

# CompTIA

## Exam Questions 220-1101

CompTIA A+ Certification Exam: Core 1



#### NEW QUESTION 1

- (Topic 2)

Which of the following types of devices MOST often uses a Thunderbolt cable?

- A. Linux PC
- B. Android mobile
- C. Apple laptop
- D. Chromebook

**Answer: C**

#### Explanation:

Thunderbolt cables are commonly used to connect Apple laptops to external displays or other devices. While Thunderbolt is available on some Windows and Chromebook devices, it is most commonly associated with Apple products. References:

<https://www.intel.com/content/www/us/en/products/docs/io/thunderbolt/thunderbolt-technology-general.html>

#### NEW QUESTION 2

- (Topic 2)

A technician is replacing the RAM on an entry-level server with hot-swappable components. Which of the following should the technician do NEXT?

- A. Replace the RAM while the server is at a cool temperature
- B. Replace the RAM while the server is running
- C. Power down the server completely and then replace the RAM
- D. Verify that the OS supports hot swapping the RAM

**Answer: D**

#### Explanation:

Verify that the OS supports hot swapping the RAM. Before replacing the RAM on an entry-level server with hot-swappable components, the technician should verify that the operating system supports hot swapping of RAM.

#### NEW QUESTION 3

- (Topic 2)

A technician is adding one more line at the demarcation point. Which of the following tools would be MOST useful to accomplish this task?

- A. Toner
- B. Punchdown
- C. Network tap
- D. Crimper

**Answer: B**

#### Explanation:

Punchdown tools are used to make connections between wires in a 66/110 block at the demarcation point. The tool is used to insert the wire into the appropriate holes in the block, and it can be used to add additional lines to the demarcation point. The other options are not the correct tools for adding lines to the demarcation point. A toner is used to identify cable pairs, a network tap is used to monitor network traffic, and a crimper is used to terminate cables.

#### NEW QUESTION 4

- (Topic 2)

Which of the following allows all VMs in a virtual environment to have RAM allocated for use?

- A. Measured service
- B. Containerization
- C. Synchronization
- D. Resource pooling

**Answer: D**

#### Explanation:

The concept described in the question is related to virtualization and resource management in a virtual environment. The approach that allows all virtual machines (VMs) to have memory (RAM) allocated for use is known as resource pooling. Therefore, the correct answer is D: "Resource pooling." This approach allows resources to be allocated dynamically to VMs based on their current needs, and ensures that resources are used efficiently in the virtual environment.

Resource pooling is a technique used in virtualization to share resources among multiple virtual machines (VMs). With resource pooling, RAM can be allocated dynamically to VMs as needed, allowing all VMs in a virtual environment to have RAM allocated for use. References:

[https://en.wikipedia.org/wiki/Resource\\_pooling](https://en.wikipedia.org/wiki/Resource_pooling)

#### NEW QUESTION 5

- (Topic 1)

A technician is tasked with installing additional RAM in a desktop computer. Which of the following types of RAM is MOST likely to be used?

- A. SODIMM
- B. DDR3
- C. ECC
- D. VRAM

**Answer: B**

**Explanation:**

DDR3 is the most commonly used RAM type in modern desktop computers. It is faster and more energy efficient than its predecessors, and offers larger capacity modules. References: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 5

**NEW QUESTION 6**

- (Topic 1)

A user submitted a ticket to report an issue with a new printer that is no longer accepting new print jobs. The technician verifies the printer is on and notices the printer LCD screen has the following error message:

Paper Jam, Jam in fuser.

Which of the following is the MOST efficient next step the technician should complete?

- A. Apply a maintenance kit to the printer
- B. Check the printer paper path to locate any obstructions.
- C. Turn the printer on and off to see if the error clears.
- D. Replace the fuser.

**Answer: B**

**Explanation:**

The MOST efficient next step the technician should complete is to check the printer paper path to locate any obstructions<sup>1</sup>. The error message “Paper Jam, Jam in fuser” indicates that there is a paper jam in the fuser<sup>2</sup>. The fuser is one of the parts of a laser printer most likely to fail without giving any explicit message<sup>2</sup>. The printer LCD screen indicates a paper jam in the fuser. The most efficient next step the technician should complete is to check the printer paper path to locate any obstructions. Applying a maintenance kit or replacing the fuser may not be necessary if the issue is caused by a paper jam.

**NEW QUESTION 7**

- (Topic 1)

Which of the following would be BEST reason to use a virtual machine as a sandbox?

- A. To test new software in a safe environment
- B. To increase the efficient use of computing resources
- C. To run multiple machines on the same hardware
- D. To have dedicated hardware for a single system

**Answer: A**

**Explanation:**

The main reason to use a virtual machine as a sandbox is to test new software in a safe environment without risking the integrity of the host operating system. Using a virtual machine enables the testing of software and allows for the isolation of the software from the host system. References: CompTIA A+ Certification Study Guide, Tenth Edition, pg. 409

**NEW QUESTION 8**

DRAG DROP - (Topic 1)

An office manager reports that a printer is experiencing performance issues. Printouts are smudging when they are handled, and, recently, whenever the manager tries to print oversized documents, the paper jams before anything is printed on it.



- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**



### NEW QUESTION 9

- (Topic 1)

An organization has some computers running macOS and some computers running Windows. The computers running macOS also need to run a piece of software that is only available on Windows. Which of the following BEST describes the solution for running Windows software on a computer running macOS?

- A. Operating system spoofing
- B. Remote software provisioning
- C. Indirect software implementation
- D. Cross-platform virtualization

**Answer:** D

#### Explanation:

Cross-platform virtualization would be the best solution for running Windows software on a computer running macOS. This involves running a virtual machine (VM) on the macOS computer, which emulates a Windows environment and allows the Windows software to be installed and run within the VM. Cross-platform virtualization allows a computer running macOS to run Windows software. It involves creating a virtual machine on the macOS computer and installing a Windows operating system on it. References: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 1

### NEW QUESTION 10

- (Topic 1)

A technician is receiving reports that the entire office sporadically loses network connectivity throughout the day. The technician determines the root cause to be EMI. Which of the cable mediums would be the MOST cost effective without sacrificing system performance?

- A. Coaxial
- B. Shielded Cat 6
- C. Plenum Cat 5e
- D. Multimode fiber

**Answer:** B

#### Explanation:

Electromagnetic interference (EMI) is unwanted noise or interference in an electrical path or circuit caused by an outside source. Hence shielded Cat 6 is better. If a technician determines that the root cause of sporadic network connectivity issues is EMI, the most cost-effective cable medium that can be used without sacrificing system performance is shielded Cat 6 cable. Shielded cables protect against electromagnetic interference (EMI) and radio frequency interference (RFI). References: CompTIA A+ Certification All-in-One Exam Guide, Tenth Edition by Mike Meyers (Page 548)

### NEW QUESTION 10

- (Topic 1)

A user connects a smartphone to a laptop. Which of the following types of networks has the user created?

- A. PAN
- B. MAN
- C. WLAN
- D. LAN

**Answer:** A

#### Explanation:

When a user connects a smartphone to a laptop, they create a Personal Area Network (PAN). A PAN is a type of network used for communication between devices in close proximity to each other, typically within a range of a few meters or less. This type of network is commonly used for wireless communication between personal devices, such as connecting a smartphone to a laptop for file sharing or internet access. References: CompTIA A+ Certification Exam Objectives - 220-1001: 1.1 Explain common connectors and their uses.

### NEW QUESTION 14

- (Topic 1)

Which of the following would MOST likely be used to obtain electronic images of a large number of printed documents?

- A. NFC device
- B. ADF/flatbed scanner
- C. Camera/webcam
- D. QR scanner

**Answer: B**

**Explanation:**

ADF/flatbed scanner would most likely be used to obtain electronic images of a large number of printed documents. References: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 351

**NEW QUESTION 17**

- (Topic 1)

A computer that contains critical data has not been backed up and will not boot past a S.M. A. R. T, error that indicates imminent hard disk failure. Which of the following actions should the technician take FIRST?

- A. Run diagnostics on the faulty hard drive using a boot disk
- B. immediately replace the hard drive generating the SMART error
- C. Turn off
- D. T, monitoring in the computer's BIOS settings
- E. Attempt to boot the operating system in safe mode

**Answer: A**

**Explanation:**

The technician should run diagnostics on the faulty hard drive using a boot disk first when a computer that contains critical data has not been backed up and will not boot past a S.M.A.R.T. error that indicates imminent hard disk failure. References: CompTIA A+ Certification Exam Guide, Exam 220-1001, Page 376

**NEW QUESTION 20**

- (Topic 1)

Which of the following utilizes TCP ports 20/21 and transfers data in cleartext?

- A. SNMP
- B. SSH
- C. FTP
- D. Telnet

**Answer: C**

**Explanation:**

FTP (File Transfer Protocol) uses TCP ports 20/21 and transfers data in cleartext, which means the data is not encrypted and can be read by anyone who intercepts it. This makes FTP insecure for transferring sensitive information. SSH (Secure Shell), on the other hand, uses port 22 and encrypts data, making it more secure. SNMP (Simple Network Management Protocol) uses ports 161/162 and is used to monitor network devices. Telnet uses port 23 and transfers data in cleartext, making it insecure. References: CompTIA A+ Certification Exam: Core 1 - Page 199

**NEW QUESTION 23**

SIMULATION - (Topic 1)

A small ISP has hired a new technician Joe, the new technician, is being trained to configure customers\* home networks The trailing instructor gives me technician a starter kit with cables, cable ends, and other network equipment and asks mm to build a working network.

The computer should be connected to have internet connectivity and the phone should be connected to have a dial tone.

**INSTRUCTIONS**

Use the appropriate cables. cable ends, tools and equipment to configure the network ana connect an components accordingly

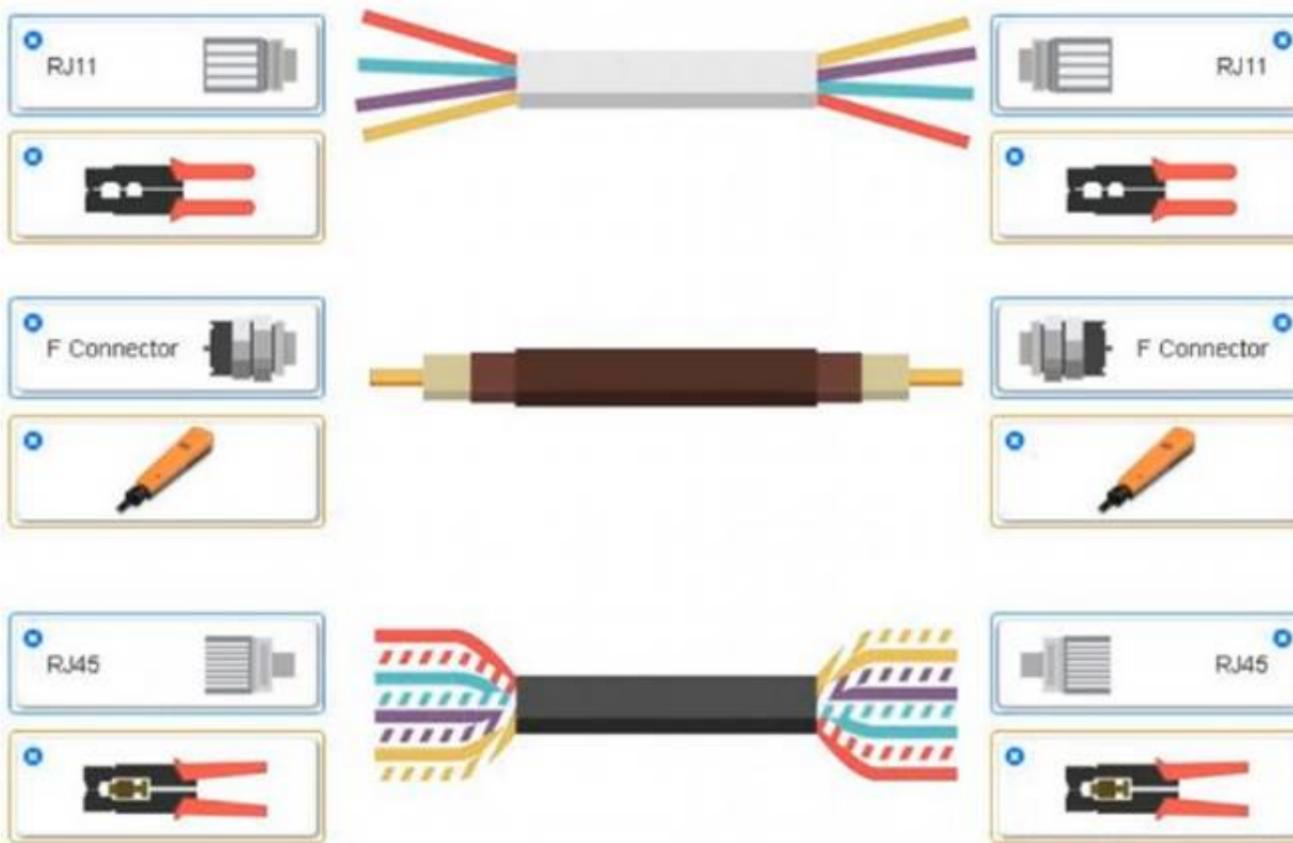
There are 3 steps and the simulation starts on step 1.



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:  
Answer of both steps below.



