

Overall Performance

Your Score: 0%



Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

▼ Question 1: Incorrect

You want to be able to monitor and filter VM-to-VM traffic within a virtual network.

What should you do?

- Route VM-to-VM traffic through a physical firewall and back to the virtual network.
- Define VLAN memberships on each VM.
- Implement a virtual firewall within the hypervisor.
- Create a virtual router with VRF technology.

Explanation

Virtualized hosts are susceptible to the same network exploits as physical network hosts and need to be protected by a firewall. By implementing a virtual firewall within the hypervisor itself, you can monitor and filter traffic on the virtual network as it flows between virtual machines.

While routing VM-to-VM traffic through a physical firewall would work, it is very inefficient. A virtual router with VRF is used to create multiple networks from a single router interface. Configuring VLAN membership would not allow you to monitor and filter traffic.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_FIREWALL]

▼ Question 2: Incorrect

Which term refers to a software implementation of a computer system that executes programs like a physical machine?

- Virtual machine
- Physical host
- Hypervisor
- Workload management

Explanation

A virtual machine is a software implementation of a computer system that executes programs like a physical machine. A virtual machine functions as a self-contained and autonomous system.

A hypervisor is a thin layer of software that resides between the virtual operating system(s) and the hardware. The physical host is the actual hardware that the hypervisor software runs on. Workload management relates to the portability of virtual machines.

References

TestOut PC Pro - 10.5 Virtualization

[e_a_plus_1001_4_20.exam.xml Q_VIRT_02]

▼ **Question 3:** Incorrect

Google Cloud, Amazon Web Services, and Microsoft Azure are some of the most widely used cloud storage solutions for enterprises. Which of the following factors prompt companies to take advantage of cloud storage? (Select TWO.)

- ➔ Need to bring costs down
- Need for a software as a service for managing enterprise applications
- ➔ Growing demand for storage
- Need for a platform as a service for developing applications
- Need for a storage provider to manage access control

Explanation

Some of the most widely used cloud storage for enterprises are Google Cloud, Amazon Web Services, and Microsoft Azure. Because of the growing demand for storage and desire to bring costs down, many companies have been taking advantage of cloud storage.

References

TestOut PC Pro - 10.5 Virtualization

[e_a_plus_1001_4_20.exam.xml Q_CLOUD_STORAGE]

▼ **Question 4:** Incorrect

When referring to cloud computing, what does the term *cloud* mean?

- It is the name of an operating system that is very flexible and easy to use so anyone can design, build, and provide cloud services, such as Infrastructure as a Service, Platform as a Service, and Software as a Service.
- It refers to the virtual hardware that cloud computing is built on.
- ➔ It is a metaphor for the internet based on the basic cloud drawing used to represent the telephone network.
- It is a metaphor for a data storage service with an ever-growing capacity, like storm clouds.

Explanation

The term *cloud* is a metaphor for the internet based on the basic cloud drawing used to represent the telephone network. It is now used to describe the internet infrastructure in computer network diagrams.

References

TestOut PC Pro - 10.5 Virtualization

[e_a_plus_1001_4_20.exam.xml Q_CLOUD_PURPOSE]

▼ **Question 5:** Incorrect

You need to create a virtualization environment on your Windows 10 system using Client Hyper-V to test potentially rogue applications that end users' downloads from the internet.

Because the applications may be malicious, you need to isolate the virtual machines from your production network and the host system; however, you need the virtual machines to be able to communicate with each other.

Which type of virtual network should you implement?

- A bridged virtual network
- An external virtual network
- ➔ A private virtual network
- An internal virtual network

Explanation

You should implement a private virtual network on your Windows 10 system. A private virtual network allows communication only between virtual machines on the same host. A private virtual network is not bound to a physical network adapter. A private virtual network is isolated from all external network traffic on the virtualization host and any network traffic between the host operating system and the external network. This type of network implementation allows you to create a sandbox environment that is very useful for protecting your network from testing or troubleshooting on a virtual host.

