Exam Report: 10.1.3 Practice Questions

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Candidate: Garsteck, Matthew
Login: mGarsteck

Overall Performance

Your Score: 50%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Correct

You are purchasing a PC system that will be used as a file and print server in a small business.

Which of the following hardware selection criteria is the MOST important for this system? (Select TWO).

- [x] RAID 1+0 array
- [ ] RAID 0 array
- [x] 64-bit multi-core processor
- [ ] HDMI output
- [ ] High-end video adapter with GPU

Explanation

The following hardware selection criteria is most important for a PC system that will be used as a file and printer server in a small business:

- RAID 1+0 array
- 64-bit multi-core processor

A high-end video board with HDMI output is not required for a server system. A RAID 0 array offers performance, but does not protect data with redundancy.

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_01]

Question 2: Incorrect

You have just purchased a new home and want to purchase a home theater computer system.

Which of the following hardware selection criteria isthe MOST important for this system? (Select TWO).

- [ ] 64-bit processor with 12 cores
- [ ] HTPC form factor
- [x] Video card with HDMI output
- [x] ~~RAID 5 disk array~~
- [ ] RAM configured to run in quad-channel mode

Explanation

A video card with HDMI output and an HTPC form factor is more appropriate for a home theater system.

A RAID 5 disk array, 12-core CPU, and quad-channel RAM are more appropriate for a virtualization

workstation.

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_02]

Question 3: Correct

You own a custom PC retail store. A small business client asks you to build three workstations for her organization:

- Virtualization workstation
- Video editing workstation
- Thin client PC

Drag and drop each PC hardware configuration on the left to the most appropriate workstation type on the right.

Thin client PC

- Intel Celeron dual-core 2.7GHz CPU
- 320 GB SATA HD
- 2 GB DDR3 RAM
- Few or no applications installed

Video editing workstation

- Intel Core i7 six-core 3.4 GHz CPU
- 1 TB SSD SATA
- 16 GB DDR4 RAM
- Video capture card

Virtualization Workstation

- AMD 12-core 4 GHZ
- 4 TB SATA HD
- 32 GB DDR4 RAM
- Hardware-assisted virtualization (HAV)

Explanation

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

- AMD 12-core 4 GHZ
- 4 TB SATA HD
- 32 GB DDR4 RAM
- Hardware-assisted virtualization (HAV)

A thin client only needs to be able to connect to a remote desktop session. As such, it only needs to meet the minimum requirements for running Windows locally. The following hardware is sufficient:

- Intel Celeron dual-core 2.7GHz CPU
- 320 GB SATA HD
- 2 GB DDR3 RAM
- Few or no applications installed

An audio/video editing workstation has specialized requirements to allow it to process media files. The following hardware is appropriate:

- Intel Core i7 six-core 3.4 GHz CPU
- 1 TB SSD SATA
- 16 GB DDR4 RAM
- Video capture card

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_03]

Question 4: Incorrect

You are a PC technician for a national computer retailer. A customer asks you to build three custom computers for him to use at his home office. He requests a gaming PC, a home office server, and a thin client workstation.

Drag and drop each PC hardware configuration on the left to the most appropriate workstation type on the right.

Home office server

- ~~400 W power supply~~
- ~~500 GB SATA HD~~
- ~~512 MB PCIe video adapter~~
- ~~Basic desktop applications installed~~

- 2 TB RAID 5 disk array
- 600 W power supply
- No audio adapter
- Integrated video adapter

Gaming PC

- 1000 W power supply
- 1 TB SATA HD
- Dual SLI 6 GB PCIe video adapters
- 5.1 channel surround sound adapter
- Liquid CPU cooler

Thick client workstation

- ~~2 TB RAID 5 disk array~~
- ~~600 W power supply~~
- ~~No audio adapter~~
- ~~Integrated video adapter~~

- 400 W power supply
- 500 GB SATA HD
- 512 MB PCIe video adapter
- Basic desktop applications installed

Explanation

A home office server needs to store a lot of data quickly and reliably. Video and audio performance are of less concern. However, the increased number of storage devices require an upgraded power supply. The following hardware issufficient for this system:

- 2 TB RAID 5 disk array
- 600 W power supply
- No audio adapter
- Integrated video adapter

A thick client needs to be able to run desktop applications locally and also needs to connect to a remote desktop session. As such, it only needs to meet the minimum requirements for the local operating system and installed applications. The following hardware would be sufficient:

- 400 W power supply
- 500 GB SATA HD
- 512 MB PCIe video adapter
- Basic desktop applications installed

A gaming PC needs high-end graphics and audio, such as dual SLI-linked video adapters. These devices consume a lot of power, so a high-end power supply will be required, as well as additional cooling capacity. The following hardware would be appropriate:

- 1000 W power supply
- 1 TB SATA HD
- Dual SLI 6 GB PCIe video adapters
- 5.1 channel surround sound adapter
- Liquid CPU cooler

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_04]

Question 5: Incorrect

You are a PC technician for a national computer retailer. A business customer asks you to build three custom computers to be used by employees at a branch office:

- CAD / CAM design workstation
- Home theater PC
- Virtualization workstation

Drag and drop each PC hardware configuration on the left to the most appropriate workstation type on the right.