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Description automatically generated

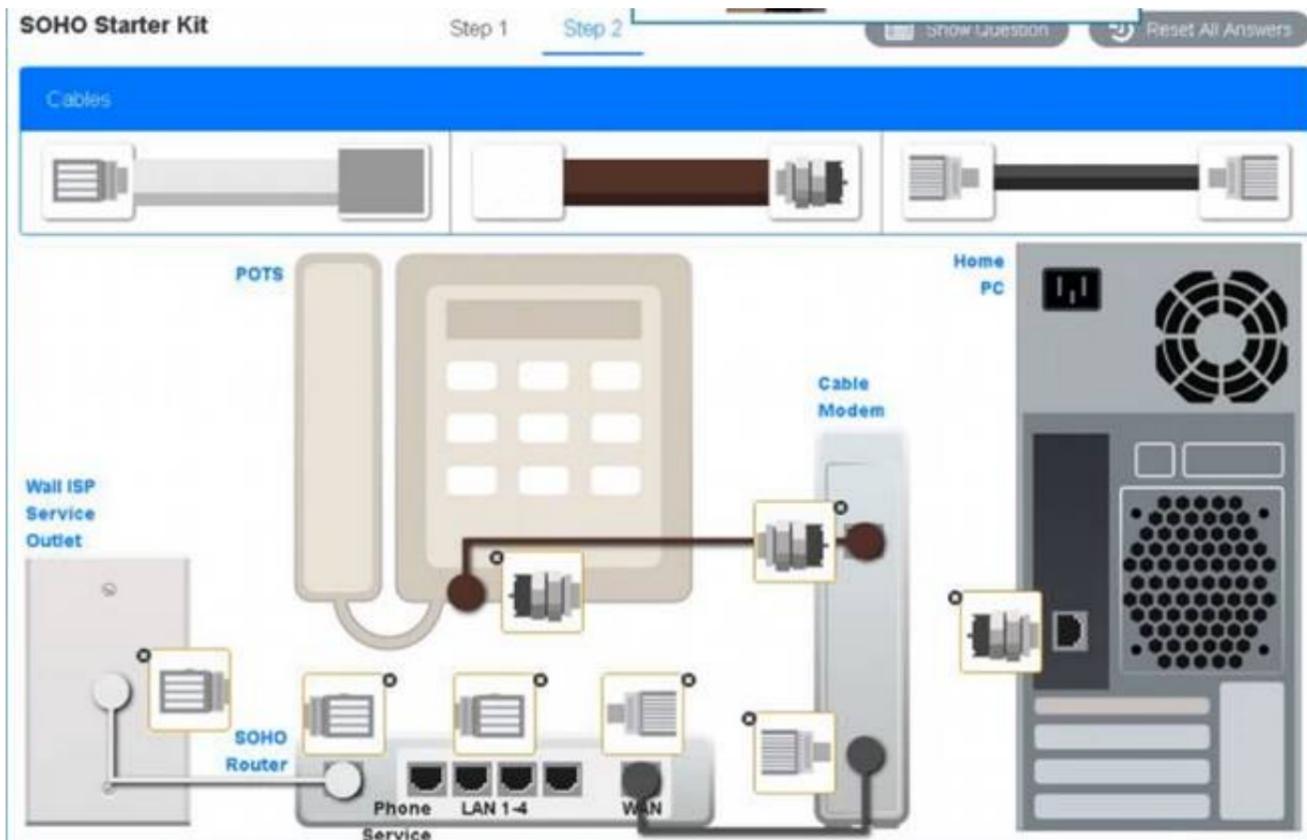


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**NEW QUESTION 26**

- (Topic 1)

A technician is setting up a new desktop computer and will be installing the hard drive directly on the motherboard without using cables to connect it. Which of the following will the technician be installing?

- A. Thunderbolt
- B. eSATA
- C. M.2
- D. SCSI

**Answer: C**

**Explanation:**

M.2 is a form factor for solid-state drives (SSDs) that enables direct attachment to the motherboard without the need for cables. Thunderbolt is a high-speed interface that supports data transfer, video output, and charging. eSATA is an external interface for connecting SATA devices. SCSI is an older interface standard for connecting hard drives, printers, and other peripherals. Installing a hard drive directly on the motherboard without using cables is usually done with an M.2 slot. References: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 5

**NEW QUESTION 31**

- (Topic 1)

Recently, an organization received a number of spam emails that passed through the spam gateway. The emails contained generally the same information, but the sending domains were different. Which of the following solutions would BEST help mitigate the issue?

- A. Updating the keyword filtering
- B. Editing the sender policy framework
- C. Contacting the gateway vendor
- D. Verifying DMARC is enabled

**Answer: D**

**Explanation:**

DMARC (Domain-based Message Authentication, Reporting and Conformance) is an email authentication protocol. It is designed to give email domain owners the ability to protect their domain from unauthorized use, commonly known as email spoofing.

**NEW QUESTION 34**

- (Topic 1)

A company just bought a printer capable of automatically printing on both sides of the paper. After installation, however, the technician can only print on both sides of the paper manually. Which of the following should the technician do to fix the issue?

- A. Install the most recent firmware upgrade available for the printer.
- B. Contact the vendor for a hardware replacement.
- C. Reinstall the printer software and drivers, and then restart the printer.
- D. Read the installation manual and configure duplex settings.

**Answer: D**

**Explanation:**

The issue described in the question is most likely due to an incorrect configuration of the printer's duplex settings. To enable automatic duplex printing, the technician needs to read the printer's installation manual to understand how to configure the printer's duplex settings correctly. Once the settings are configured, the printer should be able to print on both sides of the paper automatically. To fix the issue of a newly installed printer capable of automatically printing on both sides of the paper but only printing on both sides manually, the technician

should read the installation manual and configure duplex settings. Duplex printing settings can be configured in the printer driver software, which can be accessed through the printer settings in the Control Panel. Installing the most recent firmware upgrade available for the printer, contacting the vendor for a hardware replacement, or reinstalling the printer software and drivers and restarting the printer will not resolve the issue.

#### NEW QUESTION 37

- (Topic 1)

A user's mobile phone gets really hot to the touch and does not retain a charge. The user also reports that the phone is very slow, especially while charging. Which of the following is MOST likely causing these symptoms?

- A. Broken charging port
- B. Digitizer failure
- C. CPU overheating
- D. Defective battery

**Answer:** D

#### Explanation:

A defective battery is the most likely cause of a mobile phone that gets really hot to the touch, does not retain a charge, and is slow while charging. A defective battery can cause the phone to overheat and may also cause performance issues. References: CompTIA A+ Certification Exam Objectives 1001, 2.14

#### NEW QUESTION 39

- (Topic 1)

A Microsoft Windows user is preparing to work in another country and needs to comply with corporate policy for data protection when copying files to portable media. Which of the following solutions would MOST likely satisfy this requirement?

- A. A USB 3.1 flash drive with BitLocker to Go installed
- B. An SD memory card with NTFS
- C. An xD memory card with ext3
- D. A portable hard drive with FAT32

**Answer:** A

#### Explanation:

Using a USB 3.1 flash drive with BitLocker to Go installed is the best option for complying with corporate policy for data protection when copying files to portable media. References: CompTIA A+ Certification Exam Guide, Ninth Edition, Chapter 12

#### NEW QUESTION 44

- (Topic 1)

In which of the following places is a laptop's wireless antenna MOST likely located?

- A. Near the network interface card
- B. Underneath the battery
- C. Integrated into the motherboard
- D. In the bezel of the lid

**Answer:** D

#### Explanation:

According to Dell Community, the Wi-Fi antenna is located in the top of the LCD display housing. It consists of two elements, fed by two cables, a white main designated on the Wi-Fi card by a white triangle, and a black auxiliary designated on the Wi-Fi card by a black triangle.

#### NEW QUESTION 47

- (Topic 1)

A technician needs to improve a workstation's overall response time for frequently used applications and data without removing the current hard drive. Which of the following storage devices should the technician install to BEST accomplish the objective?

- A. M.2
- B. SAS
- C. HDD
- D. SCSI

**Answer:** A

#### Explanation:

Installing an M.2 SSD will improve a workstation's overall response time for frequently used applications and data without removing the current hard drive. M.2 drives are faster and more efficient than traditional hard drives, making them a good option for increasing overall performance. References: CompTIA A+ Certification Exam Core 1 Exam Objectives - 1.5 Given a scenario, configure storage devices and use appropriate media

#### NEW QUESTION 50

- (Topic 1)

A field technician has been dispatched to a site with an internet outage. Upon arriving, the technician discovers that the POTS lines are not working as well. Which of the following technologies is the site MOST likely using?

- A. Fiber
- B. Cable
- C. DSL
- D. Satellite

**Answer:** C

**Explanation:**

DSL (Digital Subscriber Line) uses POTS (Plain Old Telephone Service) lines to provide high-speed internet access. If the POTS lines are not working, it could cause an internet outage for DSL customers. Fiber and cable internet typically use different types of infrastructure, while satellite internet is not reliant on POTS lines. References: CompTIA A+ Certification Exam: Core 1 - Page 231

**NEW QUESTION 51**

- (Topic 1)

A technician installed new firmware on the company's laser printers and has since been receiving multiple calls that information is garbled and looks like code. Only printers with the new firmware are having this issue. Which of the following steps should the technician complete NEXT?

- A. Change the language settings on the printers
- B. Reboot all the machines having the issues
- C. Reboot all the printers.
- D. Install an updated printer driver on the print server

**Answer:** D

**Explanation:**

The MOST efficient next step the technician should complete is to install an updated printer driver on the print server<sup>2</sup>. The issue of information being garbled and looking like code could be related to a compatibility issue with the new firmware and the existing printer driver<sup>1</sup>. The printer driver is responsible for converting the print job data into a format that the printer can understand and print<sup>2</sup>.

**NEW QUESTION 53**

- (Topic 1)

Which of the following would an administrator use to migrate virtual machines from on premises to the cloud?

- A. IaaS
- B. SaaS
- C. DBaaS
- D. DRaaS

**Answer:** A

**Explanation:**

An administrator would use Infrastructure as a Service (IaaS) to migrate virtual machines from on-premises to the cloud. IaaS is a cloud computing service that provides virtualized computing resources, such as servers, storage, and networking, that can be used to deploy and run applications in the cloud. By using IaaS, an administrator can create a virtual machine in the cloud and migrate the existing virtual machine from on-premises to the cloud. References: CompTIA A+ Certification Exam: Core 1 - Objective 3.3

**NEW QUESTION 57**

- (Topic 1)

A network administrator was notified that laptop users are unable to access or ping any network resources on the corporate network. Which of the following should the network administrator check FIRST?

- A. DHCP
- B. AAA
- C. DNS
- D. ARP

**Answer:** C

**Explanation:**

Domain Name System (DNS) is an Internet service that translates domain names (e.g., its.umich.edu) into IP addresses. Dynamic Host Configuration Protocol (DHCP) is a protocol for automatically assigning IP addresses and other configurations to devices when they connect to a network.

**NEW QUESTION 62**

- (Topic 1)

A technician needs to install a cost-effective storage device into a rackmount server that will be used as a VM host. This storage will be used for all VMs that run from the server. Which of the following should be used?

- A. Optical disk drive
- B. eMMC storage device
- C. 15,000rpm drive
- D. RAID 10 array

**Answer:** D

**Explanation:**

RAID 10 array is often used for server virtualization as it provides both redundancy and performance benefits. It uses a combination of mirroring and striping to provide both fault tolerance and improved I/O performance. An optical disk drive or eMMC storage device would not provide enough storage or performance for a VM host server, while a 15,000rpm drive may provide good performance but would not provide redundancy for fault tolerance. Therefore, a RAID 10 array is the best option for cost-effective storage that will be used for all VMs that run from the server.

**NEW QUESTION 64**

- (Topic 1)

A user takes a tablet to a technician because the cursor on it keeps drifting. The technician notices the screen does not appear to be damaged. Which of the following is the MOST likely cause of the cursor issue?

- A. The screen is physically damaged.
- B. The screen rotation is incorrect.
- C. The touch-pen battery is depleted.
- D. The screen needs to be recalibrated.

**Answer: D**

**Explanation:**

The most likely cause of the cursor issue is that the screen needs to be recalibrated. This can happen when the tablet is used for a long time or when the tablet is dropped or bumped. Recalibrating the screen will help the tablet recognize the touch input more accurately.

**NEW QUESTION 65**

- (Topic 2)

A technical lead wants to migrate all common business applications, including email and fileshares, to the cloud. Which of the following cloud concepts should be used?

- A. MaaS
- B. PaaS
- C. SaaS
- D. IaaS

**Answer: C**

**Explanation:**

The cloud concept that should be used for migrating all common business applications, including email and fileshares, to the cloud is Software as a Service (SaaS).

**NEW QUESTION 67**

- (Topic 2)

A startup is looking to immediately expand its data center but does not have the personnel or space to manage everything internally. The organization has multiple small offices and remote users with large computational and storage-solution requirements. Funding is not an issue for the company. Which of the following can BEST accomplish the company's goals?

- A. SaaS
- B. IaaS
- C. ISP
- D. SON

**Answer: B**

**Explanation:**

IaaS is a cloud computing model where a third-party provider hosts infrastructure components such as servers, storage, and networking on behalf of customers. This allows the startup to immediately expand its data center without the need for additional personnel or space to manage everything internally. Additionally, IaaS allows remote users to easily access the required computational and storage resources from multiple small offices. Infrastructure as a Service (IaaS) can provide the startup with the necessary computational and storage solutions without the need for internal management. IaaS allows organizations to rent computing resources from a third-party provider instead of owning and maintaining them in-house.

**NEW QUESTION 72**

- (Topic 2)

A technician needs to install a printer on the network. Which of the following must the technician configure? (Select THREE).

- A. PCL
- B. Dots per inch
- C. Gateway
- D. Subnet mask
- E. MAC address
- F. MB
- G. IP address
- H. Drivers

**Answer: CDG**

**Explanation:**

When installing a printer on a network, the technician needs to configure the network settings, which include the IP address, subnet mask, and gateway. These settings are used to ensure that the printer can communicate with other devices on the network. When installing a printer on a network, the technician must configure the network settings of the printer to ensure that it can communicate with other devices on the network. This includes configuring the gateway, subnet mask and IP address of the printer.