An internal virtual network is used to allow communication between virtual machines on the same virtualization host and between virtual machines and the host operating system. An external virtual network is used to provide virtual machines with access to a physical network, allowing them to communicate with externally located servers and clients. A bridged network is another term for an external virtual network.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_SECURE_VM]

Question 6: Incorrect

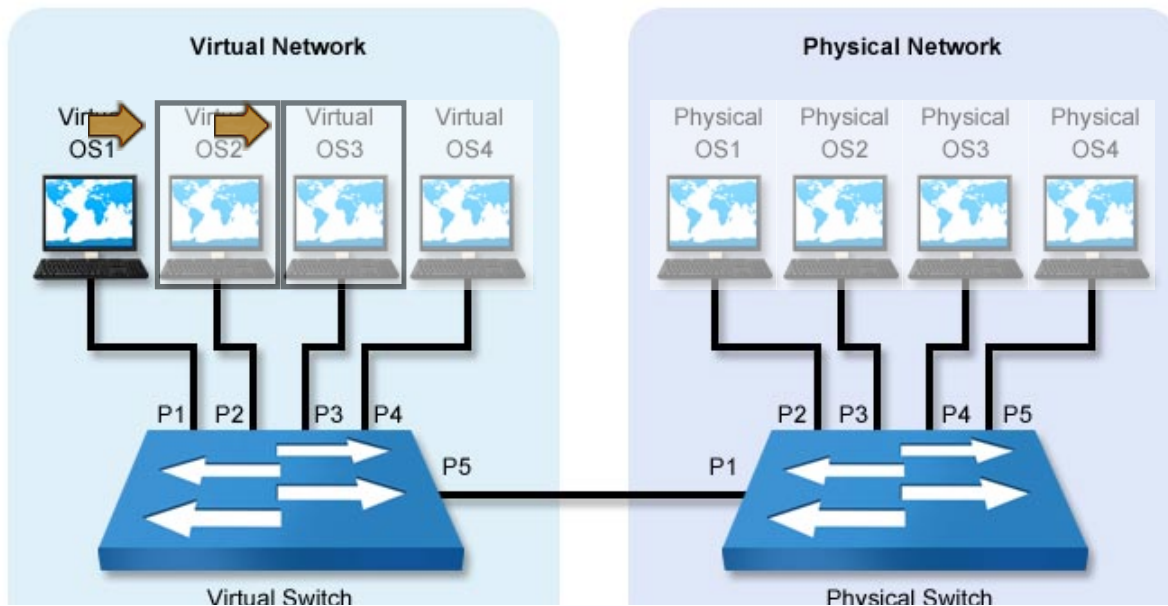
You have configured a virtual network that includes the following virtual components:

- Four virtual machines (Virtual OS1, Virtual OS2, etc.)
- One virtual switch

The virtual switch is connected to a physical network to allow the virtual machines to communicate with the physical machines out on the physical network.

Given the port configuration for the virtual switch and the physical switch in the table below, click on all of the virtual and physical machines that Virtual OS1 can communicate with.

Device	Port	Port Assignment
Virtual Switch	P1	Virtual Network1
	P2	Virtual Network1
	P3	Virtual Network1
	P4	Physical Network
	P5	Physical Network
Physical Switch	P1	Physical Network
	P2	Physical Network
	P3	Physical Network
	P4	Physical Network
	P5	Physical Network



Explanation

Virtual OS1 can communicate with the following machines:

- Virtual OS2
- Virtual OS3

The virtual switch port configuration allows these three virtual machines to communicate as if the machines were part of a real, physical network. Virtualized networks allow virtual servers and desktops to communicate with each other, and can also allow communication (via the host operating system) to network devices out on the physical network. Virtual networks typically include the following components:

- Virtual switches allow multiple virtual servers and/or desktops to communicate on virtual network segments and/or the physical network. Virtual switches are often configured in the hypervisor.
- Virtual network adapters are created and assigned to a desktop or server in the hypervisor.
 - Multiple network adapters can be assigned to a single virtual machine.
 - Each network adapter has its own MAC address.
 - Each network adapter is configured to connect to only one network at a time (i.e., a virtual network or the physical network, but not both).

Virtual OS4 and all of the other Physical OS machines are configured to communicate on the physical network.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_NETWORK]

▼ Question 7: Incorrect

Which of the following cloud computing solutions delivers software applications to a client either over the internet or on a local area network?

- PaaS
- IaaS
- ➔ SaaS
- DaaS

Explanation

Software as a Service (SaaS) delivers software applications to the client either over the internet or on a local area network.

Infrastructure as a Service (IaaS) delivers infrastructure to the client, such as processing, storage, networks, and virtualized environments. The client deploys and runs software without purchasing servers, data center space, or network equipment. Platform as a Service (PaaS) delivers everything a developer needs to build an application onto the cloud infrastructure. The deployment comes without the cost and complexity of buying and managing the underlying hardware and software layers. Data as a Service (DaaS) stores and provides data from a centralized location without the need for local collection and storage.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_CLOUD_SAAS]

▼ Question 8: Incorrect

Which of the following are true concerning the Virtual Desktop Infrastructure (VDI)? (Select TWO)

- User desktop environments are provided by individual desktop systems instead of by

remote servers.

