# Lab Exercises

This section of the PowerShell training is supposed to be executed in a PowerShell console or PowerShell ISE. Results may vary depending if the commands are executed in the console, the ISE, 32&64-bit environment or running with administrative privileges. Feel free to experiment with the alternatives to discover the differences.

If there are any questions or if there is anything you would like to have explained in greater detail, feel free to contact me directly. As always there are a hundred different ways of achieving the same result, so trying out different approaches for the same problem can be a learning experience.

## Exercise 1 – Working with Get-Command

Use Get-Command to discover how many cmdlets there are with the noun object

Get-Command –Noun Object

Get-Command –Name \*-Object

Use Get-Command to discover how many cmdlets with the verb Format

Get-Command –Verb Format

Get-Command –Name Format-\*

Get the version of ping.exe using Get-Command

Get-Command –Name Ping.exe

For more information about the version number, we select a partial output using the pipeline and Select-Object

Get-Command –Name Ping.exe | Select-Object -Property Version

To find a command it is also possible to specify a partial name, for example:

Get-Command -Name \*Computer\*

To get a full list of all commands Get-Command can be run without parameters, in the next example you will run Get-Command by using its alias, gcm:

gcm

## Exercise 2 – Working with Get-Help

View the Syntax of Get-Help

Get-Command –Name Get-Help –Syntax

Try to shorten this command and make it shorter, do this by using positional arguments instead of named parameters and try to find any aliases to make the command shorter. At the end of this lab the shortest version will be discussed. The following cmdlet can be used to find the available aliases:

Get-Alias

View and read the help for the Select-Object cmdlet:

Get-Help –Name Select-Object

View and read the examples for the Where-Object cmdlet:

Get-Help –Name Where-Object –Examples

View and read the help for ForEach-Object in an external window. This also allows you to search for specific terms by using the integrated search. Use this search functionality to find certain key words in the help text:

Get-Help –Name ForEach-Object –ShowWindow

Assuming you have internet connectivity, another method of viewing help is in a browser window:

Get-Help –Name Measure-Object –Online

Get-Help also provides a lot of information in regards to concepts in PowerShell, for example how quotation marks are used:

## Exercise 3 – Count the number of services on the local system

Using the knowledge gained in this presentation try to find a cmdlet that can gather information on service and find an additional cmdlet that allows for measurement of the number of services that are running on the device. Using get help it is possible to find additional information about these cmdlets and how to use them, read the help for these cmdlets. The command can look something along these lines:

<Command1> | <Command2>