Exam Report: 10.5.10 Practice Questions

Date: 3/26/2020 4:26:28 pm
Time Spent: 3:25

Candidate: Garsteck, Matthew
Login: mGarsteck

Overall Performance

Your Score: 47%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: 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?

- Workload management
- Virtual hard disk
- ~~Virtual machine~~
- 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_virtual_pp6.exam.xml Q_VIRT_01]

Question 2: Correct

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

- Physical host
- Virtual machine
- 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_virtual_pp6.exam.xml Q_VIRT_02]

Question 3: 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.

~~Paravirtualization~~ Full virtualization

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

~~Partial virtualization~~ 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.

~~Full virtualization~~ 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_virtual_pp6.exam.xml Q_VIRT_03]

Question 4: Correct

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

What should you do?

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

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_virtual_pp6.exam.xml Q_VIRT_FIREWALL]

Question 5: Correct

What key advantage does a virtual router have over a physical router?

- Routing protocols are not needed to route data between networks.
- Multiple networks can be connected to a single interface.
- Faster routing performance.
- Allows the Virtual Router Redundancy Protocol (VRRP) to be used.

Explanation

The key advantage of a virtual router is it can support multiple networks on a single router interface. It does this by using a different routing table for each network. Physical routers are limited to a single network on each interface.

Like physical routers, virtual routers use routing protocols to route data between networks. The Virtual Router Redundancy Protocol is used by physical routers to specify backup routers in the case of a failure. Virtual routers do not offer significant performance increases.

References

TestOut PC Pro - 10.5 Virtualization
[e_virtual_pp6.exam.xml Q_VIRT_ROUTER]

Question 6: Incorrect

The servers for the company are all virtual machines and hosted on the same hypervisor. You need to keep users in all other departments from accessing the virtual servers used by the finance department.

Which of the following technologies should you use to logically isolate the network?

- ~~NIC teaming~~
- VLANs
- MAC filtering
- Subnetting

Explanation

A virtual LAN (VLAN) uses switch ports to define a broadcast domain. When you define a VLAN, you assign devices on different switch ports to a separate logical (or virtual) LAN.

NIC teaming is used to combine two or more physical connections into one logical connection and does not isolate networks. While MAC filtering could be used to control access, it is easily bypassed by MAC spoofing. Subnetting is used to divide large networks into smaller networks. Subnetting can be used to isolate sensitive systems, but it is not as secure as using VLANs.

References

TestOut PC Pro - 10.5 Virtualization
[e_virtual_pp6.exam.xml Q_VIRT_VLAN]

Question 7: Correct

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 supports 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_virtual_pp6.exam.xml Q_WIN_VIRT_01]

Question 8: Correct

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?

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

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_virtual_pp6.exam.xml Q_WIN_VIRT_02]

Question 9: Incorrect

Which of the following statements about virtual NICs are true? (Select TWO.)

- [ ] Virtual NICs don't have a MAC address.
- [x] Multiple virtual NICs can be added to a virtual machine.
- [ ] Virtual NICs need the appropriate driver installed to function.
- [ ] Virtual NICs can communicate only with other virtual NICs.
- [x] ~~The type of NIC installed in the physical machine determines the type of virtual NIC that is emulated.~~

Explanation

Within each virtual machine, you can configure one or more virtual network interfaces, which function in much the same manner as physical network 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.

When you configure a virtual network interface within a virtual machine's configuration, you can specify:

- The type of physical network interface to emulate. This allows for the best possible driver support by the operating system within the virtual machine.
- A MAC address. Most hypervisors automatically assign a MAC address to each virtual network interface. However, some hypervisors allow you to use a custom MAC address, if needed.
- The network to connect to. Most hypervisors allow you to define many different virtual networks.
- When you configure a virtual network interface, you will select which virtual network you want it to be connected to.

References

TestOut PC Pro - 10.5 Virtualization
[e_virtual_pp6.exam.xml Q_WIN_VIRT_VIRTUAL_NIC]

Question 10: Correct

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
- Rapid elasticity
- Resource pooling

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_virtual_pp6.exam.xml Q_CLOUD_01]

Question 11: Incorrect

Match each cloud computing definition on the left with the appropriate characteristic on the right. Each characteristic may be used once, more than once, or not at all.

Provides resources to a single organization.

Private cloud

Combines public, private, and community cloud resources from different service providers.

Hybrid cloud

Designed to be shared by several organizations.

Community cloud

Provides computing resources that are accessible by the general public.

Public cloud

Keeps one organization data separate and secure from any other organization using the same service provider.

~~Hybrid cloud~~ Private cloud

Explanation

In a public cloud, computing resources such as platforms, applications, and storage are made available to the general public by a cloud service provider.

A private cloud provides resources to a single organization. The cloud service provider ensures the organization's data is kept separate and secure from any other organization using the same service provider.

A community cloud is designed to be shared by several organizations.

A hybrid cloud combines public, private, and community cloud resources from different service providers.

References

TestOut PC Pro - 10.5 Virtualization
[e_virtual_pp6.exam.xml Q_CLOUD_02]

Question 12: 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_virtual_pp6.exam.xml Q_CLOUD_CLOUD]

Question 13: Incorrect

You were recently hired by a small start-up company. The company is in a small office and has several remote employees.

You have been asked to find a business service that would accommodate the current size of the company but would also be able to scale as the company grows. The service needs to provide adequate storage, as well as additional computing power.

Which cloud service model should you use?

- PaaS
- ~~SaaS~~
- DaaS

IaaS

Explanation

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.

Software as a Service (SaaS) delivers software applications to the client either over the Internet or on a local area network. 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_virtual_pp6.exam.xml Q_CLOUD_IAAS]

Question 14: Incorrect

Which of the following best describes the Platform as a Service (PaaS) cloud computing service model?

- PaaS delivers software applications to the client either over the internet or on a local area network.
- PaaS stores and provides data from a centralized location without the need for local collection and storage.
- PaaS delivers everything a developer needs to build an application onto the cloud infrastructure.
- ~~PaaS delivers infrastructure to the client, such as processing, storage, networks, and virtualized environments.~~

Explanation

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.

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. 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_virtual_pp6.exam.xml Q_CLOUD_PAAS]

Question 15: Correct

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

- SaaS
- DaaS
- IaaS
- PaaS

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_virtual_pp6.exam.xml Q_CLOUD_SAAS]