700-905 Dumps

Cisco HyperFlex for Systems Engineers

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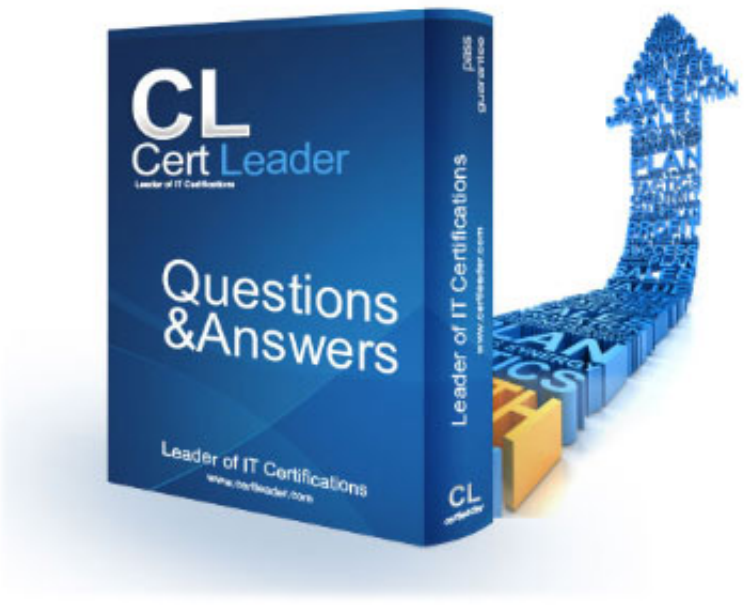


NEW QUESTION 1
How many separate VLANs must each HyperFlex node be configured with running ESXi?

A. 1
B. 2
C. 3
D. 4

Answer: D

Explanation:

The virtual environment has the following characteristics:

- HyperFlex nodes are emulated using VMs running ESXi installations

Server Selection	Chosen Servers (Checkbox)	Server 1, Server 2, Server 3
	Management VLAN	3091
	Storage Traffic VLAN	3092
	vMotion VLAN	3093
	VM Network VLAN	3094

NEW QUESTION 2
Which three features do Managed Deployments provide? (Choose three.)

A. Great tor managing large deployments, scalability, and oversight of the UCS servers.
B. Consistent deployment by replicating working configurations from development labs to the production deployment
C. High availability of the management system and connectivity when using 2 Cisco Fabric Interconnects
D. Individual configuration of each redundant fabric or global configuration.
E. Increased operating overhead, raising Operating Expenses (OpEx)
F. Decentralized yet complex management of an entire UCS domain.

Answer: ACD

Explanation:

Managed deployments provide these features:

- Centralized and simplified profile-based management of the entire Cisco UCS domain.
- Individual configuration of each redundant fabric or global configuration.
- High availability of the management system and connectivity when using two Cisco Fabric Interconnects.
- Great for managing large deployments, scalability, and oversight of the Cisco UCS servers.
- Reduced operating overhead, lowering operating expenses (OpEx).

In the context of Cisco HyperFlex, the centralized management platform for the entire cluster allows the HyperFlex installation to configure the servers automatically. The installation is therefore much simpler than if you had to configure the BIOS, disk drives, networking, and other hardware related features yourself.

NEW QUESTION 3
Which two features enable RAID cards striping as well as mirroring and parity? (Choose two.)

A. Integration with Cisco Intersight for a cloud-based storage management solution.
B. No load on the system resources, drives seem as one drive to the operating system
C. On RAID card failure, the RAID onboard concurrent cache assists rebuild cache.
D. Hot replacement of drives available, depending on configuration
E. Distributed drives across disparate systems can be in RAID together.

Answer: BD

Explanation:

RAID cards enable striping as well as mirroring and parity, with these features:

- No load on the system resources, drives seem as one drive to the operating system.
- Hot replacement of drives available, depending on configuration.
- Disk replacements require RAID rebuilds, taking a long time.
- On RAID card failure, the RAID card compatibility can be an issue.
- Limited drives in a raid field, depending on solution, limiting scalability.
- Only local drives can be in RAID together.

NEW QUESTION 4
Which two statements on Replication Factors are valid? (Choose two.)

