9.1.7 Practice Questions

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Score: 100% Passing Score: 80%

Question 1: ✔ Correct

As a network administrator, you have had several users ask for a way in which they could connect their phones to their Linux computer, without the use of wires.

Which of the following device types would BEST meet these user's needs?

- HBA
- Bluetooth
- USB
- PCI
- GPIO

Explanation

Bluetooth allows a device such as a phone to be connected to a Linux computer, as if the device were plugged in using a wire. However, Bluetooth is only a short-range solution.

The Universal Serial Bus (USB) requires a physical connection to the computer. However, you may use a USB device to provide Bluetooth capabilities.

GPIO is a type of pin found on an integrated circuit that does not have a specific function. The function of a GPIO pin is customizable and can be controlled by software.

A PCI device is any piece of computer hardware that plugs directly into a PCI slot on a computer's motherboard.

A Host bus adapter (HBA) is a hardware device, such as a circuit board or integrated circuit adapter, that provides I/O processing and physical connectivity between a host system, such as a server, and a storage device.

References

9.1.2 Device Types Facts

q_device_types_facts_lp5_bluetooth.question.fex

Question 2: ✔ Correct

The hard disk in your Linux laptop has almost reached its maximum storage capacity. You would like to add more hard disk storage but there is no room internal to the computer.

Which of the following device types is BEST to use if you want to achieve the fastest throughput?

- PCI
- Bluetooth
- USB
- GPIO

Explanation

A USB disk lets you connect your new hard disk to the computer via an external wire. USB connections generally have a higher throughput than a Bluetooth device.

A PCI device is any piece of computer hardware that plugs directly into a PCI slot on a computer's motherboard.

GPIO is a type of pin found on an integrated circuit that does not have a specific function. The function of a GPIO pin is customizable and can be controlled by software.

References

9.1.2 Device Types Facts

q_device_types_facts_lp5_usb.question.fex

Question 3: ✔ Correct

You have been currently using a cable to connect your Linux laptop to the company network. You are now, however, required to attend several meeting a week in other parts of the building and you would like to be able to bring your laptop with you, but still need access to the network while in the meeting.

Which of the following device types would BEST meet your needs?

- WiFi
- SCSI
- SATA
- HBA

Explanation

WiFi (wireless fidelity) is a technology that uses radio waves to provide network connectivity. A WiFi connection is established using a wireless adapter to create hotspots - areas in the vicinity of a wireless router that are connected to the network and allow users to access internet services.

Small Computer System Interface (SCSI), is a set of standards for physically connecting and transferring data between computers and peripheral devices. SCSI is most commonly used for hard disk drives and tape drives.

A Host bus adapter (HBA) is a hardware device, such as a circuit board or integrated circuit adapter, that provides I/O processing and physical connectivity between a host system, such as a server, and a storage device.

Serial ATA (SATA) is a computer bus interface that connects host bus adapters to mass storage devices such as hard disk drives.

References

9.1.2 Device Types Facts

q_device_types_facts_lp5_wifi.question.fex

Question 4: ✔ Correct

You have installed a new Linux system and you want to make a baseline of system performance.

Which of the following files contain baseline information? (Choose TWO).

- [x] **/meminfo**
- [ ] **/top**
- [x] **/cpuinfo**
- [ ] **/ps.aux**
- [ ] **/systat**

Explanation

The cpuinfo and meminfo files located in the /proc directory should be recorded as part of a system baseline. Cpuinfo contains information about the CPU such as model, CPU speed, cache, etc. Meminfo contains information such as total memory, free memory, etc. Dmesg displays a snapshot of information about the hardware that is controlled by the kernel, and that output can be redirected to a file for use in system baseline documentation.

Top is a display of running system statistics but is not a file. Ps.aux and systat do not exist.

References

8.4.3 Swap Area Management

q_device_driv_f_lp5_01.question.fex

Question 5: ✔ Correct

Which of the following commands will display which boot options were given to the kernel at boot time?

- **cat /proc/modules**
- **cat /proc/mounts**
- **cat /proc/cmdline**
- **cat /proc/version**

Explanation

Use **cat /proc/cmdline** command to display the boot options given to the kernel at boot time.

The **/proc** directory contains information about the system state and processes. Be aware of the following files and directories in the **/proc** directory:

- *mounts* lists the currently mounted filesystems.
- *modules* lists the kernel modules that the computer is currently using.
- *version* gives information about the current kernel version.
- *cpuinfo* has information about the computer's CPU.
- *devices* displays a list of hardware installed on the computer.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_02.question.fex

Question 6: ✔ Correct

Which of the following is the full path and filename of the file that contains information about which interrupt request (IRQ) channels are being used by each hardware device on the system?

- ➡ ◉ /proc/interrupts
- ○ /proc/dma
- ○ /proc/devices
- ○ /proc/irqs

Explanation

The full path and filename of the file that contains information about which interrupt request (IRQ) channels are being used by each hardware device on the system is **/proc/interrupts**.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_03.question.fex

Question 7: ✔ Correct

You need to get detailed information about the system memory.

