# Week 10 Windows Server Activities - Printing

Activities

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**How to Create Screenshots:** Please use the Windows Snip and Sketch Tool or the Snipping Tool. Paste a screenshot of just the program you are working on. If you are snipping a virtual machine, make sure your focus is outside the virtual machine before you snip.

1. Press and hold down the **Windows key** & **Shift**, then type **S.** This brings up the on-screen snipping tool.
2. Click and Drag your mouse around whatever you want to snip.
3. Release the mouse button. This places the snip into the Windows Clipboard.
4. Go into Word or wherever you want to paste the snip. Hold down **CTRL**, then type **V** to paste the snip.

# Activity 9-1: Print Spooler Service

Time Required: Approximately 5 minutes

Objective: Learn about the Print Spooler service and the services upon which it depends.

Description: The Print Spooler service works in conjunction with the Remote Procedure Call service to help make Windows Server printing possible. In this activity, you use the Services tool to view the Print Spooler service as well as services upon which it depends.

1. Logon to Server1 with your administrator account.
2. Open Server Manager, if it is not open.
3. Click Tools and click Services.
4. If necessary, click Services in the left pane.
5. Scroll the right pane in the Services window to find the Print Spooler service. Click Print Spooler. Notice the description of the Print Spooler service. Double-click Print Spooler to view its properties.
6. **Insert a screenshot:**

Click or tap here to enter text.

1. Click the Dependencies tab.
2. **What service(s) depend on the Print Spooler service? On what service(s) does the Print Spooler depend?**

Click or tap here to enter text.

1. **Insert a screenshot:**

Click or tap here to enter text.

1. Click Cancel in the Print Spooler Properties (Local Computer) dialog box.
2. Close the Services window. Leave Server Manager open for the next activity.

# Activity 9-2: Installing the Print and Document Services Role

Time Required: Approximately 15 minutes

Objective: Install the Print and Document Services Role.

Description: In this activity, you install the Print and Document Services role along with the Print Server role service.

1. Logon to Server1 with your administrator account.
2. Open Server Manager, if it is closed.
3. Click Manage and click **Add Roles and Features**.
4. If you see the Before you begin window, click Next.
5. Ensure Role-based or feature-based installation is selected and click Next.
6. Be sure your server is selected in the Select destination server window and click Next.
7. In the Select server roles window, check the box for Print and Document Services. If you see a dialog box to add features required for a role, such as remote server administration tools, click Add Features.
8. Click Next in the Select server roles window.
9. Click Next in the Select features window.
10. In the Print and Document Services window, read the information about the Print and Document Services role and note that there is a link to learn about this role. Click Next.
11. In the Select role services window, make sure Print Server is selected (the default), Choose **Internet Printing** 🡪 Click Next until you get to the Confirmation step.
12. Click **Install** in the Confirm installation selections window.
13. When the Installation progress window shows that the installation succeeded, click Close.
14. In the left pane of Server Manager, select Print Services and scroll through the right pane to view the boxes of information for this role. Notice that the Roles and Features box shows that Print Server is installed as a role service.
15. **Insert a screenshot:**

Click or tap here to enter text.

1. Click the back arrow near the top left of the window in Server Manager to go back to the main display. Leave Server Manager open for the next activity.

# Activity 9-3: Configuring the Print Server Properties

Time Required: Approximately 10 minutes

Objective: Configure the print server properties from the Print Management tool.

Description: In this activity, you open the Print Management tool and configure the print server properties.

1. Logon to Server1 with your administrator account.
2. If necessary, open Server Manager.
3. Click Tools and click Print Management.
4. In the left pane, click the right-pointing arrow in front of Print Servers to view the available print services, including your server.
5. Right-click your server, such as Server1 and click Properties.
6. Five tabs are shown in the Print Server Properties dialog box: Forms, Ports, Drivers, Security, and Advanced. Click each tab to view its configuration options.
7. If it is not selected, click the Advanced tab.
8. **What spooler management options are already selected?**

Click or tap here to enter text.

1. **What is the folder and its path where spooler files can be written?**

Click or tap here to enter text.

1. Click the Security tab. Notice the groups and users who have security access.
2. **What default permissions are granted to the Everyone group**?

Click or tap here to enter text.

1. **Insert a screenshot**:

Click or tap here to enter text.

1. Click Cancel.
2. Leave the Print Management window open for the next activity.

# Activity 9-4: Installing a Printer

Time Required: Approximately 10 minutes

Objective: Install a printer using the Network Printer Installation Wizard.

Description: In this activity, you install a printer using the Network Printer Installation Wizard. This activity does not require a printer to be attached to the computer, because you practice a manual configuration without automatic detection.