A. RF2 has 100% better protection of data while using 33% more space and is recommended.
B. RF3 has 100% better protection of data while using 33% more space and is recommended.
C. LAZ can increase RTO for 16+ node clusters.
D. When performing rolling upgrades, the upgraded node is down for maintenance, stretching RF2 to the absolute limit.
E. LAZ can decrease fault tolerance of S+ node clusters to less than 4

Answer: BD

Explanation:

Maximum Tolerable Failures Dependent on Replication Factor

	3-4 Nodes	5 Nodes or More (No LAZ)
Replication Factor 2	1 node or 1 drive failure	1 node failure or 1 drive failure
Replication Factor 3	1 node failure or 2 drive failures	2 node failures or 2 drive failures

Replication factor implies:

- RF3 has 100 percent better protection of data while using 33 percent more space and is recommended.
- When performing rolling upgrades, the upgraded node is down for maintenance, stretching RF2 to the absolute limit.

NEW QUESTION 5
How many memory channels does the Cisco UCS M5 server support per CPU?

A. 1
B. 2
C. 6
D. 8

Answer: C

NEW QUESTION 6
What does the letter W indicate when selecting CPUs for your HX Node (le. HX-CPU 8170M)?

A. support of 1.5 TB/socket of memory
B. support for all flash drive array
C. support for NVMe
D. support for 768 TB/socket of memory

Answer: A

Explanation:

CPU Options

There are several dozens of CPU variants that are available with Cisco HyperFlex M5 servers. The product IDs ending in "M" support 1.5 TB/socket of memory. All other CPU PIDs support 768-Gbps socket memory.

The table lists a few of the many variants, all with product IDs ending in "M." "M" indicates support for 1.5-TB memory per CPU, and up to 3-TB memory in the HyperFlex server (dual CPU.)

Product ID	Clock Freq (GHz)	Cache Size (MB)	Cores	Highest DDR4 DIMM Clock Support (MHz)
HX-CPU-8180M	2.5	38.50	28	2666
HX-CPU-6142M	2.6	22.00	16	2666
HX-CPU-6134M	3.2	24.75	8	2666
HX-CPU-8176M	2.1	38.50	28	2666
HX-CPU-8170M	2.1	35.75	26	2666
HX-CPU-8160M	2.1	33.00	24	2666

For a full list of available CPUs, refer to the server specification sheets.

NEW QUESTION 7
Which two processes does Disk Failure initiate? (Choose two)

A. The affected cluster is marked as unhealthy and placed into standby mode
B. If the replication factor is sufficient for the failure, the system is marked as unhealthy but remains operational
C. Distributed pooled data is migrated off nodes to master data store.
D. Performance is almost unaffected Sets 1-minute timer until self-healing starts.
E. Self-healing mode is initiated and data replication factors applied.

Answer: BD

Explanation:

Disk Failure

Disk failure initiates this process:

1. If the replication factor is sufficient for the failure, the system is marked as unhealthy but remains operational.
2. VM running on the node is not migrated and the input/output continues from copies.
3. Performance is almost unaffected. Sets 1-minute timer until self-healing starts.
4. After 1 minute, the missing pieces are re-created from the remaining instances.

NEW QUESTION 8
Which two steps should be performed before installing HyperFlex? (Choose two.)

A. Determine and download recommended hypervisor
B. Determine and download recommended VCenter required
C. Download service profile templates
D. Determine and download recommended UCS firmware required.
E. Determine and download virtual machine OS' required.

Answer: AD

NEW QUESTION 9
Which three advantages of using the M5 generation of HyperFlex servers over the M4 generation are valid? (Choose three)

A. Support for Cisco VICs
B. Multiple GPUs
C. M.2 SATA drive support for faster disk I/O
D. DDR3 memory
E. Microsoft Hyper-V support
F. NVMe support

Answer: CEF

Explanation:

HyperFlex M5 generation servers are configured with these important features:

- HDD or SSD drives for capacity storage.
  - Self-encrypting drive options are available.
- SSD cache drive (SAS, NVMe, or NVMe Optane).
- M.2 SATA drives as boot drives for the hypervisor (ESXi or Hyper-V).
- All nodes use Intel Xeon Scalable CPUs and DDR4 memory.