The gateway is the device that connects the local network to other networks or the Internet. The subnet mask is used to determine which part of an IP address represents the network and which part represents individual hosts on that network. The IP address is a unique identifier for each device on a network.

**NEW QUESTION 75**

- (Topic 2)

Which of the following is the SAFEST way to replace RAM on a server that has a redundant power supply?

- A. Unplug one power cable.
- B. Verify the RAM temperature.

- C. Utilize a grounding strap.
- D. Replace the RAM while the server is running.

**Answer:** C

**Explanation:**

Utilizing a grounding strap is the safest way to replace RAM on a server that has a redundant power supply. This ensures that no static electricity is transferred to any of the server components, which could cause permanent damage. The other options are not the correct methods for replacing RAM. Unplugging one power cable is not recommended, as it could cause the server to go offline and disrupt any services that are running. Verifying the RAM temperature is not necessary and does not provide any additional safety measures, and replacing the RAM while the server is running is not recommended, as it could cause system instability.

**NEW QUESTION 76**

- (Topic 2)

Which of the following commonly uses NFC?

- A. Contactless payments
- B. IoT devices
- C. Inventory tracking
- D. Tethering

**Answer:** A

**Explanation:**

NFC (Near Field Communication) is a wireless communication technology that is commonly used for contactless payments, mobile payments, and other mobile transactions. It allows two devices to communicate with each other when they are placed in close proximity. Contactless payments commonly use NFC (Near Field Communication). NFC is a wireless communication technology that allows two devices to communicate with each other when they are in close proximity. Contactless payments use NFC to enable customers to make payments by simply tapping their contactless card or mobile device on a payment terminal.

**NEW QUESTION 79**

- (Topic 2)

Which of the following network types would be used in a server room to connect virtual servers to high-speed storage?

- A. WAN
- B. PAN
- C. MAN
- D. SAN

**Answer:** D

**Explanation:**

A Storage Area Network (SAN) is a dedicated, high-speed network that connects servers to data storage devices. SANs are used in server rooms to provide high-speed storage access to virtual servers.

**NEW QUESTION 81**

- (Topic 2)

A user is trying to play a DVD on a projector. The user can hear the audio; however, the projector is showing an error message that states:

HDMI Blocked due to Copy Protection

Which of the following is the MOST likely cause of the error?

- A. The HDMI cannot carry the signal from the DVD to the projector.
- B. The user needs to switch from HDMI to a cable standard such as DisplayPort.
- C. The projector does not support the necessary HDCP protocol.
- D. The user needs to enable copy-protected sources in the projector's settings.

**Answer:** C

**Explanation:**

The Official CompTIA® A+® Core 1 and Core 2 Student Guide (Exams 220-1101 and 220-1102) | 193 Protected content. If you encounter an error that indicates unauthorized content or an HDCP error: • DVI, HDMI, DisplayPort, and Thunderbolt all provide support for the Digital Rights Management (DRM) mechanism High-bandwidth Digital Content Protection (HDCP). HDCP allows a content source (such as a Blu-ray disc) to disable itself if the display adapter and monitor and/or speaker system do not support HDCP and fail to authenticate themselves with the playback source. There have been various iterations of HDCP (at time of writing the current version is 2.2) and backward-compatibility can be problematic as authentication may fail between devices that support different versions of the standard.

**NEW QUESTION 84**

- (Topic 2)

A client wants to connect an external keyboard to an Android tablet. Which of the following connection types are appropriate for this task? (Select TWO).

- A. DVI
- B. Infrared
- C. Lightning
- D. USB-C
- E. PS/2
- F. Bluetooth

**Answer:** DF

**Explanation:**

The appropriate connection types for connecting an external keyboard to an Android tablet are USB-C and Bluetooth.

#### NEW QUESTION 87

- (Topic 2)

Which of the following options provides correct information about 2.4GHz and 5GHz wireless frequencies? (Select TWO)

- A. 2.4GHz has less interference
- B. 5GHz transmits in lower speed.
- C. 2.4GHz penetrates solid objects more effectively
- D. 5GHz provides faster data connections.
- E. 2.4GHz has a higher data rate
- F. 5GHz has 23 channels.
- G. 2.4GHz has 11 channels
- H. 5GHz has no data interference.
- I. 2.4GHz has a higher coverage area
- J. 5GHz has higher bandwidth.
- K. 2.4GHz has a higher bandwidth
- L. 5GHz has lower transmit power.

**Answer:** BE

#### Explanation:

The correct answers are B. 2.4GHz penetrates solid objects more effectively. 5GHz provides faster data connections and E. 2.4GHz has a higher coverage area. 5GHz has higher bandwidth. The 2.4GHz frequency has a lower data rate compared to 5GHz, but it can penetrate solid objects more effectively and has a higher coverage area. The 5GHz frequency, on the other hand, provides faster data connections and has higher bandwidth, but it has fewer channels and lower transmit power.

#### NEW QUESTION 90

- (Topic 2)

A technician is inspecting a projector that is displaying fuzzy images. Which of the following actions would provide the BEST solution?

- A. Adjusting the lens
- B. Changing the filter
- C. Replacing the video cable
- D. Reseating the lamp

**Answer:** A

#### Explanation:

Adjusting the lens is the best solution to improve image quality in a projector. The lens can become misaligned over time or during transportation, causing the image to appear fuzzy.

#### NEW QUESTION 91

- (Topic 2)

A user is unable to plug a USB 3.0 device into a USB port. Upon inspection, a technician notices the USB 3.0 port appears to be slightly smaller than the other connections. Which of the following is the MOST likely cause?

- A. A foreign object is stuck inside the port
- B. The cable connection utilized the wrong orientation.
- C. The USB cable is physically damaged.
- D. The USB port belongs to a different form factor.

**Answer:** D

#### Explanation:

USB 3.0 ports are slightly smaller than other USB connections, so if the port appears to be the wrong size, it is likely that the port belongs to a different form factor. This can be caused by a number of factors, such as the device being too old to support USB 3.0, or the device not having a USB 3.0 port in the first place.

#### NEW QUESTION 94

- (Topic 2)

A technician is preparing to set up a gaming computer with the following components:

- ? Discrete, high-end graphics card
- ? Video capture card
- ? High-end processor
- ? Multiple hard drives
- ? USB 3.0 hub
- ? Sound card

Which of the following options is the MOST important for the technician to consider before building the gaming computer?

- A. Redundant power supply
- B. Modular power supply
- C. 20-pin v
- D. 24-pin power adapter
- E. Power supply wattage rating

**Answer:** D

#### Explanation:

This is because high-end graphics cards, processors, and multiple hard drives require a significant amount of power to operate. A power supply with insufficient

wattage could cause stability issues or even damage the components.

The CompTIA A+ Core1 certification guide emphasizes the importance of selecting an appropriate power supply for a computer build. In addition to wattage, other factors to consider when selecting a power supply include efficiency, modularity, and the number and type of connectors required to power the components. However, of the options listed, the wattage rating is the most critical consideration.

Therefore, the technician should ensure that the power supply they select has a wattage rating that is sufficient to power all the components in the gaming computer. It is always a good practice to select a power supply with a wattage rating that exceeds the estimated power usage of t

#### NEW QUESTION 98

- (Topic 2)

A salesperson is using a weather application on a mobile device. The application appears to be draining the device's battery very quickly. Which of the following is the BEST action for the salesperson to take in order to view weather forecasts while travelling?

- A. Enable the GPS service to ensure accurate location detection.
- B. Manually enter office locations in the weather application.
- C. Configure less frequent location checks using cellular location services.
- D. Use the offices' Wi-Fi IP addresses as the geolocation mechanism.

**Answer:** C

#### Explanation:

Reducing the frequency of location checks using cellular location services will consume less battery power while still allowing the user to view weather forecasts while travelling. The other options may not solve the battery drain issue while using the weather application.

Configuring less frequent location checks using cellular location services is the best option for the salesperson to view weather forecasts while traveling without draining the battery too quickly. References: <https://www.makeuseof.com/tag/5-ways-improve-battery-life-android-phone/>

#### NEW QUESTION 99

- (Topic 2)

A user sends a print job to a network printer, and the print job uses double the amount of paper as expected. Which of the following should the user configure to get the expected result?

- A. Duplex
- B. Collate
- C. Landscape
- D. Transparency

**Answer:** A

#### Explanation:

The user should configure the print job to use the Duplex option, which will print on both sides of the paper and reduce the amount of paper used.

#### NEW QUESTION 102

- (Topic 2)

A technician is working on a critical warehouse machine that will not turn on. The technician has determined the power supply for the machine failed. The warehouse manager is looking for a solution that will prevent downtime in the future. Which of the following devices should the technician install to meet this requirement?

- A. Grounded power supply
- B. Modular power supply
- C. 220V power supply
- D. Redundant power supply

**Answer:** D

#### Explanation:

A redundant power supply is a device that provides two or more power supplies connected in parallel so that when one fails, the other one will take over to ensure continuous power. This is ideal for critical warehouse machines that require a reliable power source and are at risk of downtime in the event of a power failure. Installing a redundant power supply will help to reduce the chances of an unexpected power outage and keep the machine running.

#### NEW QUESTION 106

- (Topic 2)

Which of the following is the MAXIMUM power PoE+ provides?

- A. 15.4W
- B. 30W
- C. 60W
- D. 95W

**Answer:** B

#### Explanation:

The earliest PoE switches from a few years ago generated 15 Watts per port (IEEE 802.3af). Today, most use the PoE+ standard (IEEE 802.3at), which generates up to 30 Watts per port. That's plenty for most devices that people want to connect

#### NEW QUESTION 108

- (Topic 3)

A technician needs to increase the available RAM on a virtual workstation. Which of the following should the technician do?

- A. Increase the ECC memory timings in the BIOS.

- B. Upgrade to the latest DDR5 modules.
- C. Clear the temporary files on the workstation's boot drive.
- D. Use a hypervisor to adjust the resource allocation.

**Answer:** D

**Explanation:**

A hypervisor is a software layer that manages and allocates resources for virtual machines (VMs) on a physical host machine. A technician can use a hypervisor to adjust the resource allocation for a virtual workstation, such as increasing the amount of RAM assigned to it from the available pool of memory on the host machine. This can improve the performance and functionality of the virtual workstation without requiring any hardware changes or modifications. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 59)

**NEW QUESTION 109**

- (Topic 3)

Following a scheduled power outage, users report they cannot access the local intranet. A technician is able to ping the IP address of the server that is hosting the website. Which of the following services is MOST likely offline?

- A. Web
- B. DNS
- C. File
- D. DHCP

**Answer:** B

**Explanation:**

DNS stands for Domain Name System and is a service that translates domain names (such as [www.example.com](http://www.example.com)) into IP addresses (such as 192.168.1.100) that computers can use to communicate over a network. If the DNS server is offline, users may not be able to access websites or other network resources by using their domain names, even if they are online and reachable by their IP addresses. The technician should check if the DNS server is running and configured correctly, or use an alternative DNS server if possible. Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 81)

**NEW QUESTION 111**

- (Topic 3)

A technician is replacing all RJ45 cables in a customer environment. Which of the following are the BEST tools to execute the task? (Select TWO).

- A. Optical fiber tester
- B. Scissors
- C. Cable tester
- D. Crimper
- E. Coaxial cable
- F. Screwdriver

**Answer:** CD

**Explanation:**

A cable tester and a crimper are the best tools to execute the task of replacing all RJ45 cables in a customer environment. A cable tester can be used to check the continuity and quality of a cable, and a crimper can be used to attach RJ45 connectors to the ends of a cable. An optical fiber tester is a tool that can be used to test fiber optic cables, which are not RJ45 cables. Scissors are not a tool for replacing cables, but for cutting them. A coaxial cable is a type of cable that has a single copper conductor at its center, which is not an RJ45 cable either. A screwdriver is not a tool for replacing cables, but for fastening or loosening screws.

**NEW QUESTION 114**

- (Topic 3)

An end user needs to upgrade the hard drive on a laptop and wants one that is fast and shock resistant. Which of the following is the BEST option for this end user?

- A. Hybrid HDD/SSD
- B. 5,400rpm HDD
- C. 7,200rpm HDD
- D. NVMe SSD

**Answer:** D

**Explanation:**

A non-volatile memory express (NVMe) solid state drive (SSD) is the best option for an end user who wants to upgrade the hard drive on a laptop and wants one that is fast and shock resistant. NVMe SSDs use flash memory and PCIe interface to achieve high performance and low latency. SSDs are also more shock resistant than hard disk drives (HDDs) because they have no moving parts. Hybrid HDD/SSD combines both technologies but does not offer the same speed or capacity as pure SSDs. A 5,400rpm HDD or a 7,200rpm HDD are slower and less shock resistant than SSDs.

**NEW QUESTION 119**

- (Topic 3)

A technician is on site troubleshooting a customer's laptop. The technician needs to download a software update but the company's proxy is blocking updates. Which of the following would be the MOST appropriate action for the technician to take to get the update?

- A. Connect to a hotspot
- B. Request a traffic exemption.
- C. Change the DNS address to 1.1.1.1
- D. Update the Group Policy settings

**Answer:** B

**Explanation:**

If a technician is on site troubleshooting a customer's laptop and needs to download a software update but the company's proxy is blocking updates, the most appropriate action for the technician to take would be to request a traffic exemption from the company's IT department.

**NEW QUESTION 124**

- (Topic 3)

A technician receives an alert indicating all VMs are down. After some troubleshooting, the technician discovers the network is out of space. To resolve the issue, the technician decides to add more space. Which of the following network types will the technician be working with?

