

Chapter 8

Installing Peripherals

Objective: Given a scenario, set up and install standard peripheral devices on a laptop.

Users depend on various peripherals to support their work with desktop computers, laptops, tablets, and other devices. From entering data with keyboards, mice, and scanners to generating paper documents with a printer, peripherals play an essential role in making computers useful in an office environment.

In this lesson you'll learn everything you need to know about this objective, including:

- devices
- installation type

Peripheral types

Peripherals are the devices that we connect to our computers that play a supporting role. We each use many different peripherals in our daily work period. Let's explore some of the common peripherals you might find in an office environment.

Keyboard & Mice

Keyboards and mice are peripheral devices that allow you to provide input to a computer system. The keyboard allows you to enter text and numeric data, and the mouse allows you to move objects around and work within the graphical user interface. Keyboards and mice are mandatory for desktop computers. They are often built into laptops, but many laptop users prefer to have external keyboards and mice on their desks because these full-size devices are easier to use than the smaller devices built into laptops.



Display

Displays are also mandatory for a computer to be useful to its users. The displays of devices that allow the user to see what the computer is doing while they interact with the computer, such as the one shown in the figure below service, generally don't have displays connected to them. Still, laptop and desktop computers must use displays to be useful to people. As with keyboards and mice, laptops also have built-in displays, but users often have larger monitors on their desks when using their laptops in the office. Touchscreen displays are also quite popular because they allow users to interact directly with the display without using a keyboard or mouse.



All-in-one devices combine the monitor and the computer into a single piece of hardware. These devices save space on a user's desk but have the disadvantage of requiring the replacement of both the display and the computer at the same time. Apple's iMac is a popular all-in-one device.

Speakers

Speakers produce sound and are commonly connected to a computer system so that users may hear the sound created by or stream through the computer. In busy environments, users often prefer to use headphones instead of speakers for privacy and to avoid their office mates.



Printers & Scanners

Printers and scanners produce paper output and are either directly connected to an individual computer or connected to the network to serve many people.

Scanners take paper and create digital documents in PDF form or using other image formats so that they may be stored electronically. Printing and scanning functionality is often combined in multifunction devices.



Cameras

Cameras allow users to capture stereo images and videos. They're pretty much essential today for participation in video conferences. Laptops and smartphones usually have built-in camera whereas desktops require an external camera.



External Hard drives

Users with large storage needs may use external hard drives in addition to the internal storage contained within their computer. These drives may easily be moved between computers.

Be sure to understand the purpose of each of these peripherals types and whether they are used for input output and or storage. Keyboards mice cameras and scanners are used for input printer displays and speakers are used for output external hard drives are used for storage.

That's an overview of the most common types of peripheral devices used with modern computers. You'll find many more specialized devices in almost any business environment, and IT professionals spend a lot of their time configuring and troubleshooting peripherals.

Installing and Configuring peripherals

IT professionals are often asked to install peripherals for individual employees or the entire office. The installation and configuring of these devices varies quite a bit and can be simple or challenging.

The simplest devices use plug-and-play technology to make it easy for users to install them on their own. As the name implies, you plug these devices into the computer, and the computer automatically configures them to work properly. Other devices, particularly specialized or outdated devices, may require manual installation. The most important part is finding and installing a driver for the device in your operating system. The driver is a small piece of software that tells the operating system how to interact with the peripheral.

You can usually find them on the peripheral manufacturer's website. Once you download the correct driver, you may select devices shared by an entire office, such as a large printer, which typically doesn't connect to a single computer. Instead, they connect directly to the network and then maybe manage it over an IP connection. These devices typically have web-based interfaces that allow administrators to configure, manage, and monitor devices remotely. You connect to the web-based interface using the web browser on the computer that is connected to the same network, and then the device will guide you through the configuration process.

Practice Question 1

You recently received a new external hard drive for your computer that attaches via a USB cable. On the hard drive package, you read that it is a PhP device. What next step will you need to take to install the drive?

- A. Download and install driver
- B. Identify the drive's model number
- C. Connect the USB cable
- D. Configure the I/O settings

Practice Question 2

Installing a large pin that will be shared by many people in your office. What is the most common way of connecting this type of device?

- A. Ethernet Cable
- B. USB cable
- C. Firewire cable
- D. SATA

Practice Question 1 Explanation

The key to answering this question is noticing that the device uses plug-and-play (PhP) technology. This means that the device should configure itself automatically when it is connected to the computer. There should be no need to take any steps such as finding the device model number, downloading or installing a driver, or performing any special configuration test period; instead, the plug-and-play technology should automatically configure the device and make it ready for use as soon as it is connected to the computer with the USB cable so the correct answer is **C: USB cable**

Practice Question 2 Explanation

This question asks you to gather a few pieces of information. In this chapter, you learned that shared printers are most often connected directly to the network and accessed by users by the shared device's IP address. You also learned that network connections are made using Ethernet cables, so the correct answer here is that you should use an Ethernet cable to connect the printer to the network, where it may be accessed by any user.

It is possible to connect a printer to a single computer using a USB cable but this printer would then be available only to the users of that computer unless it is shared. If the user of that computer wanted to share the printer with others, they would need to leave their computer powered on all day and configure it as a print server. That is a much more cumbersome process than simply connecting the printer directly to the network. Serial ATA (SATA) connectors are used for storage devices, not printers, so the correct answer is **A: Ethernet cable.**

Peripheral Types Questions

1. What is the primary function of a keyboard in a computer system?
2. How does a mouse complement the use of a keyboard in a graphical user interface?
3. Why might laptop users prefer external keyboards and mice over built-in options?
4. What are the advantages of using an external monitor with a laptop?
5. What is the main advantage of all-in-one devices, and what is a potential drawback?
6. Why might users prefer headphones over speakers in a busy office environment?
7. How do multifunction devices combine the functionality of printers and scanners?
8. Why are cameras considered essential peripherals in today's business environment?
9. What role do external hard drives play in a computer system?
10. Which peripheral devices are primarily used for input, and which are used for output?

Installation and Configuration Questions

11. What is plug-and-play technology, and how does it simplify the installation of peripherals?
12. Why might some devices require manual installation despite the availability of plug-and-play?
13. What is the function of a driver in the installation of peripheral devices?
14. Where can users typically find the correct drivers for their peripherals?
15. How can IT professionals configure shared devices like printers in an office environment?
16. What are the benefits of using a web-based interface to manage network-connected peripherals?
17. Describe the process of installing a driver for a specialized peripheral device.
18. What are some challenges IT professionals might face when configuring outdated peripheral devices?
19. How can an external hard drive be utilized for input and storage?
20. Why is it important to understand whether a peripheral device is used for input, output, or storage?