1. Logon to Server1 with your administrator account.
2. Open the Print Management window, if it is not already open. Or, to open it from Server Manager, click Tools and click Print Management.
3. In the left pane, use the right-pointing arrow, if necessary to ensure you can view the server name under Print Servers.
4. In the left pane, right-click the server name under Print Servers and click Add Printer.
5. Notice the options to install a local or a network printer. A local printer is one that is physically attached to the computer through a port, and a network printer is one that is connected to a different computer or to a dedicated print server device (wireless or cabled to the network) and that is shared over the network. For this activity, click Add a new printer using an existing port.
6. Click the down arrow that shows LPT1: (Printer Port) as the default.
7. **What options are available?**

Click or tap here to enter text.

1. For practice, use the default selection for the printer port (port to which the printer is connected), such as LPT1: (Printer Port), and click Next.
2. Ensure that Install a new driver is selected and click Next.
3. For the Manufacturer, select Microsoft, select whichever print driver you want. If you selected the defaults, notice that the driver is digitally signed. Digital signing offers some security that the driver is authentically written by the manufacturer. Click Next.
4. In the Printer Name and Sharing Settings dialog box, ensure that there is a check in the box for Share this printer, which is the default. In the Share Name text box, enter Office Printer plus your initials, such as Office Printer HP 4200. This is the name that users on the network will see. In the Location text box, enter a theoretical room number, such as Room 10. Also, enter a comment, such as Shared color printer. Click Next.
5. Review the information for the printer.
6. **Insert a screenshot:**

Click or tap here to enter text.

1. Click Next.
2. Ensure that the Status shows the driver and printer installations succeeded. Notice that you could now print a test page to test your installation. You can also choose to add another printer.
3. **Insert a screen shot:**

Click or tap here to enter text.

1. Click Finish.
2. Leave the Print Management window open for the next activity.

When you add a shared printer, consider the following guidelines when choosing a share name:

* Compose names that are easily understood and spelled by those who will use the printer.
* Include a room number, floor, or workstation name to help identify where the printer is located.
* Include descriptive information about the printer, such as the type, manufacturer, or model.
* After you install a printer on a network to be shared, make sure that network printer sharing is turned on. This step enables printer sharing through the Windows Firewall so that shared printers appear when users view network resources and so that communications are permitted between the shared printers and the users who want to access them.

# Activity 9-5: Viewing Printing Preferences

Time Required: Approximately 5 minutes

Objective: Determine the default setup for printing preferences on a printer.

Description: After you install a printer, it is a good idea to verify the printing preferences to make certain they match the intended use of the printer. In this activity, you view the printing preferences for the printer you installed earlier.

1. Logon to Server1 with your administrator account.
2. Ensure the Print Management tool is open.
3. In the left pane, use the right-pointing arrow to expand the elements under the print server so that you see Printers listed. Click Printers in the left pane to view the installed printers in the middle pane.
4. In the middle pane, right-click the printer you installed earlier. Click Properties.
5. Make sure the General tab is displayed. Click the Preferences button near the bottom of the dialog box.
6. **What tabs are shown?**

Click or tap here to enter text.

1. **What are the options on the tabs that can be configured?**

Click or tap here to enter text.

1. Click Cancel.

# Activity 9-6: Configuring a Group Policy to Enable Publishing a Printer

Time Required: Approximately 10 minutes

Objective: Learn how to enable printer publishing in a Group Policy.

Description: Publishing a printer for domain-wide access must be enabled in a domain level Group Policy within Active Directory. In this activity, you make certain that a domain level Group Policy for publishing printers is enabled.

1. Logon to Server1 with your administrator account.
2. Open Server Manager, if it is not open.
3. Click Tools and click Group Policy Management.
4. Right-click the Domain object and Click Create a GPO and link it here. Name the GPO Printing Settings.
5. In the left pane of the Group Policy Management Editor window, as necessary, use the right-pointing arrows to display the elements under these folders: Computer Configuration, Policies, and Administrative Templates.
6. In the left pane, click the Printers folder under Administrative Templates.
7. Scroll through the right pane and notice the policies that can be configured.
8. In the right pane, double-click Allow printers to be published.
9. Make sure Enabled is selected.
10. **Insert a Screenshot:**

Click or tap here to enter text.

1. Click OK.
2. In addition to enabling printer publishing, you might want to enable the ability for browsing master servers to include published printers, as users browse for network printers when installing them through their operating system’s version of the Network Printer Installation Wizard. To enable printer browsing, double-click Printer browsing, select Enabled (if it is not already selected), and click OK.
3. Review the middle pane of the Group Policy Management Editor window to ensure your changes have been made.
4. Close the Group Policy Management Editor window. Close the Group Policy Management window.