M5 servers supersede the M4 generation of Cisco UCS servers that was the first to support Cisco HyperFlex. M4 nodes used Intel Xeon processor E5-2600 v4 family CPU. M4 servers did not contain M.2 drives for the hypervisor boot and did not support Microsoft Hyper-V.

NEW QUESTION 10
HyperFlex is tightly integrated Into the Cisco portfolio, allowing which two powerful service integrations" (Choose two)

A. Cloud mobility: CloudCenter enables workload mobility between HyperFlex and public and private clouds, Including private cloud self-service Infrastructure as a service (IaaS) capabilities
B. Application centric infrastructure: ACI enables faster deployment via End-Point Group integration of the HyperFlex clusters into existing application environments
C. Multi-cloud integration Workloads are able to seamlessly migrate to platforms such as Amazon Web Services: Microsoft Azure and Google Cloud Platform
D. On-premise container platform: Cisco Container Platform automates repetitive tasks, such as installing Kubernetes and Docker, installing analytics tools, creatingclusters, load balancing, curatmg the O
E. and even updating the distribution
F. Data Center Network Monitor: This management platform enables administrators to monitor storage In the HyperFlex solution and provide real-time storage performance for the HyperFlex cluster

Answer: AD

Explanation:

HyperFlex is tightly integrated into the Cisco portfolio, so it allows powerful service integrations:

- **Application performance monitoring:** AppDynamics enables performance monitoring of the hybrid applications running application tiers on HyperFlex and across clouds.
- **Application placement:** Cisco Workload Optimization Manager (WOM) analyzes workloads to assists with workload placement on HyperFlex.
- **Cloud mobility:** CloudCenter enables workload mobility between HyperFlex and public and private clouds, including private cloud self-service infrastructure as a service (IaaS) capabilities.
- **On-premise container platform:** Cisco Container Platform automates repetitive tasks, such as installing Kubernetes and Docker, installing analytics tools, creating clusters, load balancing, curating the OS, and even updating the distribution.

NEW QUESTION 10
How many DIMMs are supported per memory channel in the Cisco UCS M5 server?

A. 2
B. 1
C. 8
D. 4

Answer: A

Explanation:

Memory

OS memory is used by the Cisco HyperFlex servers not only to serve the internal hypervisor processes but also to expedite VM-related functions. Its performance has a significant impact on overall system operation.

Memory in HyperFlex M5 nodes provides these benefits:

- Allows up to two DIMMs per memory channel.
- Is organized with six memory channels per CPU.
- Comes in 128-, 64-, 32- and 16-GB DIMMs.
- Permits 3-TB (3072-GB) maximum memory.
  - 2 x 128 GB x 6 channels x 2 CPU = 3072 GB.

NEW QUESTION 15
Which statement about Standalone Cisco UCS Server Deployments is valid?

A. They require Cisco Fabric Interconnects to operate, which reduces the Operating Expenses (OpEx) associated with the deployment
B. They do not require Cisco Fabric Interconnects to operate, which reduces the Operating Expenses (OpEx) associated with the deployment
C. They do not require Cisco Fabric Interconnects to operate, which reduces the Capital Expenses (CapEx) associated with the deployment
D. They require Cisco Fabric Interconnects to operate, which reduces the Capital Expenses (CapEx) associated with the deployment

Answer: C

Explanation:

Standalone deployments have these features:

- Reduced upfront cost, but increased management overhead.
- Good for single deployments or small environments, but do not scale well.
- You are always able to integrate a single deployment into a centrally managed infrastructure.

Standalone deployments of servers do not require Cisco Fabric Interconnects to operate, which reduces the Capital Expenses (CapEx) associated with the deployment. It does not mean that the long-term total cost of ownership (TCO) is better in standalone deployment scenarios, because management overhead is much greater than in a managed deployment scenario, especially in larger deployments.