CAD / CAM design workstation

~~• 32 GB PC4-21300 DDR4 RAM~~ ~~• 4 TB SATA HD~~ ~~• Integrated video adapter~~	• 2 GB GDDR5 PCIe video adapter • 16 GB PC3-21300 DDR4 ECC RAM • 1 TB SATA HD

Virtualization workstation

~~• 2 GB GDDR5 PCIe video adapter~~ ~~• 16 GB PC3-21300 DDR4 ECC RAM~~ ~~• 1 TB SATA HD~~	• 32 GB PC4-21300 DDR4 RAM • 4 TB SATA HD • Integrated video adapter

Home theater PC

✓	• HDMI output • Compact form factor • 5.1 channel surround sound adapter • TV tuner adapter

Explanation

Virtual machines place a very heavy load on the host hypervisor's RAM and CPU. Video and audio performance is of secondary concern. Therefore, the most important criteria to be included in the design for this workstation would be:

- 32 GB PC4-21300 DDR4 RAM
- 4 TB SATA HD
- Integrated video adapter

A CAD / CAM workstation also places a heavy load on the the system CPU and RAM. In addition, because of the extensive mathematical calculations used by the software on these systems, it is strongly recommended that ECC memory be used. A high-end video adapter that uses GDDR5 memory instead of DDR3 memory is also recommended. The following hardware is sufficient:

- 2 GB GDDR5 PCIe video adapter
- 16 GB PC3-21300 DDR4 ECC RAM
- 1 TB SATA HD

A home theater PC (HTPC) is a dedicated system that is optimized to play media on a television set. The following hardware is appropriate:

- HDMI output
- Compact form factor
- 5.1 channel surround sound adapter
- TV tuner
adapter

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_05]

Question 6: Correct

You are a PC technician for a national computer retailer. You are asked to build each of the systems listed on the right. You need to use the most appropriate hardware components to ensure that each of these systems will fulfill its intended role.

Drag and drop the most appropriate list of components on the left to the system type on the right that needs the component to function fully. (One list of components will not be the most appropriate for any listed system.)

Home office server

✓	• 2 TB RAID 5-disk array • 600W power supply • No audio adapter • Integrated video adapter

Gaming PC

✓	• 1000W power supply • 1 TB SATA HD • Dual SLI 6GB PCIe video adapters • 5.1 channel surround sound adapter

• Liquid CPU cooler

Home theater PC

✔
• HDMI output
• Compact form factor
• 5.1 channel surround sound adapter
• TV tuner
adapter

Virtualization workstation

✔
• AMD 12-core 4 GHz CPU
• 4 TB SATA HD
• 32 GB DDR4 RAM
• Hardware-assisted virtualization

Thin client workstation

✔
• Intel Celeron dual-core 2.7 GHz CPU
• 500 GB SATA HD
• 2 GB DDR3 RAM
• Few or no applications installed

Audio/video editing workstation

✔
• Intel Core i7 six-core 3.4 GHz CPU
• 2 TB SSD SATA
HD
• 16 GB DDR4 RAM
• High-end audio adapter with speaker system
• High-end video adapter with dual displays

Explanation

Audio/video editing workstation:

• Select the most powerful processor that you can afford. Audio and video editing applications require a great deal of processing power. A 64-bit multi-core processor should be the minimum processor considered.
• Implement a high-end video adapter with dual displays. Audio and video editing applications require extensive video processing and screen real estate.
• Implement a high-end audio adapter and speaker system.
• Implement a very large and very fast hard disk drive. Audio and video editing applications require extensive disk space and speed. You may want to consider using an SSD drive instead of a traditional hard disk.

Virtualization workstation:

• Virtualization hosts require extensive RAM and CPU processing power. Each virtual machine running on the system must share the system processor and RAM; therefore, you need to implement the maximum amount of RAM supported by the motherboard in dual- or triple-channel mode.
• A 64-bit multi-core processor should be the minimum processor considered. You may want to consider a system with multiple processors.
• Video and audio performance are of secondary concern.

