

CIS 231 – Printing Homework – #1

TCP/IP Printers

This assignment requires that you configure TCP/IP printers at your server using TCP/IP ports. The settings that you will use for these ‘fake’ printers are provided in the below Printer Table.

Setup: Users, Groups and Shares

1. Create two new containers in your domain; Research and Marketing. Create users in each container and create global and domain local groups in each container. Establish the appropriate memberships for each group (AGLP). In addition, create two folders at the root of a drive (not drive C). Share the folders; name one share REPORTS and name the other APPS. The default share permissions will suffice.
 - a. Provide a screenshot which displays the contents of the Research container.
 - b. Provide a screenshot which displays the contents of the Marketing container.
 - c. Execute the net share command at the command prompt. Include the command and its output

2. Configure your server with the role of print server.
 - a. Provide a screenshot which confirms your print server has been configured with the role of print server.

3. Configure each of the three printers from the table as a shared printer on the file server in your domain. The following must be fulfilled:
 - Accept the Default names for both the Printer and the Printer Share
 - The first two printers must be shared and published; the third should only be shared (not published).
 - When creating the TCP/IP Ports, use the default port name.
 - *Only* users in *your* domain should be able to print to each of the printers.

| Printer Table: Refer to this table while doing the assignment. | | |
|---|---|--|
| Printer Number | IP Address/ TCP/IP Port (Replace # with the Student # that was assigned to you) | Make / Model / Driver The name listed below is exactly the name listed in the add printer wizard. Don't use a different driver. You may need to use windows updates to get the driver or download the driver from the manufacturer's site Do not use a class driver for the first two printers (use type 3). Use a class printer for the 3rd printer. |
| 1 | 192.168.#.12 | Epson AI-C2600 |
| 2 | 192.168.#.13 | HP Color Laserjet 4650 PCL 5 |
| 3 | 192.168.#.14 | HP Laserjet 400 MFP M425 PCL 6 Class Driver |

Notes regarding using these ‘fake’ printers:

- When adding a port you will get a message that indicates additional port information is required. If there were actually a printer on the network with that IP address, this screen would not display. Accept the defaults provided: Standard Generic Network Card.
- After adding the printer, right-click on it and pause it; this will allow you to send jobs to the printer without generating error messages.

Provide print-screen images which contain the following information:

- a. The Printers node under the Print Server in Print Management. Make sure all columns are visible.
- b. The Ports node under the Print Server in Print Management. Make sure the port name and printer name columns are fully visible.
- c. The Drivers node under the Print Server in Print Management. Make sure all columns are visible.
- d. The Security Tab for each of the Printers. Be sure the picture includes verification that you successfully set permissions so that only users in your domain can use the share.

- e. The Share Tab for each Printer
4. Logon at Windows 10 as a user from the Research container and manually add each of the printers.
 - a. Provide a numbered or bulleted list of the exact steps you took to add the printers.
 - b. Provide a print-screen image of the printer's folder for this user.
 - c. While logged in as the user, send a print job to each printer and then, back at the server; provide a print-screen image of the printers node within Print Management. This should verify that jobs were sent to the respective printers.
5. Add the 32 bit driver for each of the Type 3 printers to the respective printer shares created in question 3.
 - a. Provide a numbered or bulleted list of the exact steps you took to add the 32bit driver for each of the type-3 printers.
 - b. Provide a screenshot of the Drivers node under the Print Server in Print Management. Make sure all columns are visible.
6. Login at the Windows 7 client as the same user that you used in question 4 and add the three shared printers.
 - a. Provide a numbered or bulleted list of the exact steps you took to one of the printers.
 - b. Provide a print-screen image of the printer's folder for this user on each client.
 - c. While logged in as this user on either client, send a print job to one of the printers. Confirm that the job reached the printer.
7. Use Print Management to deploy all three printers to the users in the Marketing container. Name the GPO DeployPrintersMarketing (No scripts here.... just GPO settings) Test your results. Provide the following:
 - a. Within Group Policy Management, provide a screenshot which displays the expanded Marketing container.
 - b. Within Group Policy Management click on the GPO object which is linked to the Marketing container and then click on the settings tab in the right pane. Provide a screenshot of this window. I want both the left and right panes in the screenshot – no cropping. Be sure that I can see everything that's configured; expand whatever needs expanding.
 - c. Within Windows 7, while logged in as a user from the Marketing container, provide a screenshot of the Printers folder.
 - d. Within Windows 10, while logged in as a user from the Marketing container, provide a screenshot of the Printers folder
8. Deploy all printers to the Windows 7 and Windows 10 computers using scripts. You must add the printers to the Windows 10 machine(s) using powershell cmdlets and you must use commands (cscript or rundll32 – you choose) to add the printers to Windows 7.

Each script must:

- Establish a drive mapping of Q: to the APPS share
 - Establish a drive mapping of S: to the REPORTS share.
 - Add all printers.
 - Configure the default printer to be the Epson AL-C2600.
 - Document each script – include statements that explain what's happening.
- a. Include the contents of each script in the Word document.
 - b. Include either the absolute path to each script or a screenshot which displays the contents of the folder in which it is stored. If you choose the latter the screenshot must show the folder's path in the address bar. Either option must also include the contents of the folder so that I can see that script in the folder.

- c. Explain to me how you got this to work. How many GPO's, where the GPO is linked, how did you test it? Include screenshots for each part of your explanation.
 - d. Within Windows 7, after logging in as a user, provide a screenshot of the Printers folder and display the output to the Net Use command.
 - e. Within Windows 10, while logged in as a user, provide a screenshot of the Printers folder and display the output to the Net use command.
 - d. Within Print Management, click on the *Deployed Printers* node in the left pane. Take a screenshot of this; both the left and right panes must be included in the image.
9. Add another shared printer to your print server. The printer must be the HP 2500C Series. Use the tcp/ip port of 192.168.#.15. Use V3 drivers; add the 32 and 64 bit drivers to the share and list it in the directory. Provide the following screenshots:
- a. Provide a screenshot of the Printers node under the Print Server in Print Management. Make sure all columns are visible.
 - b. Provide a screenshot of the Drivers node under the Print Server in Print Management. Make sure all columns are visible
 - c. Provide a screenshot of the Ports node under the Print Server in Print Management. Make sure all columns are visible.
10. Modify the scripts used in the question 8; add the statements that will remove the HP Laserjet 400 printer and add the new HP 2500C printer and test your resulting scripts.
- a. Include the contents of the script(s) in the Word document.