NEW QUESTION 20
What is the minimum amount of memory required for an HX node?
A. 192 GB
B. 64 GB
C. 32 GB
D. 128 GB

Answer: D

Explanation:

HyperFlex Edge servers have lower hardware requirements than standard HyperFlex servers:

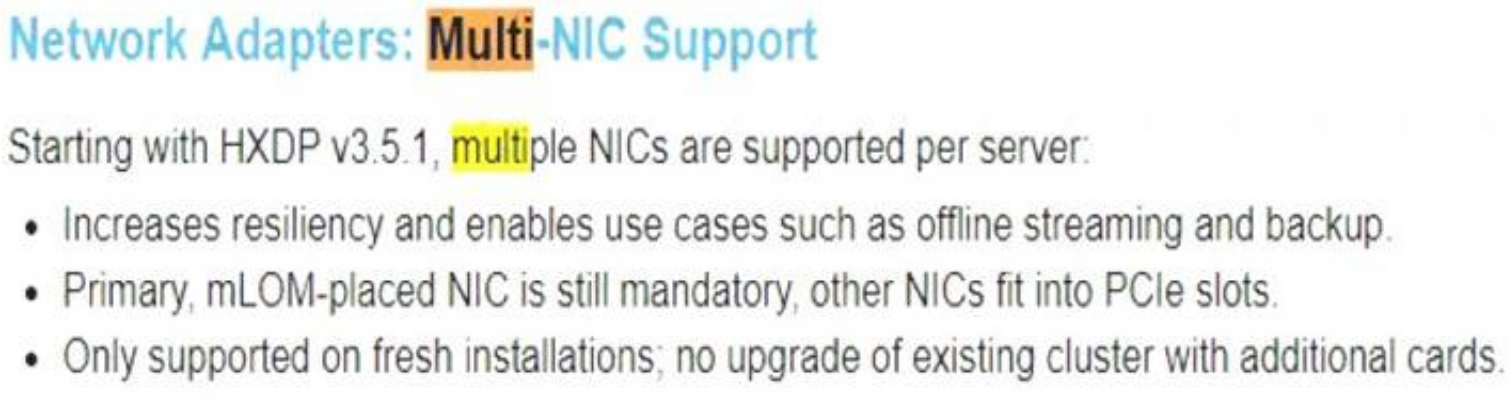
- Cisco Fabric Interconnects are not part of the solution, hardware configured over Cisco IMC.
- Only 1 CPU per server required.
- Minimum 8 RAM sticks per server, up to 12 supported per CPU.
- 128 GB of RAM required, 192 GB recommended.
- 3-8 capacity drives (6-8 on standard HX 220).
- mLOM not required.
- PCIe NICs available with dual 10-G and quad 1-G RJ45 Ethernet connectivity.

NEW QUESTION 25
Which version of HXDP was the first to support multiple VICs on a single server?

A. HXDP 3.5.1
B. HXDP 3.0
C. HXDP 4.0
D. HXDP 3.5

Answer: A

Explanation:

