CCNA Discovery

Networking for Home and Small Businesses v4.0: Personal Computer Hardware

Lab 1.5.3 Installing a Printer and Verifying Operation

Objectives

- Manually install a printer using the default Windows XP driver.
- Verify printer and driver installation and troubleshoot any problems.
- Download and install the most recent driver from the printer manufacturer.

Background / Preparation

Many home and small office printers are plug-and-play, which means that Windows XP automatically discovers the printer and installs a functional driver. However, if you know the process for manually installing a printer and updating the printer driver, you have the knowledge to troubleshoot many types of printer problems.

In this lab, you will install a virtual printer on a Windows XP workstation. This lab is designed to work without an actual printer, but most steps are exactly the same for connecting a physical printer.

The following resources are required:

- Computer with Window XP installed
- Internet connection

Step 1: Add a printer

- a. From the Start menu, select Control Panel. Double-click the Printers and Faxes icon. If this icon is not shown, click Switch to Classic View in the left pane.
- b. In the **Printers and Faxes** window, click the **Add Printer** icon to open the Add Printer Wizard. Click **Next**.



c. For Local or Network Printer, click the Local printer attached to this computer radio button, and uncheck Automatically detect and install my Plug and Play printer. Click Next.

Add Printer Wizard
Local or Network Printer The wizard needs to know which type of printer to set up.
Select the option that describes the printer you want to use: Local printer attached to this computer
Automatically detect and install my Plug and Play printer
A network printer, or a printer attached to another computer
To set up a network printer that is not attached to a print server, use the "Local printer" option.
< Back Next > Cancel

d. For Select a Printer Port, click the Use the following port radio button and choose LPT1: (Recommended Printer Port). Click Next.

Add Printer Wizard			
Select a Printer Port Computers communicate with printers through ports.			
Select the port you want yo new port.	ur printer to use. If the port is not listed, you can create a		
 Use the following port: 	LPT1: (Recommended Printer Port)		
Note: Most computers use the LPT1: port to communicate with a local printer. The connector for this port should look something like this:			
	A A A		
Create a new port: Type of port:	Adobe PDF Port		
	< Back Next > Cancel		

e. **Note:** In this step, you will choose a driver provided by Windows XP for an HP LaserJet 2200, a common home or small office, black-and-white laser printer. You do not have to physically have the printer to do these steps. However, if you are installing a printer that is actually attached to your computer, choose the manufacturer and printer model corresponding to your printer instead of the HP LaserJet 2200.

For Install Printer Software, select HP from the Manufacturer list. In the Printers list, locate HP LaserJet 2200 Series PCL and click to select it. Click Next.

Add Printer Wizard	
Install Printer Software The manufacturer and model (determine which printer software to use.
	d model of your printer. If your printer came with an installation ur printer is not listed, consult your printer documentation for
Manufacturer 🔥	Printers 🔼
Gestetner	HP LaserJet 2100
Hewlett-Packard	HP LaserJet 2100 PCL6
IBM	HP LaserJet 2200 Series PCL
infotec 🗸 🗸	HP LaserJet 2200 Series PS (MS)
This driver is digitally signed. Tell me why driver signing is imp	Windows Update Have Disk
	< Back Next > Cancel

f. For **Name Your Printer**, choose a descriptive name for the printer. In an environment like a large office that has several printers of the same make and model, it is helpful to give each printer a unique name so that it can easily be identified. Click **No** under **Do you want to use this printer as the default printer?** (If you are connecting an actual printer, click **Yes** if you want Windows applications to use this printer by default.) Click **Next**.

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Name Your Printer	D
You must assign a name to this	
	cause some programs do not support printer and server n 31 characters, it is best to keep the name as short as
Printer name:	
HPLJ 2200 Series PCL Virtu	al
Do you want to use this printer a	is the default printer?
OYes	
0163	
⊙ No	

- g. In the **Printer Sharing** window, click **Next** to accept the default option to not share this printer.
- h. If you are actually installing a printer, click **Next** in the **Print Test Page** window to print a test page. If you are installing a virtual HP LaserJet 2200, click the **No** radio button before clicking **Next**.
- i. In the **Completing the Add Printer Wizard** window, review the printer settings, and then click **Finish**.