- A. SCSI
- B. NAC
- C. SAN
- D. WISP

**Answer: C**

**Explanation:**

A storage area network (SAN) is the type of network that the technician will be working with when adding more space to resolve the issue of all VMs being down due to the network being out of space. A SAN is a network that provides access to consolidated and block-level data storage, which can be used for virtualization and backup purposes. SCSI is a type of interface that connects devices such as hard drives and optical drives to a computer. NAC is a type of security solution that controls access to a network based on policies and device compliance. WISP is a type of internet service provider that delivers wireless broadband access over long distances.

**NEW QUESTION 126**

- (Topic 3)

A technician is troubleshooting a laptop that has a blank LCD panel. The technician shines a flashlight into the LCD and sees a faint image. Which of the following BEST describes the issue?

- A. Defective inverter
- B. Incomplete video driver
- C. Incorrect input source
- D. Burned-out bulb

**Answer: A**

**Explanation:**

An inverter is a device that converts DC power from the laptop's battery or AC adapter to AC power for the backlight of the LCD panel. If the inverter is defective, the backlight will not work and the LCD panel will appear blank or very dim. The user can still see a faint image if they shine a flashlight into the LCD because the LCD itself is still working.

**NEW QUESTION 129**

- (Topic 3)

A user's laptop is experiencing severe slowdowns when operating process-intensive tasks. Which of the following memory upgrades is compatible with a laptop?

- A. DIMM
- B. ECC RAM
- C. Virtual RAM
- D. SODIMM

**Answer: D**

**Explanation:**

SODIMM stands for Small Outline Dual In-line Memory Module and is a type of memory module that is compatible with laptops and other small devices. SODIMMs are smaller and thinner than DIMMs (Dual In-line Memory Modules), which are typically used for desktop PCs and servers. Upgrading or adding SODIMMs can increase the amount of RAM available for a laptop, which can improve its performance and speed when running process-intensive tasks. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-series-combined-content-guide> (page 24)

**NEW QUESTION 130**

- (Topic 3)

A desktop support technician receives an escalated ticket regarding a computer that displays the following message upon booting up: The amount of system memory has changed. Which of the following components is failing?

- A. GPU
- B. HDD
- C. RAM
- D. CPU

**Answer: C**

**Explanation:**

The message "The amount of system memory has changed" indicates that there is a problem with the random access memory (RAM) modules in the computer. The RAM may be loose, faulty, or incompatible with the motherboard or other components. The GPU, HDD, and CPU are not directly related to system memory and would not cause this message to appear.

**NEW QUESTION 134**

- (Topic 3)

A company would like to take advantage of the cost savings of cloud computing by only paying for the resources used. Which of the following will BEST address

this need?

- A. Shared resources
- B. Rapid elasticity
- C. Metered utilization
- D. High availability

**Answer: C**

**Explanation:**

Metered utilization is a cloud feature that allows cloud providers to charge customers based on their actual consumption of resources, such as CPU time, storage space, bandwidth, or transactions. This enables customers to pay only for the resources they use, rather than a fixed or flat rate, which can reduce costs and increase efficiency. Metered utilization can also provide more transparency and accountability for both cloud providers and customers, as they can track and monitor their resource usage and billing. Reference: <https://partners.comptia.org/docs/default-source/resources/a-core-1-content-guide> (page 97)

**NEW QUESTION 139**

- (Topic 3)

A technician needs to install RAM into a rackmount server that will be used as a VM host. Which of the following would be BEST to install?

- A. SODIMM
- B. VRAM
- C. DDR4
- D. ECC

**Answer: D**

**Explanation:**

When installing RAM into a server that will be used as a VM host, it is recommended to install ECC (Error-Correcting Code) RAM to help prevent errors that can cause virtual machines to crash. References: <https://www.servermonkey.com/blog/ecc-vs-non-ecc-ram-what-are-the-differences.html>

When installing RAM into a rackmount server that will be used as a VM host, it would be best to install ECC (Error Correcting Code) RAM which can detect and correct common types of data corruption.

**NEW QUESTION 140**

- (Topic 3)

Which of the following virtualization technologies allows Linux and Windows operating system to run concurrently?

- A. Test environment
- B. Sandbox
- C. Legacy OS
- D. Cross-platform

**Answer: D**

**Explanation:**

Reference: <https://www.comptia.org/training/books/a-core-1-220-1101-study-guide> (page 59)

**NEW QUESTION 143**

- (Topic 3)

A laptop does not have any audio output from the built-in speakers. The Windows Device Manager shows a down arrow for the audio device. Which of the following will correct this audio issue?

- A. Replacing the speakers
- B. Increasing the volume
- C. Enabling the audio device
- D. Updating the driver

**Answer: C**

**Explanation:**

Enabling the audio device is the correct action to correct an audio issue where a laptop does not have any audio output from the built-in speakers and Windows Device Manager shows a down arrow for the audio device. A down arrow indicates that the audio device is disabled and needs to be enabled by right-clicking on it and selecting Enable device. Replacing the speakers, increasing the volume, or updating the driver are unlikely to solve the issue if the audio device is disabled.

**NEW QUESTION 148**

- (Topic 3)

A user's touch-screen tablet is having an issue with the screen orientation. Which of the following is MOST likely causing this issue?

- A. The screen rotation is locked
- B. The screen protector on the tablet is damaged
- C. The touch-screen digitizer is malfunctioning
- D. The inverter is misconfigured

**Answer: A**

**Explanation:**

The screen rotation is locked. If a user's touch-screen tablet is having an issue with screen orientation, it could be due to screen rotation being locked in device settings.

If the screen rotation is locked, the touch-screen tablet will not rotate the screen when the device is turned. This can usually be unlocked in the settings or by

pressing a specific key combination. References: <https://www.howtogeek.com/254132/how-to-enable-screen-rotation-on-windows-10/>

#### NEW QUESTION 153

- (Topic 3)

A company uses legacy accounting software, and no replacement is available. Which of the following virtualization solutions will the company MOST likely select?

- A. Network
- B. Storage
- C. Desktop
- D. Sandbox

**Answer:** D

#### Explanation:

A sandbox is a virtualization solution that allows a legacy application to run in an isolated environment without affecting other applications or systems. A sandbox can emulate an older operating system or hardware configuration that is compatible with the legacy software. A hybrid cloud is a combination of public and private cloud services that share data and resources. Infrastructure as a service is a cloud computing model that provides servers, storage, networking, and software over the internet. Public cloud is a cloud computing model that provides services and resources to anyone over the internet. Private cloud is a cloud computing model that provides services and resources to a specific organization or group over a private network.

#### NEW QUESTION 154

- (Topic 3)

An administrator chose a shared-tenant model for a cloud deployment. Which of the following is the MOST likely reason the administrator chose this model?

- A. Cost savings
- B. Highly available
- C. Dedicated hardware
- D. Increased security

**Answer:** A

#### Explanation:

The shared-tenant model for a cloud deployment, also known as a multi-tenant model, allows multiple customers to use the same resources and infrastructure of the cloud service provider, with each customer's data and applications isolated from one another. This model is often chosen for cost savings, as resources are shared and users only pay for what they use. Therefore, the MOST likely reason that an administrator chose this model is A. Cost savings.

#### NEW QUESTION 155

- (Topic 3)

An organization keeps receiving spam that appears to come from its own domain. No accounts have been compromised. Which of the following will BEST mitigate this issue?

- A. DNS
- B. S/MIME
- C. SPF
- D. SSID

**Answer:** C

#### Explanation:

The BEST solution to mitigate spam that appears to come from an organization's own domain is to implement SPF (Sender Policy Framework). SPF is an email validation protocol designed to detect and prevent email spoofing, which is a common tactic used by spammers. By publishing SPF records in the organization's DNS (Domain Name System), the recipient's mail server can check if an incoming email originated from a valid source. If the email fails SPF authentication, it can be blocked or flagged as spam. Therefore, SPF helps to prevent email spoofing and mitigate the risk of spam coming from an organization's own domain.

#### NEW QUESTION 157

- (Topic 3)

A user's desktop computer slows down after a few minutes of use, and the fans alternate between silent and very loud. Which of the following is MOST likely failing, therefore causing these symptoms?

- A. CPU fan
- B. Memory
- C. Power supply
- D. Hard drive

**Answer:** A

#### Explanation:

A CPU fan is a component that cools down the CPU, which is the main processor of the computer. If the CPU fan is failing, it can cause the computer to slow down and the fans to alternate between silent and very loud. This is because the CPU fan cannot maintain a consistent speed and airflow to keep the CPU at a safe temperature.

When the CPU gets too hot, it throttles its performance to avoid overheating, which results in a slower computer. The other fans in the computer also try to compensate for the lack of cooling from the CPU fan by spinning faster and louder.

#### NEW QUESTION 162

- (Topic 3)

A user wants RAID to be configured on a desktop to allow the fastest speed and maximum storage capacity. Which of the following RAID types should a technician configure to accommodate this request?

- A. 1
- B. 5
- C. 10

**Answer:** A

**Explanation:**

RAID 0 is a configuration that stripes data across multiple disks without parity or redundancy. It provides the fastest speed and maximum storage capacity among the RAID types listed, but it also has no fault tolerance. RAID 1 mirrors data across two disks, providing redundancy but halving the storage capacity. RAID 5 stripes data across three or more disks with parity, providing fault tolerance but reducing the storage capacity by one disk. RAID 10 combines mirroring and striping across four or more disks, providing both speed and redundancy but reducing the storage capacity by half.

**NEW QUESTION 164**

- (Topic 4)

A customer's phone no longer charges fully The phone only charges to 67% and then stops\_ Which of the following should be replaced to resolve this issue?

- A. The phone
- B. The charger
- C. The battery
- D. The SD card

**Answer:** C

**Explanation:**

The correct answer is C. The battery.

The battery is the component that stores and provides electrical power to the phone. The battery can degrade over time and lose its capacity to hold a full charge. This can cause the phone to stop charging at a certain percentage and run out of power faster. To resolve this issue, the battery should be replaced with a new one that is compatible with the phone model and manufacturer.

To replace the battery, the customer may need to follow different steps depending on the type of phone and battery. Some phones have removable batteries that can be easily accessed by opening the back cover of the phone and sliding out the old battery. Other phones have non-removable batteries that are sealed inside the phone and require special tools and skills to open the phone and disconnect the old battery. In this case, the customer may need to contact the phone manufacturer or a professional service center for assistance.

Reference: Troubleshooting Mobile Devices – CompTIA A+ 220-1101 – 5.5

**NEW QUESTION 169**

- (Topic 4)

Which of the following best describes metered utilization for cloud computing?

- A. Cloud resources are billed to clients based on usage.
- B. Cloud resources are shared with other companies conducting similar business.
- C. Cloud resources are available at a fixed amount for a fixed price.
- D. Cloud resources are located in the on-site data center.

**Answer:** A

**Explanation:**

Metered utilization for cloud computing is a pricing model where cloud service providers charge clients based on the amount of resources they consume, such as network bandwidth, storage space, CPU cycles, or memory. This allows clients to pay only for what they use, rather than a fixed amount or a subscription fee. Metered utilization can also enable clients to scale their cloud resources up or down according to their needs and demand.

References: The following web search results provide more information about metered utilization for cloud computing:

? Understanding Metered Billing For Cloud Infrastructure - Togai: This article explains the concept of metered billing, its advantages, and how it works for cloud infrastructure services.

? Usage Metering and Throttling in Cloud Computing: This article discusses the importance of metering and throttling in cloud computing, and how they are implemented in WSO2 Stratos, a cloud platform as a service (PaaS) solution.

? Cloud Volumes Service Metered Billing: Control Your Cloud ... - NetApp: This article describes how NetApp's Cloud Volumes Service offers metered billing for cloud storage, and how it can help clients reduce their cloud costs and optimize their performance.

**NEW QUESTION 172**

- (Topic 4)

A company wants to save money by leveraging the cloud while still being able to customize the infrastructure. Which of the following cloud models would best address the company's needs?

- A. Private
- B. Public
- C. Hybrid
- D. Community

**Answer:** C

**Explanation:**

A hybrid cloud model would best address the company's needs of saving money by leveraging the cloud while still being able to customize the infrastructure. A hybrid cloud model is a combination of public and private cloud services, connected by a secure network. A public cloud service is a cloud service that is offered by a third-party provider over the Internet, and is shared by multiple customers. A private cloud service is a cloud service that is dedicated to a single customer, and is hosted either on-premises or by a third-party provider. A hybrid cloud model allows the company to use the public cloud for cost-effective and scalable services, such as storage, backup, or analytics, and use the private cloud for more sensitive or customized services, such as security, compliance, or performance. A hybrid cloud model also enables the company to move workloads between the public and private cloud as needed, depending on the demand, availability, or cost. A hybrid cloud model can provide the company with the best of both worlds: the flexibility and efficiency of the cloud, and the control and customization of the infrastructure.

References:

? What is Hybrid Cloud? | IBM1

- ? Hybrid Cloud Computing | Microsoft Azure2
- ? Cloud Deployment Models: Explaining and Comparing the 5 Main Models ...3

#### NEW QUESTION 176

- (Topic 4)

A customer's Windows tablet PC was dropped and is no longer responding to touch input on the left half of the screen. The screen protector has several scratches, but the glass is not broken. Which of the following should a technician do to diagnose the issue?

- A. Test the digitizer
- B. Update the device drivers.
- C. Replace the damaged screen protector
- D. Perform a factory reset.

**Answer:** A

#### Explanation:

The digitizer is the component that converts the touch input into electrical signals that are processed by the tablet. If the digitizer is damaged or malfunctioning, it may not register the touch input correctly or at all. The technician can test the digitizer using a diagnostic tool or by replacing it with a known good one. Updating the device drivers, replacing the damaged screen protector, or performing a factory reset are unlikely to fix the issue, as they do not address the hardware problem.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 16.