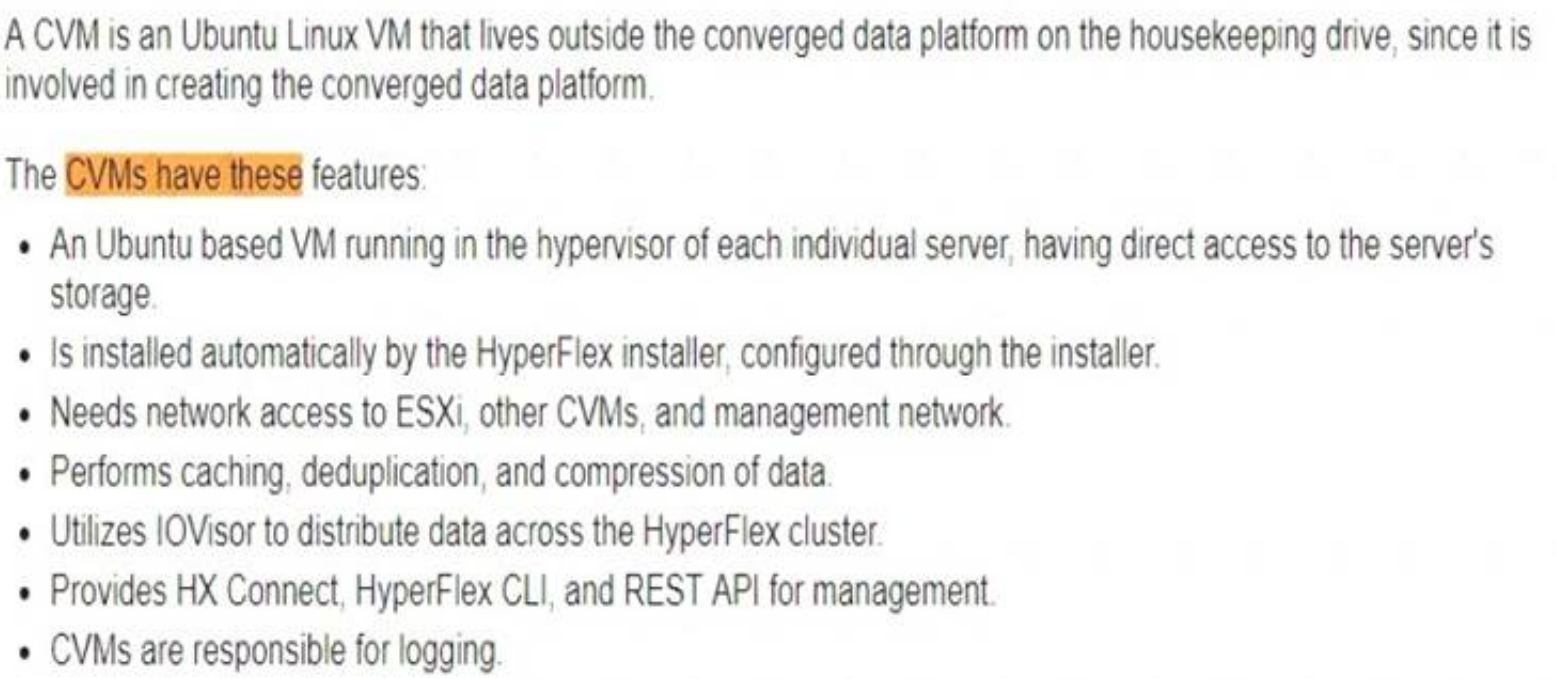


NEW QUESTION 30
A Controller Virtual Machine (CVM) is an Ubuntu Linux VM that lives outside the converged data platform on the housekeeping drive since it is involved in creating the convergence data platform Which two features tor CVMs are valid? (Choose two.)

A. creates hooks tor services related to third-party abstraction applications
B. does not perform caching, deduplication: and compression of data
C. an Ubuntu based VM running in the control space of each individual server, having linear access to the server's VMs and networking controls
D. needs network access to ESX
E. other CVMs, and management network
F. is installed automatically by the HyperFlex installer, configured through the installer

Answer: DE

Explanation:



NEW QUESTION 35
In all HX server types, where are capacity drives installed?

A. side
B. top
C. back
D. front

Answer: D

Explanation:

Identifying Capacity Drives

In all server types, the capacity drives are installed on the front.

Capacity drives are installed in:

- All HX220c (hybrid/all-flash/all-NVMe):
  - Front slots 3-10.
  - First two slots used by housekeeping and cache drives.
- HX240c-M5SX (hybrid/all-flash):
  - Front slots 2-24.
  - First slot used by housekeeping drive.
- HX240c-M5L (hybrid only):
  - Front slots 1-12.

NEW QUESTION 36
Which two results are expected when you replace a node or expand a cluster? (Choose two.)

A. Distributed pooled data is migrated off nodes to master data store.
B. Affected node is marked as unhealthy and placed into standby mode
C. vSphere DRS migrates the virtual machines to the new node to balance the load
D. On node replace, the self-healing must finish for the cluster to be healthy
E. The cluster profile is updated and RAID takes care of rebalancing the load.

Answer: CD

Explanation:

Expansion and Hardware Replacement

When you replace a node or expand a cluster, the following happens:

1. vSphere DRS migrates the virtual machines to the new node to balance the load.
2. On node replace, the self-healing has to finish for the cluster to be healthy.
3. The new node is already used for writing, but the old data is not migrated until the rebalance process.
4. Rebalance is initiated daily at 5:15 AM or can be executed manually with the **stcli cluster rebalance** command.

