25 Tough & Technical VMware Interview Questions and Answers

vSphere 8 & 9 — ESXi 8.x/9.x, vCenter Server Appliance (VCSA), vSAN

From VMinstall: VMware Interview Questions and Answers

1. System Requirements for ESXi 8.x/9.x

1. Your company has a bunch of unused server hardware, and you have been asked to build a vSphere environment. But before you start you want to make sure it is supported by the ESXi version you plan to install. Where would you find a list of hardware that is supported?

Answer: You would check the VMware Compatibility Guide — https://www.vmware.com/resources/compatibility/

2. Your hardware is on the compatibility list, and now you need to know the minimum CPU and memory requirement of an ESXi host when building a 64bit OS that will take full advantage of ESXi features?

Answer: 2 CPU Cores and 8 GB memory (bare minimum).

3. Before you start installing software what must be enabled in the server BIOS to run ESXi?

Answer: The NX/XD bit needs to be enabled.

4. You also have an old pile of network adapters to choose from. Where would you find a list of network adapters (NIC) that are supported by the version of ESXi you are installing?

Answer: You would check the VMware Compatibility Guide (same link as above).

5. One of the servers you found wasn't on the list, and now you have a problem that is causing ESXi to the purple screen, so you call VMware for support. What would happen if they found out your hardware was not supported?

Answer: When hardware is not supported there are known issues that will happen, and VMware cannot help to resolve problems due to unsupported hardware.

2. ESXi 8.x/9.x Installation

6. You've done this a hundred times. What are 3 methods that can be used when doing an Interactive ESXi installation?

Answer: Boot from a CD/DVD, boot from a USB, and PXE boot from a deployment server on the network.

7. After so many ESXi builds, you have figured out a faster way to do the install using a script. What's the main difference between an interactive ESXi installation and a scripted installation?

Answer: The interactive install will require you to follow along and fill in the configuration information whereas, in a scripted install, the configuration is provided in a kickstart file (e.g. KS_CUST.CFG). ESXi 8.x/9.x still uses a Kickstart-based installer; you can specify it in boot options (e.g. kernelopt=runweasel ks=...).

8. You can install ESXi in your sleep. What is the command or boot option to access the installer or scripted install on ESXi 8.x/9.x?

Answer: For scripted installs, you use the runweasel boot option with a kickstart file (e.g. Shift+O at boot to add kernelopt=runweasel ks=...). Interactive installer steps may vary by version; check the vSphere Installation documentation.

9. Darn, one of your servers is not loading. What's the first thing to double-check when having a problem installing ESXi?

Answer: Make sure the hardware clock is set to UTC, and the NX/XD bit is enabled in the BIOS.

10. You've typed this stuff in a million times. Name 5 of the 10 bits of information required when installing ESXi?

Answer: Keyboard Layout, VLAN ID, IP Address, Subnet Mask, Gateway, Pri DNS, Sec DNS, Host Name, Installation Location, Root Password.

3. System Requirements for vCenter Server Appliance (VCSA)

11. You're planning to deploy vCenter for a new vSphere environment. What are the minimum hardware or sizing options for the vCenter Server Appliance (VCSA)?

Answer: VCSA 8.x/9.x is sized by deployment size: Tiny (2 vCPU, 14 GB RAM, up to 10 hosts/100 VMs), Small, Medium, Large, and X-Large. Choose based on host and VM counts. Windows-based vCenter is deprecated.

12. You're upgrading from an old Windows-based vCenter. What is the standard way to run vCenter for vSphere 8 and 9?

Answer: vCenter Server Appliance (VCSA) is the standard; it runs on Linux and uses an embedded database. Windows-based vCenter is deprecated.

13. You're creating a list of ports you need the network admin to open the firewall. What is port 902 used for on vCenter?

Answer: Port 902 is the default port vCenter uses to send data to hosts managed by vCenter.

14. How does VCSA 8.x/9.x handle its database compared to the old Windows vCenter with SQL?

Answer: VCSA uses an embedded PostgreSQL database; no separate MS SQL or Oracle is required. Legacy Windows vCenter with SQL Express was limited to 5 hosts and 50 VMs.

15. Your boss asks about using an external database like Oracle for vCenter. Does VCSA 8.x/9.x support that?

Answer: No. VCSA uses an embedded database. External databases like Oracle were only for the deprecated Windows-based vCenter.

4. Managing vSphere Resources — Storage

16. You've learned over the years there's more to vSphere than the server hardware. What other 2 resources are as important as servers and need to be properly planned out when designing and building a vSphere Cloud?

Answer: Storage and network resources are crucial for all vSphere Clouds.

17. VMware vSphere gives you options. What are the 4 typical ways storage can be added to a vSphere?

Answer: Storage can be added via iSCSI, FC, NFS, and local disk (including DAS).

18. When setting up a new datastore how many VMFS file systems should be created per LUN?

Answer: The best practice is to only create 1 VMFS file system per LUN.

19. What is the best plan for a storage failure that impacts multiple datastores?

Answer: Always have a backup of the VMs on a separate storage environment that can be used to restore the lost virtual servers.

20. Your host is a beast, dual-socket with 8 core CPUs and 192 GB of memory. How many virtual servers can be added to a 1TB datastore?

Answer: It depends on the size of the VMs and the performance of the storage. Higher performing storage can be filled to capacity, but space should be left for data growth and snapshots. A datastore should never be allowed to fill up 100%.

5. Managing vSphere Resources — Networking

21. This is a tough VMware interview question created just for you. Name 4 things that happen on the VMkernel networking layer?

Answer: vMotion, IP storage (iSCSI/NFS), Fault Tolerance, and vSAN.

22. You have a VCP, so this should be an easy interview question. What are 2 ways a vSphere admin can separate traffic from distinct environments (ex. Production and test) on the same hosts?

Answer: Either by creating separate vSwitches using dedicated NICs or if NICs are not available by creating separate port groups using different VLAN IDs on the same vSwitch.

23. True or false. A Distributed Virtual Switch is very much like a physical switch that detects which VMs are logically connected to each port and uses that information to forward network traffic. Hint: It is not used for monitoring and administration across a data center.

Answer: False. A Distributed Virtual Switch acts as a single switch across all hosts in a data center to provide centralized provisioning, administration, and monitoring of virtual networks.

24. Another True or false. NIC teams are "normally" put in active/active mode to allow fail-over in the event of a hardware failure.

Answer: False again. NIC teams are usually put in active/standby mode to allow fail-over in the event of a hardware failure. You can use active/active but this would not be standard and would require port channeling at the physical switch.

25. This is a trick question so think about it! How many physical NICs are needed in an ESXi host for hosting 25 virtual servers on iSCSI storage split between 2 diverse environments (web/app)?

Answer: The answer is purely subjective. It depends on how much separation is needed for performance and the level of redundancy built into the design for hardware failure. At the minimum, maybe 2 (1 for data and 1 for VMkernel) but more should be used.

Reference: VMware vSphere Documentation