

CST8202 – Windows Desktop Support

Lab 4 – Powershell

Purpose: To begin working with command line tools and PowerShell cmdlets, arguments, and parameters.

Equipment/Resources:

- College Approved BYOD Laptop
- Access To Brightspace
- Windows 11 Virtual Machine
- VMWare Workstation

Objectives:

Many of the commands in this lab will require Administrative Privileges. Ensure that you launch PowerShell with Admin Rights.

#1 Provide a command that will show all the aliases for the cmdlet “Copy-Item”. The result should be at least 3 aliases. This command should consist of 1 cmdlet, 1 parameter and 1 argument.

#2 Create a new alias for the Copy-Item cmdlet called “Dupe”. Copy the command you used into your lab report

#3 Re-run the command you used in #1 and copy the output into your lab report. The output should now be 4 aliases. Copy the output into your lab report.

#4 Add a new 2 GB disk to your virtual machine. Use a PowerShell command to find the disk number of the newly added VM. Provide the command you used in your lab report.

#5 Using PowerShell format this new disk. This volume should be formatted NTFS, have a volume label “PSDisk” and be assigned the letter P. Your command should be 1 cmdlet, 4 parameters and 4 arguments. Provide the command that you used to create this volume.

#6 Use a PowerShell cmdlet to verify the volume was created correctly; exclude the CD-ROM drive from the output. Copy the command line that you used into your lab report.

#7 Create a new directory called “Lab4” in your “Documents” directory on your VM. Copy the exact command you used into your lab report.

#8 Have PowerShell return its current version. When you have the correct command PowerShell should return 3 lines of output. Once you have the correct command re-run this command but redirect your output to your personal document’s directory into a file called PowerShell.txt. Copy this command including redirection to your lab report.

#9 Move the file that you created in #9 into your Lab4 directory you created in #7. Record the PowerShell command line into your lab report. Your command should be 1 cmdlet and 2 arguments. Both arguments should be absolute paths.

#10 Write a PowerShell command to report the contents of your Documents directory including the subfolder(s). **Hint:** You did this in Lab1.

#11 Change your working directory to the documents directory. Copy the PowerShell.txt file from the Lab4 directory to the parent directory of Lab4. Use relative paths for this command. Write the command you used into your lab report. This command should be 1 cmdlet, 2 arguments. Each argument should be a relative path.

#12 Write a command that returns the MAC address for the Ethernet adapter of your VM. Filter the output so that only the name of the adapter and the MAC are shown. The result should be 2 columns and 3 lines. When you have the correct command redirect and append the output to the file PowerShell.txt in the Lab4 directory.

#13 Write a PowerShell command pipeline that returns only the IPv4 Address for your ethernet adapter. The final output should contain only the interface name and IPv4 address. The result should be 2 columns and 3 lines. When you have the correct command redirect and append the output to the file PowerShell.txt in the Documents directory.

#14 Compare the two different version of PowerShell.txt that you have created. Copy the output to your lab report.

#15 Write a PowerShell Pipeline that returns the last time your system booted up. Copy this command pipeline into your lab report.

Bonus

Provide a command pipeline to provision two 5GB drives into a mirrored storage pool.

Hint: take a snapshot after adding your disks.

Hint: This doc from Microsoft will help you if you can Read All the Words.

<https://docs.microsoft.com/en-us/powershell/module/storage/new-storagepool?view=windowsserver2019-ps>

Submission Requirements

Include the screen shots and written answers that are indicated in the lab instructions

NOTE: % indicates a screen shot. # indicates a written answer. All lab submissions must meet the requirements, and follow the format, listed in the lab instructions posted on Brightspace. Marks will be deducted for not following these instructions