Add Printer Wizard		
	Comple Wizard	ting the Add Printer
		cessfully completed the Add Printer Wizard. the following printer settings:
	Name: Share name: Port: Model: Default:	HPLJ 2200 Series PCL Virtual <not shared=""> LPT1: HP LaserJet 2200 Series PCL No</not>
	Test page:	No
	To close this	wizard, click Finish.
		< Back Finish Cancel

Step 2: Verify the printer installation

- a. Open the Printers and Faxes in control panel and check to see that the printer that you installed and named is shown. If it is not shown, repeat Step 1.
- b. Right-click the icon for the new printer (HPLJ 2200 Series PCL Virtual), and then click Properties.

HPLJ 2200 Series PCL Virtual Properties		
General Sharing Ports Advanced Security Device Settings		
HPLJ 2200 Series PCL Virtual		
Location:		
Comment:		
Model: HP LaserJet 2200 Series PCL		
Color: No Paper available:		
Double-sided: No Letter		
Staple: No		
Speed: 18 ppm		
Maximum resolution: 600 dpi		
Printing Preferences Print Test Page		
OK Cancel Apply		

- c. Click the Advanced tab and record the name of the driver shown in the Driver textbox. Driver Name:
- d. Click the Device Settings tab and examine the available options for the printer using this driver. To close the window, click Cancel.

😸 HPLJ 2200 Series PCL Virtual Properties 🛛 🔹 💽
General Sharing Ports Advanced Security Device Settings
 HP LaserJet 2200 Series PCL Device Settings Form To Tray Assignment Printer Auto Select: Letter Tray 1: Letter Manual Feed (Tray 1): Letter Tray 2: Not Available Tray 3: Not Available External Fonts Font Substitution Table External Fonts Installable Options Tray 2: Not Installed Tray 3: Not Installed Duplex Unit (for 2-Sided Printing): Not Installed Printer Memory: <u>8MB</u>
OK Cancel Apply

Step 3: Download and install an updated printer driver

When you use the Add Printer Wizard to manually install a printer, the driver that is installed by default allows the device to function, but the Windows-installed driver does not always allow all features of the device to be used. The most full-featured drivers are usually those provided by the device manufacturer.

Updating a printer driver is one of the best ways to troubleshoot problems and to increase printer functionality. Most manufacturers continue to update drivers to improve compatibility with operating systems, so it is a good idea to periodically check for driver updates and to install them if they are available.

In this step, you will go to the Hewlett-Packard website to obtain an updated driver for the HP LaserJet 2200. If you have installed a different printer, modify these instructions as needed.

- a. Open a web browser and go to http://www.hp.com.
- b. Click on the Software and Driver Downloads link.
 - **NOTE:** Many manufacturers have a support link on their home page that leads to drivers and other downloads.

c. Click the **Download drivers and software (and firmware)** radio button. Enter the printer model in the **for product** text box and click the double arrow link to the right of the text box.

Software & Dri∨er Downloads
Support for your products:
Select a task and enter a product name/number: Ownload drivers and software (and firmware)
C See support and troubleshooting information
for product: LaserJet 2200 e.g. Pavilion 7955, LaserJet 1100 or C4224A » How do I find my product name/number
Or Automatically detect product names/numbers:
Start Detection »
» About automatic product detection

d. The search displays the available products. Click HP LaserJet 2200 Printer or the model of the printer for which you are downloading a driver.



e. Click **Microsoft Windows XP** in the list of operating systems. In the list of drivers shown, click **Download** for the HP LaserJet 2200 PCL6 driver option.

Driver					
Description	Current version	Size (MB)	Estimated download time	Previous version	
HP Universal Print Driver for Windows - PCL 5	2.75.0.2 6 Sep 2006	8.8	56K: 21m 512K: 2m		Download »
HP Universal Print Driver for Windows - PostScript	2.75.0.2 6 Sep 2006	8.5	56K: 20m 512K: 2m		Download »
HP LaserJet 2200 PCL5e Driver	4.27.2200.410 22 Apr 2004	1.9	56K: 4m 512K: ≺1m		Download »
hp LaserJet 2200 PCL6 driver	4.27.2200.410 22 Apr 2004	2.2	56K: 5m 512K: ≺1m		Download »

f. In the download dialog box, click Save.