NEW QUESTION 40
Which three functionalities are provided by VAAI? (Choose three.)

A. When a native snapshot is requested, the request is processed by the hypervisor.
B. Missing pieces of data are re-created from the remaining nodes in service
C. Cisco HXDP creates a file system native snapshot which is registered in the vSphere.
D. VAAI performs caching, deduplication: and compression of data.
E. Instead of the snapshot being performed in hypervisor it is offloaded to Cisco HXDP.
F. VAAI uses RAID to consolidate disks into a shared data platform.

Answer: ACE

Explanation:

VAAI provides these functionalities:

- When a native snapshot is requested, the request is processed by the hypervisor.
- Instead of the snapshot being performed in hypervisor it is offloaded to Cisco HXDP.
- Cisco HXDP creates a file system native snapshot, which is registered in the vSphere.

NEW QUESTION 45
Which Cisco UCS Server running HXDP supports the largest storage pool?

A. UCS B200
B. HX220
C. HX 240
D. UCS B480

Answer: C

Explanation:

When you evaluate the servers that are most appropriate for your environment, consider these general guidelines:

- Choose HX240 servers to maximize the storage pool.
- Choose HX220 servers to ensure high compute power (relative to storage).
- Choose all-flash platforms to increase IO performance.
- For environments where storage performance is crucial, use All-NVMe nodes once HyperFlex 4.0 is released.

NEW QUESTION 47
What is the maximum size of an HXDP cluster running 3.5.1?

A. 64 nodes
B. 8 nodes
C. 16 nodes
D. 32 nodes

Answer: A

Explanation:

Cisco HyperFlex is a scalable system:

- As of HXDP v3.5.1, maximum size of standard ESXi-based cluster is 64 servers.
  - Cluster, with exception of stretched cluster, cannot be a part of more than one Cisco UCS domain.
  - You can only achieve cluster of this size with Cisco UCS 6296, other fabric interconnects do not have enough ports.
  - An alternative is to have a stretch cluster where servers are split across two Cisco UCS domains.
- If you want to connect Fibre Channel storage to the same Cisco UCS domain, consider that all Fabric Interconnects, except Cisco UCS 6332, support unified ports.

NEW QUESTION 51
Which uses for the system drive in an HX node are valid? (Choose two.)

A. Migration
B. Saving and restoring program state
C. Virtual machine store
D. Garbage collection
E. Write Cache

Answer: BD

Explanation:

Housekeeping/System Drive

Main notes to remember about 240-GB SSD housekeeping drive:

- Also known as system drive.
- Second drive used by the controller VM.
  - In addition to the boot drive.
- Used for various system operations:
  - Saving and restoring program state.
  - Removal of unneeded software.
  - Executing disk maintenance utilities.
  - Garbage collection.
  - Freeing local memory on the stack on exit from a function.
  - File backup.

NEW QUESTION 56
HyperFlex compute nodes contribute what percentage of the overall disk storage capacity?