# Activity 9-7: Configuring Printer Security

Time Required: Approximately 10 minutes

Objective: Learn how to set up security on a shared printer.

Description: Configuring security is very important on a shared printer, so that you can control who has access and ensure the productivity of the printer’s users. You also set up auditing of failed printing attempts for the domain local group you created.

1. Logon to Server1 with your administrator account.
2. Click the Security tab on the printer you setup earlier.
3. **What** security **is set up already?**

Click or tap here to enter text.

1. Click the Everyone group and click Remove. Notice that the Group or user names box is updated to reflect the change.
2. Click the Add button.
3. In the Select Users, Computers, Service Accounts, or Groups dialog box, click the Advanced button, click Find Now, double-click the DL\_Sales Group you created earlier, and click OK.
4. **What permissions are given to this group by default?**

Click or tap here to enter text.

1. Click the Advanced button.
2. In the Advanced Security Settings dialog box for the printer, click the Auditing tab. Click Add.
3. In the Auditing Entry window for the printer, click the link for Select a principal.
4. In the Select User, Computer, Service Account, or Group dialog box, click the Advanced button, click Find Now, double-click the domain local group DL\_Sales, and click OK.
5. In the Auditing Entry window for the printer, click the down arrow in the Type box and select Fail to track failed print attempts. Click OK. Notice that your auditing configuration now appears on the Auditing tab for the Advanced Security Settings window for the printer.
6. **Insert a screenshot:**

Click or tap here to enter text.

1. Click OK.
2. Click OK in the Properties dialog box for the printer.
3. Leave the Print Management tool open for the next activity.

# Activity 9-8: Pausing a Printer and Canceling a Document

Time Required: Approximately 10 minutes

Objective: Learn how to pause a printer and then cancel a document in a printer’s print queue window.

Description: Assume that your office has a printer that is printing sheet after sheet of garbled text. This activity enables you to pause printing to that printer until you can cancel the print job.

1. Logon to Server1 with your administrator account.
2. Open the Print Management tool, if it is not still open.
3. Click Printers in the left pane under the server name, if Printers is not already selected.
4. Right-click the printer you installed earlier and click Open Printer Queue.
5. Click Printer and click Pause Printing.
6. **Has the title bar of the printer’s window changed, and if so how?**

Click or tap here to enter text.

1. Create a document using a word processor or Notepad that contains only one or two words, such as Test. (To use Notepad, click Start, click the Windows Accessories folder, and click Notepad.) Print the document to the printer that you have paused. (In Notepad, click File, click Print, ensure the correct printer is selected, and click Print.) Close the document you created and do not save it.
2. When the document appears in the printer window, click it.
3. Click Document and leave the menu open.
4. **What options are available to you to control a print job?**

Click or tap here to enter text.

1. Move your pointer to a blank area and click it to close the Document menu.
2. Double-click the document you sent to the print queue.
3. Click Cancel to close the Properties dialog box for the document.
4. Right-click the document that you sent to the printer and click Cancel. Click Yes to cancel the document.
5. Click Printer and click Pause Printing to remove the check.
6. Close the window you have been using to manage print jobs and close the Print Management tool.

# Activity 9-9: Installing and Sharing a Printer

Time Required: 10 minutes

Objective: Install and share a printer.

Required Tools and Equipment: Server1

Description: Most employees in the company have been printing directly to a network-attached printer. You have learned that a print server can offer some benefits, so you decide to install the printer and share it on your Windows Server Server.

1. Log on to Server1 as your administrator account, if necessary.
2. Open Print Management 🡪 Print Servers 🡪 Right Click Server1 🡪 Add Printers.
3. Click the Add an IPP, TCP/IP etc 🡪 Click Next.
4. Printer Address: Type of Device: TCP/IP Device.
5. In the Type a printer hostname or IP address window, type the network-attached printer’s IP address (10.10.1.8) in the Hostname or IP address text box. The port name is filled in automatically, but you can change it, if you like. By default, Windows attempts to query the printer to determine the driver to use. Uncheck that option, as you don’t really have a printer. Click Next.
6. Windows will try to detect the port type and fail. Select Hewlett Packard Jet Direct from the list. Click Next.
7. This printer does not exist. Windows won’t be able to determine the printer information, select any printer under Microsoft. Click Next.
8. In the Printer Sharing window, click the Share this printer so that others on your network can find and use it option button, and type **HPPrinter** in the Share name text box. (Normally, you give a printer a more descriptive name.)
9. **Insert a screenshot:**

Click or tap here to enter text.

1. Click Next.

Note: If you don’t share the printer in the Add Printer Wizard, you can share it later in the Sharing tab of the printer’s Properties dialog box.