Gaming system:

• Gaming applications require a great deal of processing power. A 64-bit multi-core processor should be the minimum processor considered.
• Gaming applications can cause the systems processor, RAM, and video adapter to generate excessive heat. You should implement a high-end cooling solution to dissipate this heat.
• Implement a high-end video adapter with a GPU. Gaming applications require a great deal of video processing.
• Implement a high-end audio adapter with a surround-sound speaker system.

Home theater system:

• Implement a high-end audio adapter with a surround-sound speaker system.
• Implement a video adapter with a TV tuner and HDMI
output.
• To save space, you may want to select a system that uses the Home Theater PC (HTPC) compact form factor.

Thin client:

- A thin client only needs to be able to connect to a remote desktop session. As such, it needs to meet only the minimum requirements for running Windows locally.
- A thin client workstation needs to be optimized to run only very basic applications. Ensure the system has enough processing power, disk space, and RAM to support the applications that will be installed on it.
- Install the fastest network adapter supported by the network it will be connected to. Gigabit speeds (or faster) are recommended. This will help ensure that the remote desktop session provides a reasonable end-user experience.

Home or small office server:

- A home or small office server is typically used for media streaming, file sharing, and printer sharing. As such, you should install the fastest network adapter supported by the network it will be connected to. Gigabit speeds (or faster) are recommended.
- You should implement a storage solution that provides both speed and redundancy to protect data. You should consider using a RAID array that uses striping (for performance) along with mirroring or parity (for protection). RAID 5, RAID 1+0, or RAID 0+1 would be good choices.
- A 64-bit multi-core processor should be the minimum processor
- Implement the recommended amount of RAM for your server operating system in dual- or triple-channel mode.

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_06]

Question 7: Correct

You are purchasing several PC system that will be used as thin clients in a large organization.

Which of the following hardware selection criteria would be the MOST important for this system?

- ○ High-end video adapter
- ➡ ◉ Gigabit Ethernet adapter
- ○ RAID 0 array
- ○ 64-bit 8-core processor

Explanation

A thin client only needs to be able to connect to a remote desktop session, so it only needs to meet the minimum requirements for running Windows locally. You should select a system with the fastest network adapter supported by the network it will be connected to. Gigabit speeds (or faster) are recommended. This will help ensure that the remote desktop session provides a reasonable end user experience.

A RAID 0 array, high-end video adapter, or 8-core CPU really isn't needed in this type of system.

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_07]

Question 8: Correct

You have been tasked with designing a workstation that will run VMware Workstation virtualization software. A software engineer will use it to run virtual machines for application development and testing.

Which of the following criteria should MOST likely be included in your design for this system? (Select TWO).

- ☐ RAID 5 disk array
- ☐ Video card with HDMI output
- ☐ HTPC form factor
- ➡ ☑ 64-bit processor with eight cores

RAM configured to run in quad-channel mode

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 eight 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 - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_08]

Question 9: Incorrect

Joe is working on a design team that uses a computer-aided design (CAD) system. Joe has been complaining that it takes too long to perform tasks such as panning, rotating, and zooming. You have been asked to look at Joe's computer and to make any changes required to increase Joe's productivity.

Which of the following changes would BEST meet Joe's needs?

~~Configure Joe's workstation with dual monitors.~~

Increase the memory for the onboard video embedded in the motherboard.

Add a second high-capacity hard drive to Joe's computer.

Add a very high-end video board.

Explanation

CAD applications need workstation graphics cards that can manipulate complex geometry and computing. Therefore, the best solution presented is to add a very high-end video board with a fast GPU. The GPU's job is to process all graphical information and output it to a display, which will increase performance for CAD-type systems.

The onboard embedded video will not be sufficient for high-end applications such as a CAD system. Adding a second drive or monitor will not increase the performance of the issues Joe is describing.

References

TestOut PC Pro - 10.1 Component Selection
[e_impl_pp6.exam.xml Q_COMP_SEL_09]

Question 10: Incorrect

You are the IT administrator for your company. You have several users who want to work from home by connecting to a server running at the corporate headquarters. Your manager has asked you to keep costs to a minimum as you provide computers for this environment.

Which of the following types of PCs would work BEST for these remote users?

Thin client

Tablet

CAD/CAM workstation

~~Thick client~~

Explanation

A thin client only needs to be able to connect to a remote desktop session. As such, it only needs to meet the minimum requirements for running Windows locally. A thick client, CAD/CAM workstation, and tablets have additional requirements to run their operating system and applications.

References

TestOut PC Pro - 10.1 Component Selection

[e_impl_pp6.exam.xml Q_COMP_SEL_10]