8.3.4 Network Printing Facts

By making a printer accessible on the network, you allow multiple devices to share a single print device.

This lesson covers the following topics:

- Network printing processes
- Network printing considerations
- Configure a network printer attached to a PC

Network Printing Processes

Network printing uses the following three special processes and components:

- The client application generates the print job on the local system. This process is known as *spooling*.
- The print job is sent to a print *queue*. The queue is a location for storing waiting print jobs.
- A *print server* is responsible for managing the flow of documents from the queue to the printer. When the printer is ready, the print server takes the next document out of the queue and sends it to be printed.

Network Printing Considerations

When configuring network printing, keep in mind the following considerations:

Consideration	Description
Connect the Printer to the Network	The printer must have a connection to the network (either wired or wireless). This can be done in one the following ways: - Install a network interface card in the printer. - Connect the printer to a workstation or server that is connected to the network. The printer is *shared* to make it available to other computers. - Connect the printer to a special print server that has a network connection. - Use Bonjour networking technology service to allow you to share a printer on your local area network. - Use AirPrint to enable wireless printing capability on Apple iOS devices. - Use Google Cloud Print to wirelessly send jobs from internet-connected devices to a remote printer. If the printer itself does not have a network connection, use the USB port to connect the printer to another device.
Use a Print Server	The print server manages the flow of documents sent to the printer. Using a print server lets you customize when and how documents print. The print server can be any one of the following devices: - An internal print server is inside the printer itself. You use special management software to connect to the print server and manage print jobs. - You can configure a computer (either a server or a workstation) to perform print server functions. The computer can fill other roles on the network in addition to being the print server. Most operating systems include print server software. - You can purchase an external print server. This device is used only as a print server, although many print servers can manage multiple printers.

Install the Printer Drivers	Each network host that wants to use the printer must have the corresponding printer driver installed. When you share a printer in Windows, the current printer driver is automatically delivered to clients that connect to the shared printer. If the client computers run a different version of Windows, you can add the necessary printer drivers to the printer object. To add drivers for network users: • Edit the printer properties and use the Advanced tab • Edit the print server properties and use the Sharing tab

Configure a Network Printer Attached to a PC

To configure a printer attached to a Windows computer as a network printer:

1. Connect the print device to the computer.
2. Configure the printer object where the print device is connected.
3. To share the printer, do the following in Windows 10:
   a. Select **Start**.
   b. Select **Settings**.
   c. Select **Devices**.
   d. Select **Devices and Printers**.
   e. Right-click the *printer* you want to share and select **Printer Properties**.
   f. Select the **Sharing** tab.
4. If necessary, configure additional drivers to support client computers.
5. On a client computer, create a network printer object using the share name of the shared printer. To manually identify the shared printer, use the format: *computername\sharename*.

To connect to a network-attached printer or one using an external print server, create a printer using a TCP/IP port. Use the IP address and port name information to connect to the printer. Also, with network printing, you should be aware of data privacy issues when using public devices. When you send a print job to a network printer, your job is cached to the hard drive and saved there.