1. Click Print a test page. If you printed a test page, click Close, and then click Finish.
2. Clear the print job from the printer.
3. In the Devices and Printers window, right-click the printer you installed and click Printer properties.
4. Click the Ports tab. You can add a port or change a port’s configuration, such as changing the IP address of a TCP/IP port. If you have two or more identical printers, you can click the Enable printer pooling option and select additional ports for this printer.
5. Click the Security tab. Printers don’t have share permissions; they have permissions only in the Security tab, and they work similarly to NTFS permissions. Click the ACEs in the Group or user names list box, and review the permissions for each one. Notice that the Everyone group has the Print permission by default.
6. **Insert a screenshot:**

Click or tap here to enter text.

1. Click Cancel. Close any open windows.
2. Stay logged on if you’re continuing to the next activity; otherwise, log off or shut down Server1.

# Activity 9-10: Connecting to a Shared Printer

Time Required: 10 minutes

Objective: Connect to a shared printer from a client workstation.

Required Tools and Equipment: Win11 and Server1

Description: After installing the printer and configuring sharing, you need to set up client workstations to connect to the shared printer.

1. Start Server1, if necessary. Start Win11, and log on as Sales1.
2. On Win11, right-click Start, click Run, type \\Server1 in the Open text box, and then press Enter. Right-click HPPrinter and click Connect. Windows displays a message that it’s connecting to the printer.
3. Right-click Start, click Control Panel, click Hardware and Sound, and click Devices and Printers. You see the printer you connected to. Right-click the printer, click Printer properties, and then click Print Test Page. Each test page can be identified by the computer name that printed it displayed on the test page. You see a message indicating a test page has been sent to the printer. Click Close and then click Cancel to close the printer’s Properties dialog box.
4. On Server1, click Devices and Printers in Control Panel, and click the printer you installed. Click See what’s printing on the menu bar. The print queue shows any jobs waiting to be printed. (At this point, there aren’t any.)
5. Click Printer, Pause Printing from the menu to prevent jobs in the queue from printing.
6. On Win11, print a test page to the printer.
7. On Server1, you see the print job in the print queue window. Right-click the print job and review the actions you can take. Leave the print queue window open.
8. On Server1, open File Explorer and navigate to the C:\Windows\System32\spool\PRINTERS folder, which stores the jobs you see in the print queue. Two files representing the print job are listed.
9. **Insert a screenshot:**

Click or tap here to enter text.

1. Close File Explorer.
2. On Win11, open the print queue for the printer. You see the job the same way you see it on the server. Right-click the print job and click Cancel. Click Yes to confirm. (If the print job is still displayed, click View, Refresh from the menu.) You can manage your own print jobs because of the CREATOR OWNER’s Manage documents permission.
3. On Server1 in the print queue window, click Printer, Properties from the menu. Click the Security tab, click CREATOR OWNER in the list of ACEs, and then click Remove. Click OK.
4. On Win11, print another test page to the printer. In the print queue window, right-click the print job and click Cancel. Click Yes to confirm. You will get an “Access denied” message in the status bar of the print queue window.
5. **Insert a screenshot:**

Click or tap here to enter text.

1. On Server1, right-click the print job and click Cancel. Click Yes to confirm. Click Printer, Pause Printing from the menu to unpause the printer.
2. Shut down Win11, and log off or shut down Server1.

# Activity 9-11: Deploying a Shared Printer by Group Policy

Time Required: 10 minutes

Objective: Deploy a shared printer by using Group Policy preferences.

Required Tools and Equipment: Win11 and Server1

Description: After installing the printer and configuring sharing, deploy the printer by Group Policy.

1. Start Server1, logon as your administrative user.
2. Start Group Policy Management.
3. Create and link a new GPO at the MyDomain.local level called Shared Printing.
4. Edit the GPO. Go to User Configuration > Preferences > Control Panel Settings > Printers.
5. Right Click Printers > New > Shared Printer.
6. Insert the UNC path to the shared printer. \\server1\hpprinter
7. Click Set this printer as the default printer.
8. Click the Common tab. Select Remove this item when it is no longer applied. Click OK. You will get a message that the action will change to Replace. Click OK.
9. Insert a screenshot.

Click or tap here to enter text.

1. Click Ok to exit the dialog box and save your changes.
2. Close the Group Policy to save the changes.
3. Logon with Sales1 to the Win11 computer. Run **gpupdate /force** at the command line.
4. Insert a screenshot of the group policy installed printer.

Click or tap here to enter text.

Remove any Group Policies you created in these Activities.

## Assignment Submission

Attach this completed file to the assignment in Blackboard.