Which of the following commands will display that information?

- **memstat -a**
- **cat /proc/systat**
- **cat /proc/meminfo**
- **systat -m**

Explanation

Use the **cat /proc/meminfo** command to display detailed memory information.

References

8.4.3 Swap Area Management

q_device_driv_f_lp5_04.question.fex

Question 8: ✔ Correct

Which of the following commands will display information about the PCI devices installed on the system?

- **hwinfo**
- **lsusb**
- **lsmod**
- **lspci**

Explanation

Use the **lspci** command to display information for all PCI devices installed on the system. Be aware of the following options:

- **-k** shows the kernel drivers that support the device.
- **-t** displays a tree diagram that shows connections between all busses, bridges, and devices.

lsusb displays information on all USB devices connected to the computer. **hwinfo** displays information about hardware on the computer. **lsmod** displays information about all loaded modules on the system.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_05.question.fex

Question 9: ✔ Correct

Which command displays information on all USB devices connected to the computer?

lsusb ✔

Explanation

lsusb displays information on all USB devices connected to the computer. This utility uses the following options:

- **-v** shows exhaustive information.
- **-s** ***bus_name*** shows information for a specific bus.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_06.question.fex

Question 10: ✔ Correct

Which of the following commands will display information about the RAID devices on the computer?

- **hwinfo --listmd**
- **lspci**
- **modprobe -r**
- **lsusb**

Explanation

hwinfo --listmd displays information about the RAID devices on the computer.

lspci displays information for all PCI devices connected to the system. **lsusb** displays information about all the USB devices connected to the system. **modprobe -r** removes kernel modules from the system.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_07.question.fex

Question 11: ✔ Correct

What is the full path to the directory that contains information about the system state and processes?

/proc ✔

Explanation

The **/proc** directory contains information about the system state and processes. Its contents are created dynamically. Be aware of the following files and directories in the **/proc** directory:

- *cpuinfo* has information about the computer's CPU.
- *devices* displays a list of hardware installed on the computer.
- *dma* shows all the direct memory access assignments for the computer. Direct memory access gives hardware devices direct access the computer's memory independent of the CPU.
- *interrupt* lists the interrupt request (IRQ) channels the computer uses. Interrupt requests are signals sent to the CPU that inform it that it needs to process input from a hardware device.
- *iomem* contains a mapping of the memory allocated to each device and the input/output port assignments for the memory.
- *modules* lists the kernel modules that the computer is currently using.
- *version* gives information about the current kernel version.
- **/scsi** contains a file or directory for each SCSI device attached to the computer.
- **/bus** contains a file or directory for each USB device attached to the computer.
- **/ide** contains a file for the IDE devices attached to the computer, including the internal hard drives and other devices that attach to an IDE ribbon.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_08.question.fex

Question 12: ✔ Correct

Match the correct **/proc** directory content on the left with the description on the right.

Displays the boot options that were given to the kernel at boot time

✔ cmdline

Displays information about the computer's CPU

✔ cpuinfo

Displays information about the current kernel version

✔ version

Displays all the direct memory access assignments for the computer

✔ dma

Explanation

The **/proc** directory contains information about the system state and processes. Be aware of the following files and directories in the **/proc** directory:

- *cpuinfo* has information about the computer's CPU.
- *cmdline* displays the boot options that were given to the kernel at boot time.
- *dma* shows all the direct memory access assignments for the computer. Direct memory access gives hardware devices direct access the computer's memory independent of the CPU.
- *version* gives information about the current kernel version.

Other files and directories in the /proc directory include:

- *devices* displays a list of hardware installed on the computer.
- *interrupt* lists the interrupt request (IRQ) channels the computer uses. Interrupt requests are signals sent to the CPU that inform it that it needs to process input from a hardware device.
- *iomem* contains a mapping of the memory allocated to each device and the input/output port assignments for the memory.
- *modules* lists the kernel modules that the computer is currently using.
- **/scsi** contains a file or directory for each SCSI device attached to the computer.
- **/bus** contains a file or directory for each USB device attached to the computer.
- **/ide** contains a file for the IDE devices attached to the computer, including the internal hard drives and other devices that attach to an IDE ribbon.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_09.question.fex

Question 13: ✔ Correct

What is the full path to the directory that contains information about each kernel module installed on the computer?

/sys/module ✔

Explanation

The **/sys/module** has a sub-directory for each kernel module installed on the computer.

The **/sys** directory contains information about devices and drivers. In addition to the **/sys/module** directory, be aware of the following directories in **/sys**:

- **/block** has an entry for each block device on the computer. Block devices such as flash drives and disk drives use data blocks.
- **/bus** holds a sub-directory for SCSI, USB, PCI, and ISA devices. Each of these sub-directories has an additional directory for devices and drivers that has information for each device and driver in the category.
- **/class** has files for each class of devices on the computer.
- **/devices** lists every device that has been discovered on the computer. The directory hierarchy places each device beneath the device to which it is connected.

References

9.1.5 Device Driver Facts

q_device_driv_f_lp5_10.question.fex