A. 5%
B. 20%
C. 0%
D. 10%

Answer: C

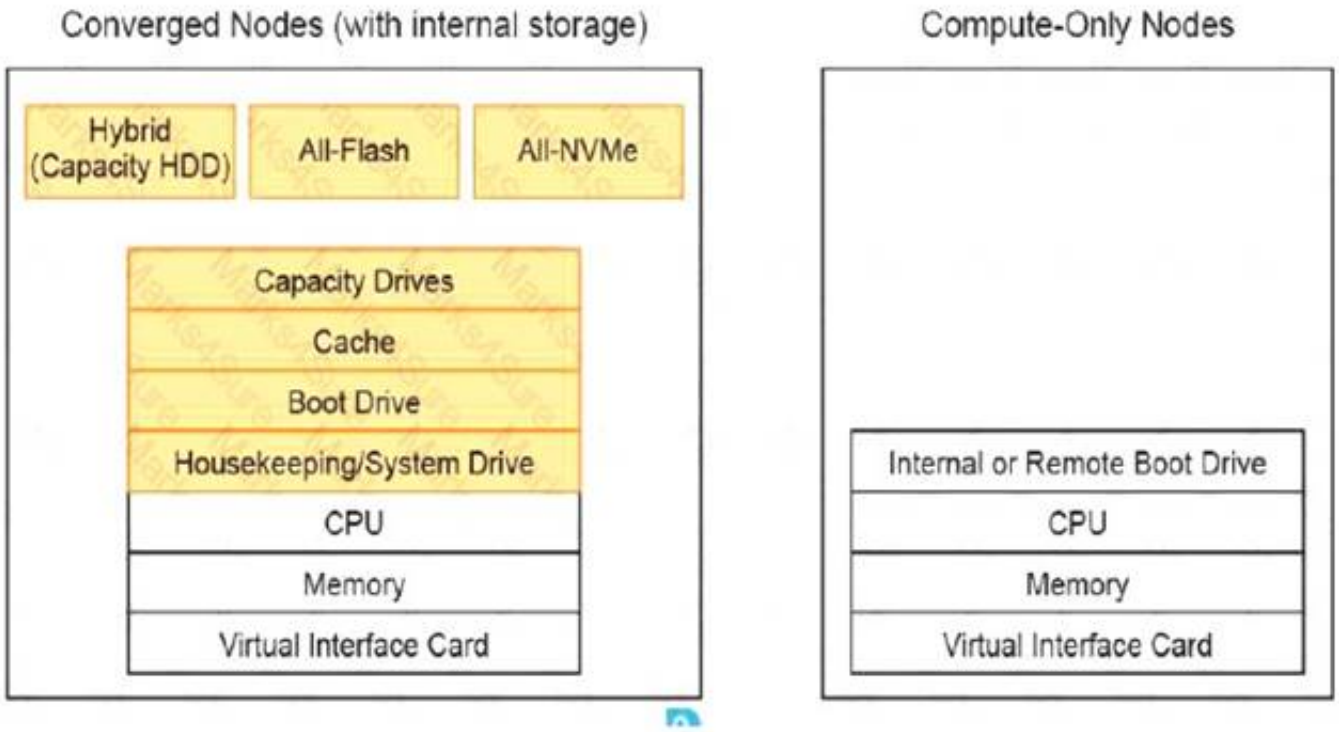
Explanation:

Compute-only nodes are part of the same vSphere cluster as the converged nodes. Since compute-only nodes do not have storage, they utilize resources available from the converged nodes.

Storage Components of Cisco HyperFlex Converged Nodes

Cisco HyperFlex converged nodes differ from compute-only nodes by the internal storage resources that they contribute to the overall storage pool. These storage resources include the capacity drives and cache drives.

The figure illustrates a high-level diagram of hardware components of HyperFlex servers.



NEW QUESTION 60
How many PCIe standards-compliant interfaces do Cisco VICs support?

A. 512
B. 128
C. 256
D. 64

Answer: C

Explanation:

Cisco VICs and Their Benefits

In heavily virtualized environments of modern data center infrastructures, hardware no longer represents the actual topology of a software-defined data center, which is also true for network connectivity. While physical cabling still constructs the physical topology, how individual hardware components are used can be much more flexible. When several virtual machines exist on the same server and in their own network topology, they are still limited by physical network interfaces for communication. However, Cisco VICs allow you to create up to 256 PCIe compliant interfaces that are presented to the hypervisor as individual network interface cards. Allowing for great flexibility when configuring the software-defined network components while maintaining a simple physical topology.

Cisco C-Series VICs resemble regular NICs and use a PCIe slot to connect to the system, while Cisco B-Series VICs use internal mezzanine slots to connect and rely on the Cisco B-Series Chassis to provide physical connectivity through the IOM.

Network Adapters: mLOM

The modular LAN-on-Motherboard (mLOM) slot is used for a Cisco VIC. It incorporates next-generation converged network adapter (CNA) technology from Cisco, providing investment protection for future feature releases.

Important information about Cisco UCS VICs:

- Installed in mLOM slot do not consume a PCIe slot.
- Can present up to 256 PCIe standards-compliant interfaces to the host.
- Available in two variants, for M4 and M5 servers:

NEW QUESTION 62
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