- ➔ User desktop environments are centrally hosted on servers instead of on individual desktop systems.
- ➔ In the event of a widespread malware infection, the administrator can quickly reimagine all user desktops on a few central servers.
- In the event of a widespread malware infection, the administrator can reimagine user desktops by pushing an image out to each user desktop system over the network.
- Roaming profiles must be configured to allow mobile users to keep their same desktop environment across systems.

Explanation

Virtual Desktop Infrastructure (VDI) is a service that hosts user desktop environments on centralized servers. Users access their desktops from low-end systems over a network connection using a remote display protocol such as Remote Desktop or VNC. This allows users to access their desktop environment with their applications and data from any location and from any client device. Roaming profiles are not needed.

VDI provides administrators with a centralized client environment that is easier and more efficient to manage. For example, if a widespread malware infection hits multiple user desktops, the affected systems can be quickly reimaged on the VDI server. There is no need to push large images down to client systems over the network.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_CLOUD_DESKTOP]

▼ Question 9: Incorrect

A company has subscribed to a cloud service that offers cloud applications and storage space. Through acquisition, the number of company employees quickly doubled. The cloud service vendor was able to add cloud services to these additional employees without requiring hardware changes.

Which of the following cloud concepts does this represent?

- Measured service
- On-demand
- Resource pooling
- ➔ Rapid elasticity

Explanation

Rapid elasticity describes the cloud provider's ability to increase or decrease service levels to meet customer needs without requiring hardware changes.

Measured service refers to the way cloud services are measured or metered for billing purposes or according to a service level agreement. An on-demand cloud service is available to user at any time. Cloud services providers use resource pooling to supply services to multiple customers using shared physical resources.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_CLOUD_01]

▼ Question 10: Incorrect

Cloud services can also offer virtual network infrastructures, which include a variety of virtual components.

Match each virtual component on the left with the appropriate description on the right. (Each component may be used only once.)

Uses Ethernet standards to transmit and receive frames on the network

Virtual network interface

Implemented within the hypervisor to monitor and filter traffic on the virtual network as it flows between virtual machines

Virtual firewall

Can be defined within the virtual switch and associated with specific hosts

Virtual VLAN

Can support multiple networks on each of its interfaces, unlike the physical version

Virtual router

Builds a table that identifies which MAC addresses are connected to each of its ports

Virtual switch

Explanation

Virtual network interfaces--one or more virtual network interfaces can be configured within each virtual machine. Virtual interfaces function in much the same manner as physical interfaces. Virtual interfaces use Ethernet standards to transmit and receive frames on the network. The operating system within the virtual machine must have the appropriate driver installed to support the virtual network interface, just as with a physical network interface.

Virtual switches--allow one virtual machine to communicate with another in much the same way that a physical switch allows physical hosts to communicate with each other. A virtual switch functions in the same manner as a physical switch: after initially coming online, a virtual switch floods each frame it receives until it builds a table that identifies which MAC addresses are connected to each port.

Virtual routers--unlike a physical router, a virtual router can support multiple networks on each router interface. A different routing table is used for each network. This is useful in situations where multiple virtual networks exist on the same physical network. As with physical routers, a routing protocol is used by the virtual router to route data between networks.

Virtual firewalls--virtual hosts are susceptible to the same network exploits as physical network hosts and need to be protected by a firewall. Protecting communications between virtual hosts is challenging because the data never leaves the virtual network, so it can't be protected with a physical firewall. One strategy is to implement a virtual firewall within the hypervisor to monitor and filter traffic on the virtual network as it flows between virtual machines.

Virtual VLANs--most virtual switch implementations support VLANs. You can define VLANs within a virtual switch and associate specific hosts with a specific VLAN. However, because virtual hosts are not physically connected to switches with cables, VLAN membership is defined within the configuration of each virtual machine.

References

TestOut PC Pro - 10.5 Virtualization

[e_a_plus_1001_4_20.exam.xml Q_CLOUD_NETWORK]

▼ Question 11: Incorrect

Which term describes the layer of software that resides between the virtual operating system and the physical hardware it is running on in a virtualization environment?