#### NEW QUESTION 180

- (Topic 4)

A technician is configuring a desktop RAID to allow for the best I/O performance and the most storage capacity possible. Which of the following RAID types should the technician use?

- A. 5
- B. 6
- C. 10

**Answer:** A

#### Explanation:

RAID 0 is a disk array configuration that splits data across two or more disks without parity or mirroring. RAID 0 provides the best I/O performance because it allows parallel read and write operations on multiple disks. RAID 0 also provides the most storage capacity possible because it does not use any disk space for redundancy. However, RAID 0 does not provide any fault tolerance and increases the risk of data loss if any disk fails. References: The Official CompTIA A+ Core 1 Student Guide (Exam 220-1101) eBook, page 252

#### NEW QUESTION 181

- (Topic 4)

A remote user is unable to access files at home but can open the files at the office. Which of the following should a technician check so the user can access the files both places?

- A. Network drive remote access
- B. Local user account
- C. Remote fileshare permissions
- D. Offline file settings

**Answer:** D

#### Explanation:

One possible reason why a remote user is unable to access files at home but can open the files at the office is that the offline file settings are not configured properly. Offline files are a feature of Windows that allows users to access files and folders that are stored on a network drive even when they are not connected to the network. Offline files are cached copies of the network files that are stored on the local computer and synchronized with the network files when the connection is restored.

To use offline files, the user needs to enable the feature on their computer and on the network drive that contains the files they want to access. The user also needs to make sure that the files and folders they want to access are available offline, which means they are marked for offline synchronization. The user can check and change these settings by following these steps:

? Open Control Panel and select Network and Internet > Sync Center > Manage offline files.

? In the Offline Files window, click Enable offline files if the feature is disabled, and then click OK.

? Restart the computer to apply the changes.

? Open File Explorer and navigate to the network drive that contains the files and folders the user wants to access.

? Right-click the files and folders and select Always available offline. A green sync icon will appear next to the items that are available offline.

? To manually sync the offline files with the network files, open Sync Center and click Sync All.

By doing this, the user should be able to access the files and folders on the network drive even when they are at home or away from the office. However, the user should also be aware of some limitations and risks of using offline files, such as:

? Offline files may not reflect the latest changes made by other users on the network, and may cause conflicts or errors when syncing.

? Offline files may take up a lot of disk space on the local computer, and may affect the performance or stability of the system.

? Offline files may be vulnerable to theft, loss, or damage if the local computer is not secured or backed up.

Therefore, the user should always backup their important files and folders, and use encryption or password protection to safeguard their offline files.

References:

? Make a network file or folder available offline - Windows Client1

? How to use offline files in Windows 10 - The Windows Club2

? Offline Files - Enable or Disable the Use Of - Windows 7 Help Forums3

#### NEW QUESTION 182

- (Topic 4)

Which of the following server roles does RADIUS perform?

- A. DNS
- B. AAA
- C. Mail server
- D. Syslog

**Answer: B**

**Explanation:**

AAA stands for Authentication, Authorization, and Accounting, and it is a framework that provides security services for network access control. Authentication verifies the identity of a user or device that requests access to a network resource. Authorization determines what level of access or privileges are granted to a user or device based on their identity or role. Accounting tracks and records the usage of network resources by users or devices for billing or auditing purposes. RADIUS (Remote Authentication Dial-In User Service) is a protocol that implements AAA functions by communicating with a central server that stores user credentials and policies.

**NEW QUESTION 186**

- (Topic 4)

A network engineer recently deployed a new application server in a cloud environment. Which of the following should be implemented to prevent a single point of failure within the system?

- A. Rapid elasticity
- B. RAID
- C. High availability
- D. Shared resources

**Answer: C**

**Explanation:**

High availability is a design principle that ensures a system or service can operate continuously without significant downtime or disruption. High availability can be achieved by implementing redundancy, failover, load balancing, and backup strategies. High availability can prevent a single point of failure within the system, which means that if one component fails, another one can take over its function. Rapid elasticity is the ability to scale up or down the resources of a system according to the demand, but it does not prevent a single point of failure. RAID is a method of storing data across multiple disks to provide redundancy and performance, but it does not prevent a single point of failure at the server level. Shared resources are the resources that are pooled and accessed by multiple users or systems, but they do not prevent a single point of failure either. References: <https://www.comptia.org/blog/what-is-cloud-computing>

**NEW QUESTION 189**

- (Topic 4)

A user attempts to connect a laptop to a projector but receives the following message from the projector: Out of Range. Which of the following needs to be addressed first?

- A. Change the resolution settings.
- B. Check the video cable and replace it if necessary.
- C. Set the computer's display settings to extend/duplicate.
- D. Verify that the laptop video card driver is the most up-to-date version.

**Answer: A**

**Explanation:**

The most likely answer is A. Change the resolution settings.

The error "Out of Range" normally means that the resolution being output by the computer is not compatible with the projector. The resolution is the number of pixels that are displayed on the screen. If the resolution is too high for the projector, it may not be able to display the image correctly or at all.

To resolve this issue, you should try lowering the resolution settings on your laptop to match the native resolution of the projector or a lower one. You can do this by following these steps:

- Right-click on an empty area of your desktop and select Display settings.
- Under Scale and layout, click on Display resolution and choose a lower option from the drop-down menu.
- Click Apply and then Keep changes.
- Reconnect your laptop to the projector and check if the image is displayed properly.

If changing the resolution settings does not help, you may need to check other factors,

such as the video cable, the display settings, or the video card driver. However, these are less likely to cause the "Out of Range" error than the resolution settings.

**NEW QUESTION 190**

- (Topic 4)

Which of the following external monitor connections provides the highest possible resolution for a PC?

- A. Thunderbolt
- B. DVI
- C. VGA
- D. HDMI
- E. DisplayPort

**Answer: E**

**Explanation:**

DisplayPort is a type of external monitor connection that provides the highest possible resolution for a PC. DisplayPort supports up to 8K resolution at 60 Hz, or 4K resolution at 120 Hz, with a maximum bandwidth of 32.4 Gbps. DisplayPort also supports audio, multiple monitors, and adaptive sync. DisplayPort is compatible with other types of connections, such as HDMI and DVI, with adapters.

References: The Official CompTIA A+ Core 1 Student Guide (Exam 220-1101) eBook, page 3-9.

### NEW QUESTION 191

- (Topic 4)

A technician just finished building a new PC and needs to install a firmware update for the system board UEFI. The technician is experiencing issues while accessing the USB key. Which of the following features should the technician most likely disable in order to complete this task?

- A. TPM security
- B. USB 3.0 support
- C. PXE boot capability
- D. Secure Boot

**Answer: D**

#### Explanation:

Secure Boot is a feature of UEFI (Unified Extensible Firmware Interface) that prevents unauthorized software from running during the boot process. Secure Boot verifies the digital signature of the boot loader and the operating system, and only allows them to run if they are signed by a trusted authority. However, Secure Boot can also prevent some legitimate software, such as firmware updates, from running if they are not signed or recognized by the system. Therefore, the technician may need to disable Secure Boot in order to install a firmware update for the system board UEFI from a USB key<sup>34</sup>. The other features are not likely to interfere with the firmware update, unless they are misconfigured or incompatible with the USB key.

References

3: bios - Can't enable secure boot in Windows 11 4: Acer aspire e5-571 Legacy Secure Boot?

### NEW QUESTION 193

- (Topic 4)

A technician is troubleshooting a laptop that displays a blank screen when the user turns it on. The technician shines a flashlight into the LCD and sees a faint image. Which of the following is the most likely cause of the issue?

- A. Defective inverter
- B. Incompatible video driver
- C. Incorrect input source
- D. Burned-out bulb

**Answer: A**

#### Explanation:

The most likely cause of the issue is a defective inverter. An inverter is a device that converts the direct current (DC) power from the laptop battery or adapter to the alternating current (AC) power that the LCD backlight bulb needs. The backlight bulb is a fluorescent lamp that illuminates the LCD screen and makes the image visible. If the inverter is defective, it may not provide enough power to the backlight bulb, or it may stop working intermittently. This can result in a dim, dark, or blank screen, even though the LCD panel is still functioning and displaying a faint image.

To troubleshoot a defective inverter, the technician can follow these steps:

? Connect an external monitor to the laptop and check if the image is displayed normally. If the external monitor works fine, it means that the laptop video card and driver are not the cause of the issue.

? Shine a flashlight into the LCD screen and look for a faint image. If the image is visible, it means that the LCD panel is not the cause of the issue.

? Check the inverter cable and connector for any damage, loose connection, or corrosion. The inverter cable is a thin wire that runs from the laptop motherboard to the inverter board, which is usually located at the bottom of the LCD screen. The inverter connector is a small plug that connects the inverter cable to the inverter board. The technician can try to reseat the inverter cable and connector, or replace them if they are faulty.

? Check the inverter board for any damage, burn marks, or blown fuses. The inverter board is a small circuit board that contains the inverter and other components. The technician can try to test the inverter board with a multimeter, or replace it if it is defective.

References:

? How to fix laptop screen flickering problem - Windows 10<sup>1</sup>

? How to Fix a Laptop Screen That's Flickering, Black, or Has Lines<sup>2</sup>

? How to Fix a Dim Laptop Screen | Techwalla<sup>3</sup>

? How to Test a Laptop Inverter | It Still Works<sup>4</sup>

? How to Replace a Laptop Inverter Board | Chron.com<sup>5</sup>

### NEW QUESTION 194

- (Topic 4)

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

- A. The network works more quickly.
- B. Applications are easier to learn.
- C. RAM works more efficiently.
- D. The overall IT cost goes down.
- E. OS performance is superior.
- F. Upgrading applications is easier.

**Answer: DF**

#### Explanation:

The correct answers are D. The overall IT cost goes down and F. Upgrading applications is easier.

Application virtualization is a technology that allows users to run applications without installing them on their devices. The applications are stored and executed on a remote server, and the users can access them through a network connection. Application virtualization has several benefits, such as<sup>12</sup>:

•The overall IT cost goes down: Application virtualization reduces the need for hardware, software, and maintenance costs, as the applications are centralized and managed on the server side. This also saves energy and space, as fewer physical machines are required to run the applications. Additionally, application virtualization can reduce licensing costs, as the applications can be delivered on-demand and based on usage.

•Upgrading applications is easier: Application virtualization simplifies the process of updating and patching applications, as the changes can be made on the server side and pushed to the users instantly. This eliminates the need for manual installation and configuration on each device, and ensures that all users have the latest version of the applications.

Other benefits of application virtualization include<sup>123</sup>:

•Allows the running of legacy apps: Application virtualization can enable users to run

applications that are developed for older or incompatible operating systems, such as Windows 7 or XP. This can extend the lifespan of legacy applications and avoid compatibility issues.

- Enables cross-platform operations: Application virtualization can allow users to run applications that are designed for different platforms, such as Windows apps on iOS, Android, macOS, or Chrome OS. This can increase the accessibility and mobility of the applications and enhance the user experience.
- Improves security and compliance: Application virtualization can isolate the applications from the underlying operating system and hardware, preventing malware or unauthorized access from affecting them. This can also protect the data and settings of the applications from being tampered with or lost. Furthermore, application virtualization can help enforce compliance policies and regulations, as the applications can be controlled and monitored by the server.

References:

1: 5 Benefits of Virtualization - IBM Blog

2: Benefits of Application Virtualization - AppsAnywhere 3: What is Application Virtualization? | VMware Glossary

#### NEW QUESTION 195

- (Topic 4)

An administrator is using an RJ45 connector to terminate a network cable. Which of the following cables is the administrator terminating?

- A. Optical
- B. Serial
- C. Cat 6
- D. USB

**Answer: C**

#### Explanation:

The correct answer is C. Cat 6.

An RJ45 connector is a standard type of physical connector for network cables. RJ45 connectors are used almost exclusively with Ethernet cables and networking<sup>1</sup>. Ethernet cables are twisted pair cables that carry data signals between devices on a network, such as computers, routers, switches, and servers<sup>2</sup>. There are different categories of Ethernet cables, such as Cat 5, Cat 5e, Cat 6, and Cat 7, that have different specifications and performance levels. Cat 6 is one of the most common types of Ethernet cables, which supports data transfer speeds up to 10 Gbps and bandwidth up to 250 MHz<sup>3</sup>. Cat 6 cables have four pairs of copper wires, each with a plastic insulation and a foil or braided shield. The wires are twisted together to reduce crosstalk and interference<sup>4</sup>.

To terminate a Cat 6 cable, an administrator needs to use an RJ45 connector that matches the wiring scheme of the cable. There are two common wiring schemes for Ethernet cables: T568A and T568B. The administrator needs to strip the cable jacket, untwist the wires, arrange them in the correct order according to the chosen scheme, trim the excess wire, and insert them into the RJ45 connector. Then, the administrator needs to use a crimping tool to secure the wires and the connector<sup>4</sup>.

Optical cables are not terminated with RJ45 connectors, but with different types of connectors that can transmit light signals, such as SC, ST, LC, or MTRJ connectors. Optical cables are used for fiber-optic networks that can carry data over long distances at high speeds.

Serial cables are not terminated with RJ45 connectors, but with different types of connectors that can transmit serial data signals, such as DB9, DB25, or DE9 connectors. Serial cables are used for connecting devices that use serial communication protocols, such as modems, printers, scanners, or keyboards.

USB cables are not terminated with RJ45 connectors, but with different types of connectors that can transmit universal serial bus data signals, such as USB-A, USB-B, USB-C, or Micro-USB connectors. USB cables are used for connecting devices that use USB communication protocols, such as flash drives, cameras, mice, or chargers.