File Download - Security Warning	X
Do you want to run or save this file?	
Name: lj2200pcl6win2kxp2003-en.exe Type: Application, 2.15 MB From: ftp.hp.com Run Save Cancel	
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do n run or save this software. <u>What's the risk?</u>	iot

- g. In the **Save As** dialog box, click the **Desktop** icon in the left pane to save the driver installation file to your desktop. You can save the file anywhere, but it is important that you know where you have saved it.
- h. Write the name of the file: ____
- i. Click on the **Save** button. Close the browser and any other open applications.
- j. Double-click the icon for the downloaded file.
 - **NOTE:** You may not see the filename extension (**.exe**). File extensions are only visible if you disable the default **Hide extensions for known file types** from Windows Explorer. See your instructor for more information.

k. When prompted, click **Run**. In the dialog box, click the second radio button and then **Next** to unpack the files to c:\j2200. Click **Finish**.

🐸 lj2200 - InstallShield Wizard	×
Remove Installation Files Do you want to remove the files used to perform the installation?	
 Unpack the files used to perform the installation to a temporary location, and automatically remove these files after the setup is completed. Select this option if you are not planning to run the setup again later. Unpack the files used to perform the installation to the location specified below, and don't remove these files after the setup is completed. Select this option if you are planning to run the setup again at a later time. If the specified folder location does not exist, it will be created automatically. Save files in folder: 	
c:\lj2200	
Change To continue, click Next.	
nstallShield	

- I. Repeat Steps 2a and 2b to open the Properties page of the new printer. Click the **Advanced** tab. Click the **New Drive** button, and then click **Next** to begin the Add Printer Driver Wizard.
- m. Click **Have Disk** in the Printer Driver Selection window.

Add Printer Driver Wizard			
Printer Driver Selection The manufacturer and model determine which printer driver to use.			
Select the manufacturer and model of the Windows XP printer driver you want to install. If your printer driver is not listed, you can click Have Disk to select a Windows XP printer driver supplied by your printer manufacturer.			
Manufacturer Agfa Alps Apollo Apple APS-PS	Printers		
This driver is digitally signed. Have Disk <u>Tell me why driver signing is important</u>			
	< Back Next > Cancel		

n. In the Install From Disk window, click Browse and locate the folder created in Step 3 by navigating to My Computer > Local Disk C:\lj2200. Click Open and you return to the Install From Disk window. Click OK.

Install F	rom Disk	×
I	Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.	OK Cancel
	Copy manufacturer's files from: C:\\j2200	Browse

o. In the Printer Driver Selection window, select HP LaserJet 2200 Series PCL 6, and then click Next. Click Finish in the window that follows.

Add Pr	inter Driver Wizard
20.0047.07	ter Driver Selection The manufacturer and model determine which printer driver to use.
	Select the manufacturer and model of the Windows XP printer driver you want to install. If your printer driver is not listed, you can click Have Disk to select a Windows XP printer driver supplied by your printer manufacturer.
Printe	ers P LaserJet 2200 Series PCL 6
	* LaserJet 2200 Series PCL 6
	Have Disk
	<pre></pre>

p. When the process is finished, return to the properties window of the printer and click the **Apply** button, and then click **OK**.

Step 4: Verify the new driver installation

In this step, you will compare the Windows default driver installed in the first step to the newly installed driver from the manufacturer website.

- a. In the properties window of the new printer, verify that the **Apply** button is grayed out.
- b. Click the Advanced tab. What is the name of the driver?
 Driver Name:
- c. Click the Configure tab. The window for the HP LaserJet 2200 is shown in the figure.

Printer Model HP LaserJet 2200D	Fonts
Paper Handling Options Duplexing Unit Allow Manual Duplexing	Configure
Allow Scaling from Large Paper Optional Paper Sources: (None)	E713
Memory Options Printer Memory (base)	

d. Compare this tab to the Device Settings tab in Step 2d. What are the differences?

1	
2	
3	
4	
5	
6	

e. Click on some of the other tabs in the properties window to compare the new and old drivers. Record some of the differences here.

1	
2	
3	