- Virtual machine
- Workload management
- Virtual hard disk

➔ Hypervisor

Explanation

A hypervisor is a thin layer of software that resides between the virtual operating system(s) and the hardware. A hypervisor allows virtual machines to interact with the hardware without going through the host operating system. A hypervisor manages access to system resources such as:

- CPU
- Storage
- RAM

A virtual machine is a software implementation of a computer system that executes programs like a physical machine. A Virtual Hard Disk is a disk file used by a virtual machine. Workload management relates to the portability of virtual machines.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_HYPERVISOR]

▼ Question 12: Incorrect

A technician is unable to install virtualization software on a host computer. The host has more free disk space than required.

Which of the following is MOST likely to be the cause?

- There is insufficient physical memory on the host to support both the host and the VM.
- There is no auxiliary hard drive to store the VM files.
- ➔ The motherboard UEFI/BIOS doesn't support hardware assisted virtualization.
- The CPU doesn't have multiple core processors.

Explanation

Most virtualization software requires that the motherboard UEFI/BIOS doesn't support hardware assisted virtualization.

While a CPU with multiple core processors will increase performance, it is not usually a requirement for virtualization software. Virtualization software may require a minimum amount of physical memory. However, it is not likely that it would not install if there were not enough memory to support both the host and any VM. While placing VM files on an auxiliary hard drive may increase performance, it is unlikely to be a requirement to install the virtualization software.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_WIN_VIRT_01]

▼ Question 13: Incorrect

Which component is most likely to allow physical and virtual machines to communicate with each other?

- Virtual desktop
- ➔ Virtual switch
- Host operating system
- VHD

Explanation

Virtual switches allow multiple virtual servers and/or desktops to communicate on virtual network segments and/or the physical network. Virtual switches are often configured in the hypervisor.

A virtual hard disk (VHD) is a file that is created within the host operating system and simulates a hard disk for the virtual machine. A physical machine (also known as the host operating system) has the actual hardware in place on the machine, such as the hard disk drive(s), optical drive, RAM, motherboard, etc. A virtual desktop is a virtual machine in a software implementation of a computer that executes programs like a physical machine.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_SWITCH]

Question 14: Incorrect

Which term describes the layer of software that resides between the virtual operating system and the physical hardware it runs on in a virtualization environment?

- ➔ Hypervisor
- Virtual machine
- Workload management
- Virtual hard disk

Explanation

A hypervisor is a thin layer of software that resides between the virtual operating system(s) and the hardware. A hypervisor allows virtual machines to interact with the hardware without going through the host operating system. A hypervisor manages access to system resources such as:

- CPU
- Storage
- RAM

A virtual machine is a software implementation of a computer system that executes programs like a physical machine. A Virtual hard disk is a disk file used by a virtual machine. Workload management relates to the portability of virtual machines.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_01]

Question 15: Incorrect

Rachel, an employee in the support department, wants to run a virtual machine on her computer from which she can troubleshoot customer issues.

Which of the following must you complete before virtualization will work on her computer?

- ➔ Enable virtualization support in the BIOS settings.
- Flash the computer's BIOS to add virtualization support.
- Install the extra hard disk from the new virtual machine will run on.
- Install additional memory.

Explanation

For virtualization to work on Rachel's PC, you must ensure that the virtualization support is enabled in the BIOS settings. Some CPUs will have Virtualization Support turned on by default, and others will not.

Although additional memory will increase performance of a computer using virtualization, it may not be required depending on the amount of memory currently installed. Likewise, an additional hard disk may be advantages in storing or running virtual machines, but they are not a requirement. Most modern CPUs support virtualization and do not require the BIOS to be flashed.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_WIN_VIRT_02]

Question 16: Incorrect

You use a 64-bit version of Windows 10 Professional on your desktop computer. This system has a 500 GB hard disk installed and 4 GB of system RAM. Using Hyper-V, you plan to test a network design that will have multiple virtual servers and virtual workstations.

Does your system meet the requirements for the test you plan to run?

- ➔ No. You need more RAM if you plan to run multiple virtual machines using Client Hyper-

V.

- Yes. Your system meets the minimum requirements for running Client Hyper-V.
- No. Hyper-V can only be implemented on Windows Servers.
- No. You must be running the 64-bit version of Windows 10 Enterprise to meet the requirements for Client Hyper-V.

Explanation

If you plan to run multiple virtual machines, your Windows 10 Professional or Enterprise system needs far more than the minimum requirement of 4 GB of RAM for Hyper-V. Virtual machines use the physical RAM that is installed on the host machine. For example, if you're running four virtual machines, and if each has been assigned at least 1 GB of RAM to maintain a decent level of performance, a host machine that only has 4 GB of RAM will not have any RAM left for its own operating system.

