**LAB: USB Hub Functions**

**Lab Assignment**

This lab will guide you through the process of configuring and using an USB flash memory (thumb drive) to configure or update Link-OS printers. Content and concepts are based on FTP mirror.

You will;

* Have 40 mins to complete this. There may be additional time later if you do not finish.
* You will be able to use a USB flash memory device to perform a Mirroring function.
* You will be able to print a label format from a USB drive.
* You will be able to load a format and use the Print Station function.

**Lab Requirements:**

* USB Flash drive to perform the Mirroring operation and other new USB tasks on the printer.
* For Step 1 you may use any Link OS printer with an USB host port
* For Steps 2-4 you will need a Link OS industrial printer (ZT400 series)
* Media (and ribbon) for your printer
* QWERTY style keyboard

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| **Step** | **Procedure** | **Additional Information** |
| 1 | Creating the flash drive for mirroring. | On the USB memory drive that was provided will find the files you need to create the drive for mirroring. You may use one of your own USB memory drives or you may construct the needed folder on the drive provided. If you are using one of your drives the drive will need to be less than 1TB, refer to the User Guide for formatting and other requirements.   1. Create a folder called Zebra. 2. Create 3 sub folders    1. appl    2. files    3. commands 3. The /appl folder is for firmware. Place the firmware file for your printer model in this folder. (Optional)    1. Current firmware file is available from [www.zebra.com](http://www.zebra.com)    2. Firmware provided may need to first be un-Zipped in order to find the Vxx.19.xxZ.zpl firmware file 4. In the /files folder place the following file;    1. Zebra.bmp 5. In the /commands folder place the following files:    1. Sample Label.txt    2. logo.zpl |

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| 2 | Perform Mirroring | 1. D:\Craig\Work\2013\Projects & Products\Saturn\Saturn Pics\ZT_usbhost_lg.jpgInstall USB flash drive in the USB port on the front of the printer. 2. If your printer has a front panel, observe the front panel and wait.    1. F:\DCIM\Camera\IMG_20140404_134718.jpgIf the firmware is different in the printer than on the USB drive, firmware will be downloaded and the printer will restart and print a configuration label.    2. Files that are downloading will then flash briefly on the display    3. Printer executes every file loaded from the /commands folder    4. Printer posts a message ‘RESTARTING’    5. If the printer has downloaded firmware during the restart process the industrial printers will print a configuration label    6. Printer will come Ready and after a short pause, post a message ‘Mirroring Processing Finished’    7. Remove the USB drive at this time |

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| 3 | Printing a format from a USB drive.  You will need a printer with a front display to do this step. | 1. From the files provide find and copy to the root directory of your USB drive the files ‘**On a Stick.zpl**’ and the files that begin with ‘**VLS\_xxxx.zpl**’ 2. Insert USB drive in USB port on the front of the ZT410 printer 3. Using the front panel buttons (See User Guide)    1. Press OK    2. Press the right arrow to highlight Tools Icon.    3. Press OK    4. Press the left arrow button about 5 times to ‘**Print USB File**’. ‘Print USB file’ will load any executable file and process it. This could be to print a format from the USB drive that prints a label, or to store a format or a graphic file that might have a ~DG, or a ~DF in it.    5. Use up and down arrows to find and select the file ‘**On a Stick.zpl’**. 4. Press button below PRINT in lower right of screen. This should print a label that is stored on the USB drive. 5. You may also select the files beginning with ‘VLS’ to see what they print. 6. If you wish to see what is in those files you may use a PC and open the files in a text editor. |

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| 4 | Store a file on the printer and enter data in that file to print a label. | 1. From the files provided find and copy to the root directory of your USB drive the file **STOREFMT.ZPL** and **STOREFMTM1.ZPL**. 2. D:\Craig\Work\2013\Projects & Products\Saturn\Saturn Pics\ZT_usbhost_lg.jpgInsert the USB drive in the USB port on the front of the printer 3. Use the buttons on the front panel to navigate like before.    1. Navigate to ‘Print USB File’ (see above)    2. Use the up and down arrows to select **STOREFMT.ZPL** and press button to PRINT.    3. Printer will appear to do nothing as it is storing the file in E: memory.    4. Repeat for **STOREFMTM1.ZPL**    5. You may open the files on a PC to see what is in the file 4. Remove USB Drive and plug in US QWERTY keyboard    1. See User Guide for keyboards supported 5. Use the buttons on the front panel and navigate to ‘Print Station.’ Depending on how long you took to do this you may need to navigate from the Tools icon again. 6. Type your name when F1 or the prompt ‘**Enter Name**’ is displayed. Press ‘**Enter**’ on the keyboard. 7. You may need to press Enter 2 times to print one label   You may change the quantity if you wish. |