Stand Alone Lab Outline

*Version Date: June 22, 2022*

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| Outline deadline date | 5/23/2023 |

[Style Guide - Stand Alone Labs](https://docs.google.com/document/d/1tKWA0Oes56uoZwfccPHxq4dlqsx4fTl5sfmM4jdaLOE/edit?usp=sharing)

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| Lab Information | |
| Lab Title | Get Started with PowerShell Commands |
| Author Name | Michael Bender |
| Associated Course | Windows PowerShell Essentials |
| Skill Path | N/A |
| Estimated Length *Estimate in minutes* |  |
| Content Level *(Novice, Entry-Level, Practitioner, Advanced, Expert)* | Entry-level |
| Notes | **The learner will have no Internet access from within the lab environment. Make sure you've staged everything the learner needs prior to lab publication.** |

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| Lab Planning | |
| Learner Profile *Who will be taking this lab?* | This lab is designed for the beginning PowerShell user. |
| Learner Prerequisites *What do they already know?* | - Basic understanding of Powershell fundamentals  - Basic understanding of networking and computing fundamentals  - Have watched or currently watching PowerShell: Getting Started course |
| Scenario *What is your overall scenario for the lab? Use this as a check-in for each challenge to review progress/outcomes.* | The learner is an IT Support professional, and needs to skill up on PowerShell. Walking through common support tasks/queries they will learn how to use PowerShell to work smarter. |
| Resources Needed | **VMs Needed (include OS):**   * Windows OS   **Applications Needed:**  **- Windows Powershell**  **- Windows Terminal**  **- Powershell 7.x**  **- VS Code w/ Powershell extension** |
| Lab Description *250 characters* | In this lab, you’ll practice the basic PowerShell commands.When you’re finished, you’llunderstand how to run commands in PowerShell, and can find answers using PowerShell. |

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| Learning Objectives  What are objectives? | |
| * **Use essential PowerShell commands for system management** |  |

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| Lab Organization | | |
| 1 | Getting Started in the Lab Environment  No action required. Do not edit or remove.  Challenge Description:   * Here are the initial instructions and explanation of the lab environment. Read this while your environment is busy creating itself from nothing. Yes, this violates physics; we know. How fun!   Documentation Link:   * *<insert relevant path, course or tool documentation URL>*   Challenge Text:  **Welcome!**  This lab provides you with an environment consisting of one or more connections to different systems. The intent is for you to follow the instructions and subsequent analysis of tasks, as well as their effect within the environment; however, do not let this discourage you from veering from the path. It is perfectly safe and encouraged that you do—learn here without consequences. If you mess something up, just restart the lab.  But, that doesn't mean there are no rules! Though it seems like it, this is not a dream world and there are some tenets that you should keep in mind to have the best experience:   * Internet access into or out of the lab environment is not enabled. This is for everyone's safety and adherence to policy. * Some services take longer than others to fully initialize in the environment. The lab will be structured to avoid you waiting on services that take longer to configure, but if you skip ahead this may be something you need to keep in mind. * The lab environment has some pretty great accessibility and utility features. If you are unfamiliar with the lab environment, you can watch this short 6-minute course on [Getting Started in the Lab Environment](https://app.pluralsight.com/course-player?clipId=173d21fc-23ca-4e24-976b-c84f7abb825a) to cover the basics of navigation.   Enjoy! | 15 Min |
| 2 | Configure the PowerShell console  Challenge Description:   * In this challenge, you are introduced to the various PowerShell consoles. You’ll learn to launch the consoles, modify the configuration settings, and update help. When finished, you’ll have customized Powershell consoles ready to get to work.   Learning Outcome:   * Be familiar with the various ways you can use PowerShell * Configure the PowerShell consoles for your needs   Key Steps:   * *Explore each console* * *Configure each console* * *Run a basic command and see output* | 15 Min |
| 3 | Find help with Get-Help  Challenge Description:   * In this challenge, you be introduced to the one of the three must-know commands in PowerShell – Get-Help. You’ll explore the command and it’s parameters to learn how to use PowerShell from in the Console. No Web Surfing required...because you have no Internet!   Learning Outcome:   * Understand how Get-Help works and the parameters available * Discover all the help resources available in the PowerShell console   Key Steps:   * *View help of Get-Help* * *Run various permetations of Get-Command* * *Explore the PowerShell help system* | 15 Min |
| 4 | Discover commands with Get-Command  Challenge Description:   * In this challenge, you’ll be introduced to Get-Command and use it to discover the commands available in Powershell. Once finished, you’ll be on your way to discover all the answers you need in the Shell!   Learning Outcome:   * Understand how Get-Command works and the parameters available * Discover various commands through customized searches   Key Steps:   * *View help of Get-Command* * *Run various permetations of Get-Command* * *Find commands in PowerShell and use Get-Help to understand how to use* | 15 |
| 5 | Investigating commands with Get-Member  Challenge Description:   * In this challenge, you’re introduced to the final must-know command – Get-Member. Since PowerShell uses Objects to pass data, Get-Member will allow you to discover all of the properties that make up a command’s objects.   Learning Outcome:   * Understand how Get-Member works and the parameters available . * Discover the different parts of a PowerShell object * Explore command output for the information you are looking for   Key Steps:   * *View help of Get-Member* * *Use Get-Member to investigate command output* * *Use various Methods with commands* | 15 |
| 6 | Run commands together In the Pipeline  Challenge Description:   * In this challenge, you’ll discover how the PowerShell pipeline works. By passing objects from one command to another, you can start to do some real work with PowerShell.   Learning Outcome:   * Be able to use the PowerShell pipeline for various data scenarios * Parse a command output with the Pipeline * Gather information and perform an action based on the output.   Key Steps:   * *Run through basic usage of pipeline* * *Run through additional usages of pipeline to parse & refine data* * *Perform a task based on pipeline data* | 20 |
| 7 | Practical: Discover the answers In the Shell  Challenge Description:   * In this challenge, you put all the commands together in one activity. You use Get-Help, Get-Command, and Get-Member to find answers in the PowerShell console for how to perform X.   Learning Outcome:   * Understand how to find answers and perform searches in PowerShell.   Key Steps:   * *Walk through all the stepsto discover how perform a specific task in PowerShell, and then complete the task* | 25 |
| **8** | The Last Challenge  Challenge Description:   * Welcome to the final challenge! This is your last chance to experiment in the environment. Clicking Finish Lab will end this little world that flittered into existence just for you.     Challenge Text:  **Welcome to the Final Challenge!**  This is your last chance to experiment in the environment. Clicking **Finish Lab** will end this little world that flittered into existence just for you.  Take this opportunity to try new things. Don't be afraid to break anything; be curious!  **Here are some things to try out:**   * **Find a command that will allow you to do X and Y** * **Find all the verbs available In PowerShell** * **Pick a command from the lab, view the help examples, and try running the code In the examples** * **Explore the About\_ files in PowerShell for deeper learning**   You have unlimited power within this virtual world—take the time you need for unguided learning.  **Related Courses and Labs:**  *Link to Next Lab*  *Link to Learning Path*  *Link to PowerShell: Getting Started course* | 30 Min |