System requirements for Client Hyper-V include the following:

- A 64-bit CPU
- A modern Intel and AMD microprocessor that includes Second Level Address Translation (SLAT) technology
- Virtualization enabled in the BIOS/UEFI configuration
- At least 4 GB of RAM in the system (however, much more RAM than this will be required if you choose to run multiple virtual machines)

References

TestOut PC Pro - 10.5 Virtualization

[e_a_plus_1001_4_20.exam.xml Q_WIN_VIRT_REQUIREMENTS]

▼ Question 17: Incorrect

You currently use a Windows 7 Ultimate desktop system. You have been asked to evaluate Windows 10 as a possible upgrade for the Windows 7 systems you manage.

You decide to install Windows 10 in a VHD file on your Windows 7 system. To ensure that the evaluation is realistic, you need to ensure the best possible performance.

Which type of VHD file should you use?

- Dynamically expanding
- Thin provisioned
- ➔ Fixed size
- VHDX

Explanation

A fixed disk VHD file occupies a set amount of hard disk space on the physical hard disk. The size of the virtual hard disk file is the total storage capacity of the virtual disk. The entire disk size, including empty space within the virtual hard disk, is reserved on the physical disk. This disk type takes longer to create than other disk types. However, performance is improved because the entire virtual disk is a contiguous block.

A dynamically expanding disk allocates physical disk space in the VHD file as virtual disk storage is used by the system. This disk type makes the most efficient use of hard disk space. However, it does not provide the same level of performance as a fixed disk VHD file.

Thin provisioning uses essentially the same technology as a dynamically expanding disk. However, this terminology is not commonly used when working with VHD files.

VHDX is an improved version of the traditional VHD file format used by newer versions of Hyper-V.

References

TestOut PC Pro - 10.5 Virtualization

[e_a_plus_1001_4_20.exam.xml Q_WIN_VIRT_FIXED_DISK]

▼ Question 18: Incorrect

Match the virtualization implementations on the left with the appropriate characteristic on the right. Each type of implementation may be used once, more than once, or not at all.

The virtual machine completely simulates a physical computer system.

Full virtualization

Operating systems do not need modification to run within virtual machines.

Full virtualization

Only some of the components of a virtual machine are virtualized.

Partial virtualization

Guest operating systems directly access hardware resources in the hypervisor host system.

Paravirtualization

Explanation

In full virtualization, the virtual machine completely simulates a real physical host. This allows most operating systems and applications to run within the virtual machine without being modified in any way.

In partial virtualization, only some of the components of the virtual machine are virtualized. The operating system uses some virtual components and some real physical hardware components in the actual device where the hypervisor is running.

In paravirtualization, the hardware is not virtualized. All of the guest operating systems running on the hypervisor directly access various hardware resources in the physical device; components are not virtual.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_03]

▼ Question 19: Incorrect

You have been tasked with designing a workstation that will run VMware Workstation virtualization software. It will be used by a software engineer to run virtual machines for application development and testing. Which criteria should be included in your design for this system? (Select TWO.)

- HTPC form factor
- Video card with HDMI output
- RAID 5 disk array
- ➔ RAM configured to run in quad-channel mode
- ➔ 64-bit processor with eight cores

Explanation

Virtual machines place a very heavy load on the host system's RAM and CPU. Therefore, the most important criteria to be included in the design for this workstation would be:

- RAM configured to run in quad-channel mode
- 64-bit processor with 8 cores

A video card with HDMI output and an HTPC form factor would be more appropriate for a home theater system. A RAID 5 disk array would be appropriate for a virtualization workstation, but is less important than the choice of processor and RAM.

References

TestOut PC Pro - 10.5 Virtualization
[e_a_plus_1001_4_20.exam.xml Q_VIRT_REQUIREMENTS]

▼ Question 20: Incorrect

What type of resources offer the following advantages?

- Flexibility of access
- Ease of use
- Self-service provisioning of resources
- API availability
- Metering of services
- Ability to try out software applications

cloud

Explanation

Cloud resources offer the following advantages:

- Flexibility of access
- Ease of use
- Self-service provisioning of resources
- API availability
- Metering of services
- Ability to try out software applications

References

TestOut PC Pro - 10.5 Virtualization

[e_a_plus_1001_4_20.exam.xml Q_CLOUD_CLOUD]