#### NEW QUESTION 198

- (Topic 4)

A company wants to add virtual servers to handle unusually high web traffic usage. Which of the following is the most efficient way?

- A. Community cloud
- B. File synchronization
- C. Rapid elasticity
- D. Cloud VDI

**Answer: C**

#### Explanation:

Rapid elasticity is the ability of a cloud service to scale up or down the resources (such as virtual servers, storage, bandwidth, etc.) according to the demand of the users. This is an efficient way to handle unusually high web traffic usage, as it allows the company to provision more virtual servers when needed and release them when not needed, without wasting resources or paying for unused capacity. Rapid elasticity also improves the performance and availability of the web service, as it can adjust to the fluctuations in traffic and avoid overloading or downtime.

References

Rapid Elasticity in Cloud Computing: On-Demand Scaling for Business Chapter 4: Virtualization and Cloud Computing

#### NEW QUESTION 200

- (Topic 4)

A technician is configuring the BIOS of a new workstation. The machine will be used for data analytics, and the technician would like to maximize the performance of the CPU. Which of the following BIOS settings should the technician verify?

- A. Virtualization technology
- B. GPU settings
- C. BIOS update
- D. Hyperthreading

**Answer: D**

#### Explanation:

Hyperthreading is a feature of some CPUs that allows them to execute two threads (sequences of instructions) simultaneously on each core. Hyperthreading can improve the performance of CPU-intensive tasks, such as data analytics, by increasing the utilization of CPU resources and reducing idle time. The technician should verify that hyperthreading is enabled in the BIOS settings of the workstation.

#### NEW QUESTION 205

- (Topic 4)

An administrator notices that on an intermittent basis the virtual machines are running slowly. The virtual machines are correctly sized, and the hardware has enough free resources to cope with demand Which of the following is most likely the cause?

- A. The physical servers are not able to draw enough power
- B. The physical servers do not have enough network bandwidth.
- C. The physical servers are throttling due to overheating
- D. The physical servers are contending for resources

**Answer:** C

**Explanation:**

The physical servers are throttling due to overheating. This means that the servers are reducing their performance to prevent damage from excessive heat. This can cause the virtual machines to run slowly, as they depend on the physical servers' resources. To avoid this, the servers need adequate cooling and ventilation, as well as monitoring of their temperature and fan speed. According to the CompTIA Core1 objectives, one of the environmental factors that can affect system performance is overheating. A research paper on thermal management of servers also states that overheating can lead to performance degradation, reliability issues, and energy inefficiency.

**NEW QUESTION 206**

- (Topic 4)

A user's Windows PC is unable to connect to the network at a new branch office that the user is visiting. A technician discovers the PC is unable to ping the local gateway. Which of the following commands should the technician use next?

- A. ipconfig
- B. cd config
- C. ifconfig
- D. show config

**Answer:** A

**Explanation:**

ipconfig is a command-line tool that displays the current configuration of the network interfaces on a Windows PC. It can also be used to release and renew the IP address, flush the DNS cache, and display the routing table. If the PC is unable to ping the local gateway, the technician should use ipconfig to check the IP address, subnet mask, default gateway, and DNS servers of the PC. The technician can also use ipconfig /renew to request a new IP address from the DHCP server, or ipconfig /flushdns to clear the DNS cache.

References

- [CompTIA A+ Core 1 (220-1001) Certification Study Guide], page 78
- How to use the ipconfig command on Windows 10
- How to Ping the Windows Network Router

**NEW QUESTION 209**

- (Topic 4)

A technician is installing the RAM for a graphics workstation. Which of the following is special purpose memory used by graphic controllers?

- A. SRAM
- B. MicroDIMM
- C. VRAM
- D. Unbuffered DIMM

**Answer:** C

**Explanation:**

VRAM (Video Random Access Memory) is a special-purpose memory type used by graphics controllers to store image data that is displayed on the screen. VRAM is faster and more expensive than regular RAM, and it allows the graphics controller to access the image data directly without involving the CPU or the system memory. VRAM can improve the performance and quality of graphics-intensive applications, such as video editing, gaming, and 3D rendering.

References:

- Ram Flashcards | Quizlet, question "Which of the following is a special-purpose memory type used by graphics controllers?".
- Nvidia Unveils Big Accelerator Memory: Solid-State Storage for GPUs, paragraph 4.
- US5801706A - Special purpose memory for graphics and display apparatus ..., abstract.

**NEW QUESTION 211**

- (Topic 4)

Which of the following is the best example of when to use virtualization?

- A. To manage shared folders by user accounts
- B. To deploy software updates to user machines
- C. To enhance security by centralizing all user desktops
- D. To prevent users from circumventing password policies

**Answer:** C

**Explanation:**

One of the benefits of virtualization is that it allows you to create and manage multiple virtual machines (VMs) on a single physical computer. This can be used to enhance security by centralizing all user desktops on a server, rather than storing them on individual user machines. This way, the user desktops can be isolated from each other and from the host machine, preventing malware infections, data breaches, and unauthorized access. Additionally, the user desktops can be easily backed up, restored, updated, and monitored by the administrator, reducing the risk of data loss and downtime.

This type of virtualization is called desktop virtualization, and it separates the desktop environment from the physical hardware the user interacts with<sup>1</sup>. The user can access their virtual desktop from any device, such as a laptop, tablet, or smartphone, using a remote display protocol. The user experience is similar to using a local desktop, but with improved security and manageability.

References:

- What Is Virtualization, and Why Should You Use it?, section "Desktop Virtualization".

**NEW QUESTION 213**

- (Topic 4)

A laptop's external webcam software is running, but neither images nor videos can be viewed. Which of the following should a technician do first?

- A. Reseat the webcam.
- B. Restart the computer and run system diagnostics.
- C. Reinstall the webcam software and drivers.
- D. Research new webcam firmware.

**Answer:** A

**Explanation:**

The first step that a technician should do is A. Reseat the webcam. Reseating the webcam means unplugging and plugging back the webcam into the laptop's USB port. This can help to ensure that the webcam is properly connected and recognized by the laptop. Reseating the webcam is a simple and quick troubleshooting technique that can solve many common issues, such as loose or faulty connections, power or bandwidth problems, or driver or software conflicts. Reseating the webcam is the first step that a technician should do, because it follows the principle of starting with the easiest and most obvious solution before moving on to more complex and time-consuming ones. Reseating the webcam can also help to isolate the problem and eliminate other possible causes. The other options are not the first steps that a technician should do, because they are more disruptive or less effective. Restarting the computer and running system diagnostics (option B) may be helpful if the problem is caused by a software or hardware error, but it may also cause data loss or interruption of other tasks. Reinstalling the webcam software and drivers (option C) may be necessary if the problem is caused by a corrupted or outdated software or driver, but it may also introduce compatibility or configuration issues. Researching new webcam firmware (option D) may be useful if the problem is caused by a firmware bug or vulnerability, but it may also pose security or stability risks.

For more information about troubleshooting external webcams, you can refer to the following web search results: [How to Fix Webcam Problems on Your Laptop], [How to Troubleshoot Webcam Issues on Windows 10], [How to Fix Common Webcam Problems].

**NEW QUESTION 217**

- (Topic 4)

A technician needs to configure a firewall to enable network printing. Which of the following network ports should be opened? (Select two)

- A. 21 (FTP)
- B. 22 (Telnet)
- C. 25 (SMTP)
- D. 515 (LDP)
- E. 631 (IPP)
- F. LPT1

**Answer:** DE

**Explanation:**

To enable network printing, the firewall needs to open the ports that are used by the network printers and the print servers. Two common ports for network printing are 515 (LDP) and 631 (IPP). LDP stands for Line Printer Daemon Protocol, which is a TCP-based protocol for sending print jobs to a remote printer. IPP stands for Internet Printing Protocol, which is a HTTP-based protocol for managing and monitoring print jobs over the Internet. According to the CompTIA Core1 objectives, one of the network ports that is related to printing is 515. A research paper on network printing also mentions that LDP and IPP are widely used protocols for network printing.

**NEW QUESTION 220**

- (Topic 4)

A technician needs to fix a computer that received a non-specific error after a scheduled computer restart. Which of the following is the best way to start troubleshooting?

- A. Update all of the firmware.
- B. Roll back all of the recent updates.
- C. Review the system event log.
- D. Search for the error on the internet.

**Answer:** C

**Explanation:**

The best way to start troubleshooting a non-specific error after a scheduled computer restart is to review the system event log. The system event log is a record of significant events that occur on the computer, such as errors, warnings, or information messages. The system event log can help identify the cause of the error and provide possible solutions.

The answer is C.

To learn more about troubleshooting methods and tools, you can refer to the CompTIA A+ Certification Exam Core 1 Objectives1 or the CompTIA A+ Core 1 (220-1101) Certification Study Guide2. These resources cover the topics that are tested on the CompTIA A+ Core 1 exam, which is one of the two exams required to earn the CompTIA A+ certification. The CompTIA A+ certification validates your skills and knowledge as an entry-level IT professional.

**NEW QUESTION 221**

- (Topic 4)

Which of the following services checks whether the sender's IP address is associated with the sender's domain name when receiving email?

- A. DKIM
- B. MX
- C. SPF
- D. DMARC

**Answer:** C

**Explanation:**

The correct answer is C. SPF.

SPF stands for Sender Policy Framework, which is a protocol that allows domain owners to specify which IP addresses are authorized to send email on behalf of their domains1. SPF helps prevent email spoofing and phishing by verifying the sender's identity and preventing unauthorized use of their domain name12.

When an email is received, the receiving server checks the SPF record of the sender's domain, which is a DNS TXT record that lists the valid IP addresses for that domain<sup>12</sup>. The server then compares the sender's IP address with the SPF record and determines if it matches or not. If it matches, the email passes the SPF check and is accepted; if it does not match, the email fails the SPF check and is rejected or marked as spam<sup>12</sup>.

DKIM stands for DomainKeys Identified Mail, which is a protocol that allows domain owners to digitally sign their emails using a public-private key pair<sup>3</sup>. DKIM helps ensure the integrity and authenticity of email messages by verifying that they have not been tampered with or forged during transit<sup>3</sup>.

MX stands for Mail Exchange, which is a type of DNS record that specifies the mail servers that are responsible for receiving email for a domain. MX records help direct incoming email to the correct destination and prioritize them based on preference values.

DMARC stands for Domain-based Message Authentication, Reporting and Conformance, which is a protocol that builds on SPF and DKIM and allows domain owners to define how receivers should handle unauthenticated or suspicious emails from their domains. DMARC helps protect domains from email fraud and abuse by providing feedback and reports on email delivery and authentication status.

Therefore, SPF is the only service among the options that checks whether the sender's IP address is associated with the sender's domain name when receiving email.

#### NEW QUESTION 222

- (Topic 4)

A technician is setting up a new laptop for a user who wants to be able to quickly pack up the laptop and leave if needed. The user has the following accessories:

- USB badge reader
- USB badge printer
- USB signature pad
- 3.5mm headset
- HDMI external monitor
- Mouse

Which of the following is the best way to meet the user's requirement?

- A. Directly connect all accessories to the laptop.
- B. Provide the user with a second laptop.
- C. Connect everything to a compatible docking station.
- D. Provide the user with a USB hub.

**Answer: C**

#### Explanation:

The best way to meet the user's requirement is C. Connect everything to a compatible docking station.

A docking station is a device that allows a laptop to connect to multiple peripherals and accessories with a single connection. A docking station usually has ports for USB, HDMI, audio, Ethernet, and power, as well as slots for expansion cards. A docking station can enhance the functionality and convenience of a laptop by providing a desktop-like experience<sup>1</sup>. A compatible docking station is one that matches the laptop's model, brand, and connector type<sup>2</sup>.

A port replicator is a simpler device that only replicates the ports of the laptop, such as USB and HDMI, without providing additional features or power. A port replicator can also allow a laptop to connect to multiple peripherals and accessories with a single connection, but it does not offer the same benefits as a docking station<sup>1</sup>.

Directly connecting all accessories to the laptop would not meet the user's requirement, as it would be cumbersome and time-consuming to pack up and leave if needed. The user would have to disconnect and reconnect multiple cables every time they want to use or move the laptop. This option would also limit the number of accessories that can be connected, as the laptop may not have enough ports for all of them.

Providing the user with a second laptop would not meet the user's requirement, as it would be expensive and impractical. The user would have to transfer data and settings between the two laptops, and keep them both updated and secure. This option would also create confusion and redundancy, as the user would have two identical devices.

Providing the user with a USB hub would not meet the user's requirement, as it would only allow the user to connect more USB devices to the laptop. A USB hub is a device that splits one USB port into multiple ports, but it does not support other types of connections, such as HDMI or audio. A USB hub would also require an external power source or drain the laptop's battery faster. This option would not help the user connect the HDMI external monitor or the 3.5mm headset.

#### NEW QUESTION 224

- (Topic 4)

A technician is troubleshooting a user's laptop that randomly turns off. The technician disassembles the laptop and notices that various pieces of small sticker paper within the device have changed color from red to blue. Which of the following is the most likely cause of the laptop's issues?

- A. Broken screen
- B. Liquid damage
- C. Swollen battery
- D. Overheating

**Answer: B**

#### Explanation:

One of the possible causes of a laptop randomly turning off is liquid damage, which can cause short circuits, corrosion, and overheating of the internal components<sup>1</sup>. Liquid damage can be hard to detect, especially if the laptop has been dried or cleaned after the spill<sup>2</sup>. However, one of the indicators of liquid damage is the presence of small sticker paper within the device that changes color from red to blue<sup>3</sup>.

