Exam Report: 9.3.4 Practice Questions

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Overall Performance

Your Score: 100%

Passing Score: 80%

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Individual Responses

Question 1: Correct

In virtualization, what is the role of the hypervisor?

- A hypervisor is created within the host operating system and simulates a hard disk for the virtual machine.
- A hypervisor has the actual hardware in place on the machine, such as the hard disk drive(s), optical drive, RAM, and motherboard.
- A hypervisor is a software implementation that executes programs like a physical machine.
- A hypervisor allows virtual machines to interact with the hardware without going through the host operating system.

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 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 machine is a software implementation that executes programs like a physical machine. A virtual machine appears to be a self-contained and autonomous system. 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.

References

LabSim for Network Pro, Section 9.3.
[netpro18v5_all_questions_en.exm NP15_VIRTUALIZATION_01]

Question 2: Correct

What type of virtualization completely simulates a real physical host?

- Partial virtualization
- Semi-virtualization
- Paravirtualization

Full virtualization

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. Be aware of the following:

- The operating system uses some virtual components and some real physical hardware components in the actual device where the hypervisor is running.
- The operating system or application must be modified to run in a partial virtualization environment.

In paravirtualization, the hardware is not virtualized. Be aware of the following:

- All of the guest operating systems running on the hypervisor directly access various hardware resources in the physical device; components are not virtual.
- The guest operating systems run in isolated domains on the same physical hardware.
- The operating system or application must be modified before it can run in a paravirtualization environment.

References

LabSim for Network Pro, Section 9.3.
[netpro18v5_all_questions_en.exm NP15_VIRTUALIZATION_02]

Question 3: Correct

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

- Virtual desktop
- Host operating system
- Virtual switch
- 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

LabSim for Network Pro, Section 9.3.
[netpro18v5_all_questions_en.exm NP15_VIRTUAL_NETWORKING_02]

Question 4: Correct

Which of the following are advantages of virtualization? (Select two.)

- [ ] Improved detection of host-based attacks
- [ ] Redundancy of hardware components for fault tolerance

- [x] Easy system migration to different hardware
- [ ] Reduced utilization of hardware resources
- [x] Centralized administration

Explanation

Virtualization allows a single physical machine (known as the host operating system) to run multiple virtual machines (known as the guest operating systems). The virtual machines appear to be self-contained and autonomous systems. Advantages of virtualization include:

- Server consolidation
- The ability to migrate systems between different hardware
- Centralized management of multiple systems
- Increased utilization of hardware resources
- Isolation of systems and applications

Disadvantages of virtualization include:

- A compromise in the host system could affect multiple guest systems.
- A failure in a shared hardware resource could affect multiple systems.

References

LabSim for Network Pro, Section 9.3.
[netpro18v5_all_questions_en.exm NP15_VIRTUALIZATION_04]