These stickers are called liquid contact indicators (LCIs), and they are designed to show if a device has been exposed to water or other liquids<sup>3</sup>. LCIs are usually red when dry, but they turn blue or purple when wet<sup>3</sup>. LCIs are often placed near the ports, battery, keyboard, and motherboard of laptops and other electronic devices<sup>3</sup>. LCIs can help technicians diagnose liquid damage and determine if the device is covered by warranty or not<sup>3</sup>.

#### NEW QUESTION 229

- (Topic 4)

A restaurant calls the support line about its 3in (2.5cm) point-of-sale printer that is only printing fully black receipts. Which of the following should the technician check in order to resolve the issue? (Select two).

- A. Power supply
- B. Humidity
- C. Rollers
- D. Fuser
- E. Heating element
- F. Room temperature

**Answer:** CE

**Explanation:**

The correct answers are C. Rollers and E. Heating element.

A 3in (2.5cm) point-of-sale printer is a type of thermal printer that uses heat to print receipts on special thermal paper. The printer has a heating element that heats up the paper as it passes through the rollers, creating black marks on the paper where the heat is applied. The heating element and the rollers are two critical components of the thermal printer that can affect the quality of the printout.

If the printer is only printing fully black receipts, it means that the heating element is overheating or malfunctioning, causing the entire paper to turn black. The heating element may need to be replaced or repaired by a technician. Alternatively, the rollers may be dirty or damaged, causing the paper to stick to the heating element and get burned. The rollers may need to be cleaned or replaced by a technician.

The other options are not likely to cause the printer to print fully black receipts. The power supply may affect the printer's performance, but it would not cause the heating element to overheat or the rollers to malfunction. The humidity and room temperature may affect the quality of the thermal paper, but they would not cause the entire paper to turn black. The fuser is a component of a laser printer, not a thermal printer, and it has no effect on the point-of-sale printer.

References:

Basic Printer Troubleshooting – Individual Point of Sale

5 Common Issues With Any POS System and How To Fix Them Printer Troubleshooting | Square Support Center - US

Resolve receipt printer issues and cash drawer will not open - QuickBooks

**NEW QUESTION 234**

- (Topic 4)

A technician is unable to connect to a network device via SSH\_ Which of the following cables should the technician use as an alternative connection method with a laptop?

- A. Serial
- B. HDMI
- C. Parallel
- D. Lightning

**Answer:** A

**Explanation:**

The correct answer is A. Serial.

A serial cable is a type of cable that can be used to connect a laptop to a network device via a serial port. A serial port is a physical interface that allows data transmission between devices using serial communication, which is a method of sending data one bit at a time over a single wire. Serial ports are often used for console access to network devices, such as routers, switches, firewalls, or servers, when other methods of connection, such as SSH (Secure Shell), are not available or not working.

SSH is a protocol that allows secure and encrypted remote login and command execution over a network. SSH uses public key cryptography to authenticate the client and the server, and to encrypt the data exchanged between them. SSH can be accessed through different ports, depending on the configuration of the server and the client. The default port for SSH is 22, but it can be changed to any other port for security reasons.

HDMI (High-Definition Multimedia Interface) is a type of cable that can be used to transmit audio and video signals between devices, such as laptops, monitors, TVs, or projectors. HDMI cables support high-definition video and audio formats, and can also carry Ethernet and power signals. HDMI cables are not suitable for connecting to network devices via SSH, as they are designed for multimedia purposes.

Parallel cables are a type of cable that can be used to connect devices that use parallel communication, which is a method of sending data multiple bits at a time over multiple wires. Parallel cables are often used for connecting printers or scanners to computers, but they are not commonly used for network devices or SSH connections.

Lightning cables are a type of cable that can be used to connect Apple devices, such as iPhones, iPads, or iPods, to computers or chargers. Lightning cables support data transfer and power delivery, and can also be used with adapters to connect to other types of ports, such as USB or HDMI. Lightning cables are not compatible with network devices or SSH connections, as they are specific to Apple products.

Therefore, the only cable that can be used as an alternative connection method with a laptop when SSH is not working is a serial cable. Serial cables can provide console access to network devices and allow configuration and troubleshooting commands to be executed. For more information about SSH and its alternatives, you can refer to the following web search results: Alternatives to SSH, How To Configure Custom Connection Options for your SSH Client, Understanding the SSH Encryption and Connection Process, How to Use Public Key Authentication with SSH.

**NEW QUESTION 238**

- (Topic 4)

A server administrator is building a new application server. Which of the following, RAID levels provides MAXIMUM performance and redundancy?

- A. RAID 0
- B. RAID 1
- C. RAID 5
- D. RAID 10

**Answer:** D

**Explanation:**

RAID 10 is a combination of RAID 1 and RAID 0, which provides both performance and redundancy. RAID 1 mirrors data across two or more disks, while RAID 0 stripes data across two or more disks. RAID 10 combines these two methods to create a mirrored stripe set, which can tolerate multiple disk failures as long as they are not in the same mirror. RAID 10 requires at least four disks and offers better performance than RAID 5, which uses parity to provide redundancy.

References: <https://www.comptia.org/blog/what-is-raid-0-1-5-6-10>

**NEW QUESTION 243**

- (Topic 4)

An administrator is replacing 15,000rpm hard drives in a server. Which of the following is the interface type the drives most likely use?

- A. IDE
- B. SAS
- C. eSATA
- D. SATA

**Answer:** B

**Explanation:**

SAS stands for Serial Attached SCSI, which is a bit serial interface successor to SCSI sponsored by ANSI and introduced in 2004. SAS is the most common interface for enterprise HDDs, especially those with high performance and high reliability requirements, such as 15,000rpm drives. SAS offers faster data transfer speeds, lower power consumption, and better scalability than other interfaces.

**NEW QUESTION 244**

- (Topic 4)

Which of the following protocols provides the fastest bandwidth?

- A. 802.11a
- B. 802.11ac
- C. 802.11ax
- D. 802.11n

**Answer: C**

**Explanation:**

The 802.11ax protocol, also known as Wi-Fi 6, provides the fastest bandwidth among the options listed. It can achieve up to 10 Gbps of data transfer rate, using technologies such as OFDMA, MU-MIMO, and 1024-QAM. The 802.11ac protocol, or Wi-Fi 5, is the second fastest, with a maximum of 3.46 Gbps, followed by the 802.11n protocol, or Wi-Fi 4, with a maximum of 600 Mbps. The 802.11a protocol is the slowest, with a maximum of 54 Mbps

<https://www.lifewire.com/wireless-standards-802-11a-802-11b-g-n-and-802-11ac-816553>

**NEW QUESTION 247**

- (Topic 4)

After an IT department implements SSL redirection, users report being unable to access a random number generator opened within a web browser.

Which of the following should a technician do first to troubleshoot this issue?

- A. Ensure that the computer supports secure socket communication.
- B. Report the affected user accounts to the IT department.
- C. Reset the web browser cache.
- D. Check to see whether the website is HTTPS enabled.

**Answer: D**

**Explanation:**

The first step to troubleshoot this issue is to check if the website that hosts the random number generator is HTTPS enabled. This means that the website supports secure communication using SSL certificates and encryption. If the website is not HTTPS enabled, it may not be compatible with the SSL redirection implemented by the IT department. SSL redirection is a technique that automatically redirects HTTP requests to HTTPS, ensuring that the data exchanged between the web browser and the website is protected. However, some websites may not have SSL certificates or may have expired or invalid ones, which can cause errors or warnings when trying to access them via HTTPS. Therefore, the technician should check the website's URL and see if it starts with `https://` or `http://`. If it is the latter, the technician should try to manually change it to `https://` and see if the website loads correctly. If it does not, the technician should contact the website owner or administrator and ask them to enable HTTPS or update their SSL certificates. References:

Some additional references for the answer are:

[How To Fix HTTP and HTTPS Redirect Issue | Sitechecker Nginx SSL Certificate and HTTPS Redirect Errors | DigitalOcean ERR\\_TOO\\_MANY\\_REDIRECTS](#) · [Cloudflare SSL/TLS docs How to Fix SSL Redirect Loop | Hostinger Help Center](#)

**NEW QUESTION 249**

- (Topic 4)

An engineer is installing a 500W power supply in a server that requires continuous availability. Which of the following is the most suitable type of power supply for the application?

- A. Redundant
- B. Modular
- C. Switched-mode
- D. Semi-modular

**Answer: A**

**Explanation:**

A redundant power supply is a type of power supply that consists of two or more independent units that can provide power to the same device or system. A redundant power supply can increase the reliability and availability of the device or system, because if one unit fails, the other unit can take over and continue to provide power without interruption. A redundant power supply is often used in servers that require continuous availability, such as web servers, database servers, or file servers.

**NEW QUESTION 250**

- (Topic 4)

A user's mobile phone is constantly running hot and has a short battery life. A technician replaces the battery in the phone, but the issue persists. Which of the following steps should the technician take next?

- A. Check the device for updates.
- B. Check the device for malware.
- C. Check the device for liquid damage.
- D. Check the device's charging adapter.

**Answer: B**

**Explanation:**

The next step that the technician should take after replacing the battery in the phone is to check the device for malware. Malware is a malicious software that can infect the phone and cause various problems, such as overheating, battery drain, data theft, pop-up ads, or performance slowdowns. Malware can enter the phone

through various sources, such as downloading apps from untrusted sources, clicking on suspicious links or attachments, or connecting to insecure Wi-Fi networks. To check the device for malware, the technician can use a reputable antivirus or anti-malware app, such as the ones found in the web search results<sup>123</sup>. The technician can follow these steps:

- ? Download and install the antivirus or anti-malware app from a trusted source, such as the Google Play Store or the Apple App Store.
- ? Launch the app and grant it the necessary permissions to scan the device.
- ? Run a full scan of the device and wait for the results.
- ? If the app detects any malware, follow the app's instructions to remove or quarantine it.
- ? Restart the device and check if the overheating and battery drain issues are resolved.

Other steps, such as checking the device for updates, checking the device for liquid damage, or checking the device's charging adapter, may not be relevant or effective for solving the overheating and battery drain issues caused by malware. Checking the device for updates may improve the security and performance of the device, but it may not remove the existing malware. Checking the device for liquid damage may reveal physical damage to the device, but it may not explain the constant overheating and battery drain. Checking the device's charging adapter may ensure the proper charging of the device, but it may not affect the device's temperature or battery life when it is not plugged in.

References:

- ? Best Android antivirus apps of 2023 | Tom's Guide<sup>1</sup>
- ? Best iPhone antivirus apps in 2023 | TechRadar<sup>2</sup>
- ? The best antivirus software for Android - AV-TEST<sup>3</sup>

#### **NEW QUESTION 254**

- (Topic 4)

When a page that was printed on a laser printer is touched, the image on the paper smears. Which of the following is most likely the cause of this issue?

- A. Duplexing assembly
- B. Fuser
- C. Toner
- D. Transfer belt

**Answer: B**

#### **Explanation:**

The fuser is the part of a laser printer that uses heat and pressure to fuse the toner to the paper. If the fuser is defective or not hot enough, the toner may not adhere properly and smear when touched. The duplexing assembly, toner, and transfer belt are not related to this issue.

Reference: Official CompTIA learning resources CompTIA A+ Core 1 and Core 2, page 11.

#### **NEW QUESTION 258**

- (Topic 4)

Which of the following network devices is needed to direct packets to networks outside of the LAN?

- A. Hub
- B. Switch
- C. Router
- D. Bridge

**Answer: C**

#### **Explanation:**

A router is a network device that connects multiple networks together and directs data packets to their intended destinations. This includes directing packets to networks outside of the local area network (LAN). Routers use routing tables to determine the best path for data packets to travel.

Hubs and switches operate within a single LAN and are not capable of routing packets to external networks.

Bridges can connect two LANs together, but they do not have the intelligence to route packets to external networks.

Therefore, only routers are capable of directing packets to networks outside of the LAN.

References:

CompTIA A+ Certification Core 1 220-1101 Study Guide, Chapter 4: Networking, Section 4.1 Networking Fundamentals

#### **NEW QUESTION 259**

- (Topic 4)

Which of the following cloud models allows an organization to retain data on site as well as in the cloud?

- A. Public
- B. Community
- C. Hybrid
- D. Private

**Answer: C**

#### **Explanation:**

The correct answer is C. Hybrid.

A hybrid cloud model is a combination of two or more different cloud models, such as public, private, community, or on-premises. A hybrid cloud model allows an organization to retain data on site as well as in the cloud, depending on the security and performance requirements of the data. A hybrid cloud model can also provide flexibility, scalability, and cost-efficiency for the organization<sup>12</sup>.

A public cloud model is a cloud service that is available to anyone over the internet. A public cloud model does not allow an organization to retain data on site, as the data is stored and managed by a third-party provider. A public cloud model can offer lower costs, higher availability, and easier access, but it may have less security and control over the data<sup>12</sup>.

A community cloud model is a cloud service that is shared by a group of organizations that have similar needs or goals. A community cloud model does not allow an organization to retain data on site, as the data is stored and managed by a third-party provider or one of the participating organizations. A community cloud model can offer higher security, privacy, and compliance, but it may have higher costs and lower availability than a public cloud model<sup>12</sup>.

A private cloud model is a cloud service that is exclusively used by a single organization. A private cloud model can allow an organization to retain data on site or in the cloud, depending on the configuration of the private cloud. A private cloud model can offer higher security, control, and customization, but it may have higher costs and lower scalability than a public cloud model<sup>12</sup>.

#### NEW QUESTION 264

- (Topic 4)

A technician is troubleshooting a computer that has a loud system fan and randomly freezes and reboots. Which of the following is the most likely cause of these issues?

- A. Failing hard drive
- B. Defective power supply
- C. Incompatible hardware
- D. Overheating processor

**Answer: D**

#### Explanation:

An overheating processor is the most likely cause of a computer that has a loud system fan and randomly freezes and reboots. A processor generates heat when it performs calculations, and if the heat is not dissipated properly, it can damage the processor or cause it to malfunction. A loud system fan indicates that the fan is working harder to cool down the processor, but it may not be enough to prevent overheating. A computer that freezes and reboots randomly is a common symptom of an overheating processor, as the system tries to protect itself from further damage by shutting down or restarting.

The other options are not as likely to cause these issues. A failing hard drive may cause data loss, corruption, or slow performance, but it does not affect the system fan or the processor temperature. A defective power supply may cause the computer to shut down unexpectedly, but it does not cause the system fan to be loud or the processor to overheat. Incompatible hardware may cause the computer to fail to boot, display errors, or crash, but it does not cause the system fan to be loud or the processor to overheat.

To troubleshoot and resolve an overheating processor issue, the technician should check and clean the air vents, provide proper ventilation, apply thermal paste, replace the fan or the heat sink, or upgrade the processor if necessary. The technician should also update the BIOS and the device drivers, adjust the power settings, and monitor the system temperature using diagnostic tools.

References:

- ? CompTIA A+ Certification Exam Core 1 Objectives1
- ? The Official CompTIA A+ Core 1 Student Guide (Exam 220-1101) eBook2
- ? How to Troubleshoot Fan Issues | Dell US3
- ? Why your laptop fan is loud and how to fix it | Asurion4
- ? HP Notebook PCs - Fan is noisy and spins constantly (Windows)5

#### NEW QUESTION 268

- (Topic 4)

Which of the following controls the flow of users connecting to web server farms and prevents overutilization on any individual server?

- A. Firewall
- B. Honeypot
- C. Load balancer
- D. Spam gateway

**Answer: C**

#### Explanation:

A load balancer is a device or software that distributes network traffic across multiple servers or resources, such as web server farms, to optimize performance, reliability, and scalability. A load balancer controls the flow of users connecting to web server farms and prevents overutilization on any individual server by using various algorithms, such as round robin, least connections, or weighted distribution. A load balancer can also provide health checks, failover, caching, compression, encryption, and other features to enhance the user experience and security.

#### NEW QUESTION 272

- (Topic 4)

A graphic designer wants to upgrade to the fastest possible RAM for a desktop workstation. Which of the following types of RAM would be best for the designer to use?

- A. DDR2 SDRAM
- B. DDR3 SDRAM
- C. DDR4 SDRAM
- D. DDR5 SDRAM

**Answer: D**

#### Explanation:

DDR5 SDRAM (Double Data Rate 5 Synchronous Dynamic Random-Access Memory) is the latest and fastest type of RAM for desktop workstations as of 2023. DDR5 SDRAM offers higher speeds, lower power consumption, greater capacity, and improved reliability than previous generations of DDR SDRAM. DDR5 SDRAM can operate at frequencies up to 8400 MHz, compared to 3200 MHz for DDR4 SDRAM, which means it can transfer data faster and more efficiently. DDR5 SDRAM also supports dual-channel memory, which allows two memory modules to work together and double the bandwidth. DDR5 SDRAM is compatible with the latest Intel and AMD processors that support the DDR5 standard.

The other options are not as fast or suitable for a desktop workstation. DDR2 SDRAM, DDR3 SDRAM, and DDR4 SDRAM are older and slower types of RAM that have lower frequencies, higher voltages, and lower capacities than DDR5 SDRAM. DDR2 SDRAM, DDR3 SDRAM, and DDR4 SDRAM are not compatible with the latest processors that support DDR5 SDRAM, and require different motherboards and slots. DDR2 SDRAM, DDR3 SDRAM, and DDR4 SDRAM are more suitable for older or budget systems that do not require high performance or memory-intensive applications.

References:

- ? The best RAM 2023: top memory for your PC1
- ? The best RAM for gaming 2023: Blazing-fast speeds for your PC2
- ? What RAM Speed Do I Need? [2023 Guide] - GamingScan3
- ? Crucial RAM Memory for Desktop Computers4

#### NEW QUESTION 273

- (Topic 4)

A technician is setting up a home network with the following requirements:

- Automatic distribution of IP addresses

. Internet access

Which of the following should the technician configure? (Select two).

- A. DHCP
- B. APIPA
- C. VPN
- D. Public IP addresses
- E. Gateway
- F. Static IP addresses

**Answer:** AE

**Explanation:**

DHCP (Dynamic Host Configuration Protocol) is a protocol that allows a device to automatically obtain an IP address and other network settings from a DHCP server, such as a home router. This simplifies the network configuration and avoids IP address conflicts. DHCP is a common requirement for home networks that have multiple devices that need Internet access.

A gateway is a device that connects two different networks, such as a home network and the Internet. A gateway usually performs routing functions, which means it determines the best path for packets to reach their destination. A gateway also often performs NAT (Network Address Translation), which allows multiple devices on a home network to share a single public IP address. A gateway is a necessary requirement for home networks that need Internet access.

References

Understanding DHCP on Home Networks

Basic home gateway services: DHCP, DNS, NAT

IP Addresses on Home Networks – A Beginner's Guide

**NEW QUESTION 276**

- (Topic 4)

A technician is attempting to log in to a local company portal. When the technician types the URL into the address bar, the browser is unable to resolve and display the web page. The technician tries at another workstation, and the result is the same. Other web pages are not having any issues. Which of the following should the technician check first?

- A. DHCP reservations
- B. Static IP addresses
- C. Default gateway
- D. DNS entries

**Answer:** D

**Explanation:**

The technician is unable to access the company portal website, but other websites work fine. This suggests an issue with resolving the specific URL of the company portal, which is a function of DNS.

Here's why other options are not the most likely cause:

DHCP reservations: This is not relevant as the issue persists even when the technician tries a different workstation, indicating a problem beyond individual device configuration. Static IP addresses: Similar to DHCP reservations, static IPs are not likely the cause as both affected workstations are experiencing the issue.

Default gateway: While the default gateway is necessary for internet access, other websites are working, making it less likely to be the root cause.

References:

CompTIA A+ Certification Core 1 220-1101 Study Guide, Chapter 4: Networking, Section 4.2 Addressing and Naming

**NEW QUESTION 281**

- (Topic 4)

An administrator wants to replace a fiber-optic cable. Which of the following should the administrator most likely use?

- A. LC
- B. Bayonet Neill Concelman
- C. RJ45
- D. DB9

**Answer:** A

**Explanation:**

LC stands for Lucent Connector, which is a type of fiber-optic connector that uses a push-pull mechanism to connect and disconnect the cable. LC connectors are small, compact, and widely used for high-density applications, such as data centers, servers, and networks. LC connectors have a 1.25 mm ferrule that can support both single-mode and multimode fibers.

**NEW QUESTION 282**

- (Topic 4)

A user can make and receive voice calls but cannot send or receive MMS text messages on a smartphone. Which of the following is the most likely cause of the issue?

- A. The mobile data service is disabled.
- B. The SIM card is defective.
- C. The device is outside the cellular coverage area.
- D. Airplane mode is enabled.

**Answer:** A

**Explanation:**

MMS (Multimedia Messaging Service) is a type of text message that can include images, videos, audio, or other media files. Unlike SMS (Short Message Service), which only uses cellular networks, MMS requires mobile data service to send and receive messages. Therefore, if the mobile data service is disabled on the smartphone, the user will not be able to send or receive MMS messages, even if they can make and receive voice calls using the cellular network.

References

- What is MMS messaging? How to send and receive MMS messages on your iPhone or Android device
- Why Can't I Send or Receive MMS Messages?
- The Official CompTIA A+ Core 1 Student Guide (Exam 220-1101), page 349

#### NEW QUESTION 284

- (Topic 4)

Which of the following network devices should a technician install in order to isolate voice traffic on the network?

- A. Network tap
- B. Managed switch
- C. Hub
- D. DSL filter

**Answer: B**

#### Explanation:

A managed switch is a network device that can be configured to create VLANs (Virtual Local Area Networks), which are logical segments of a network that isolate traffic based on criteria such as function, security, or quality of service. A VLAN can be used to isolate voice traffic on the network, which can improve the performance and security of voice over IP (VoIP) applications. A network tap, a hub, and a DSL filter are not capable of creating VLANs.

Reference: [CompTIA A+ Core 1 (220-1101) Certification Study Guide], page 32.

#### NEW QUESTION 288

- (Topic 4)

A user reports being unable to access the network. A help desk technician notices an APIPA on the user's workstation. Which of the following services should the technician investigate first?

- A. RADIUS
- B. DHCP
- C. AAA
- D. DNS

**Answer: B**

#### Explanation:

DHCP (Dynamic Host Configuration Protocol) is a network service that automatically assigns IP addresses and other configuration parameters to devices that request them. DHCP simplifies the management of IP addresses and avoids conflicts and errors<sup>67</sup>. An APIPA (Automatic Private IP Addressing) is a feature of Windows that assigns a default IP address in the range of 169.254.x.x to a device when it cannot obtain a valid IP address from a DHCP server. An APIPA indicates that there is a problem with the DHCP service or the network connectivity between the device and the DHCP server<sup>89</sup>. Therefore, the technician should investigate the DHCP service first to check if it is running, configured correctly, and has enough available IP addresses to assign. The other services are not directly related to the IP address assignment. RADIUS (Remote Authentication Dial-In User Service) is a protocol that provides centralized authentication, authorization, and accounting for network access<sup>10</sup>. AAA (Authentication, Authorization, and Accounting) is a framework that controls the access and usage of network resources<sup>11</sup>. DNS (Domain Name System) is a service that resolves domain names into IP addresses<sup>12</sup>.

References

6: What is DHCP (Dynamic Host Configuration Protocol)? - Definition from WhatIs.com 7: How DHCP works - Windows Server | Microsoft Docs

8: What is APIPA (Automatic Private IP Addressing)? - Definition from WhatIs.com 9: How to Fix an IP Address Conflict

10: What is RADIUS (Remote Authentication Dial-In User Service)? - Definition from WhatIs.com

11: What is AAA (authentication, authorization, and accounting)? - Definition from WhatIs.com

12: What is DNS (Domain Name System)? - Definition from WhatIs.com

#### NEW QUESTION 290

- (Topic 4)

A user called the help desk to request assistance with selecting appropriate storage to back up a large collection of DVDs and photos in the most economical way. Which of the following should the help desk recommend?

- A. 5,400rpm HDD
- B. M.2 NVMe SSD
- C. SAS RAID array
- D. Optical media

**Answer: D**

#### Explanation:

Optical media, such as CDs, DVDs, or Blu-ray discs, are a suitable choice for backing up a large collection of DVDs and photos in the most economical way. Optical media are inexpensive, widely available, and have a long shelf life. They can store large amounts of data, up to 50GB on a dual-layer Blu-ray disc, and can be easily labeled and organized. Optical media are also less prone to mechanical failure, data corruption, or accidental deletion than hard disk drives (HDDs) or solid state drives (SSDs).

The other options are not as economical or suitable for this purpose. A 5,400rpm HDD is a slow and noisy type of HDD that has moving parts that can wear out or break. A HDD also consumes more power and generates more heat than an SSD. A M.2 NVMe SSD is a fast and compact type of SSD that uses a PCIe interface to transfer data. However, an SSD is more expensive than an HDD or optical media, and has a limited number of write cycles before it degrades. A SAS RAID array is a complex and costly system that uses multiple HDDs or SSDs connected by a Serial Attached SCSI (SAS) interface to provide redundancy, performance, or both. A RAID array requires a RAID controller, a compatible motherboard, and a dedicated power supply.

References:

? CompTIA A+ Certification Exam Core 1 Objectives<sup>1</sup>

? The Official CompTIA A+ Core 1 Student Guide (Exam 220-1101) eBook<sup>2</sup>

? Best ways to backup photos of 2023 | TechRadar<sup>3</sup>

? Best external hard drives in 2023: clever drives for added storage and ...<sup>4</sup>

? DVD Storage Ideas | Remodelaholic<sup>5</sup>

#### NEW QUESTION 295

- (Topic 4)

A technician is setting up a projector for a videoconferencing system. The laptop that the technician is using is set to the correct resolution. The projector is receiving a signal, but the image is distorted. Which of the following most likely explains the issue?

- A. The projector's aspect ratio is set incorrectly.
- B. The laptop's video card has failed.
- C. The projector's bulb is burned out.
- D. The display brightness needs to be adjusted.

**Answer:** A

**Explanation:**

The most likely explanation for the distorted image on the projector is that the projector's aspect ratio is set incorrectly. The aspect ratio is the ratio of the width to the height of the image, and it affects how the image is displayed on the screen. If the aspect ratio of the projector does not match the aspect ratio of the laptop, the image may appear stretched, squashed, cropped, or letterboxed.

To fix the distorted image, the technician should follow these steps:

? Check the aspect ratio of the laptop and the projector. The aspect ratio of the laptop can be found in the display settings of the operating system, such as Windows or Mac OS. The aspect ratio of the projector can be found in the user manual or the on-screen menu of the projector. Common aspect ratios are 4:3, 16:9, and 16:10.

? Adjust the aspect ratio of the projector to match the aspect ratio of the laptop. The technician can use the remote control or the buttons on the projector to access the on-screen menu and select the appropriate aspect ratio option. Some projectors may have a dedicated aspect ratio button on the remote control or the projector itself.

? Verify that the image is displayed correctly on the screen. The technician can use the zoom, focus, or keystone buttons on the projector or the remote control to fine-tune the image quality and alignment.

References:

? [How to Fix Projector Display Problems - Projectors Tab1](#)

? [Correcting Distorted Projector Images - Projector Repair World Hyd2](#)

? [How to Adjust the Aspect Ratio on a Projector - Lifewire](#)

**NEW QUESTION 297**

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