Lab Journal

Gabriel Fleury

PowerShell COSC-2101-07



GitHub Link: <https://github.com/Articunix/Powershell-Journal-Gariel/tree/main>

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| Cmdlet Name | Description | Syntax | Example |
| Get-help | Provides information about powershell commands and concepts | Get-help *cmdlet* | Get-help set-executionpolicy |

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| Cmdlet Name | Description | Syntax | Example |
| Import-CSV | Used to read csv file data and convert into objects | Import-Csv [-Path] <String> [-Delimiter <Char>] [-Header <String[]>] [-Encoding <Encoding>] [<CommonParameters>] | $users = Import-Csv -Path "C:\path\to\users.csv" |

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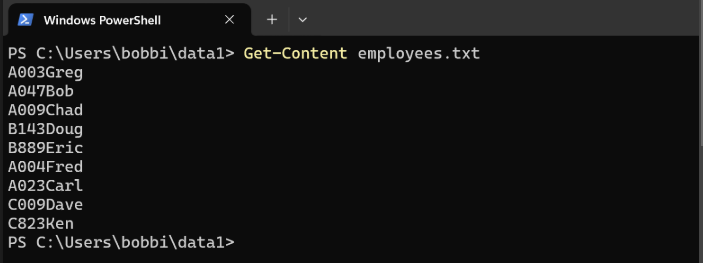
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| Cmdlet Name | Description | Syntax | Example |
| Out-file | Used to send output to a file | *Out-File [-FilePath] <String> [-Append] [-Encoding <Encoding>] [-Width <Int32>] [<CommonParameters>]* | Get-Process | Out-File -FilePath "C:\path\to\processes.txt" |

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| Cmdlet Name | Description | Syntax | Example |
| Get-content | Retrieves file content and displays in plain text | *Get-Content [-Path] <String> [-Encoding <Encoding>] [-TotalCount <Int32>] [-Tail <Int32>] [-ReadCount <Int32>] [-Raw] [<CommonParameters>]* | Get-Content -Path "C:\path\to\example.txt" |

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| Cmdlet Name | Description | Syntax | Example |
| Get-service | Gets information about a service. Things like name and status | *Get-Service [[-Name] <String[]>] [-ComputerName <String>] [-DependentServices] [-RequiredServices] [<CommonParameters>]* | Get-Service -Name "Spooler" |

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| Cmdlet Name | Description | Syntax | Example |
| Select-object | Versatile. Used to select object properties, create new ones or limit objects. | *Select-Object [-Property] <Object[]> [-ExcludeProperty <String[]>] [-ExpandProperty <String>] [-First <Int32>] [-Last <Int32>] [-Unique] [-InputObject <PSObject>] [<CommonParameters>]* | Get-Service | Select-Object -Property Name, Status |

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| Cmdlet Name | Description | Syntax | Example |
| Get-process | Gets information about running processes on your computer. | *Get-Process [[-Name] <String[]>] [-ComputerName <String[]>] [-Id <Int32[]>] [-FileVersionInfo] [-Module] [-IncludeUserName] [<CommonParameters>]* | Get-Process -Name notepad |

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| Cmdlet Name | Description | Syntax | Example |
| Get-module | Displays all modules currently loaded in the session | *Get-Module [[-Name] <String[]>] [-FullyQualifiedName <ModuleSpecification[]>] [<CommonParameters>]*  *Get-Module [-ListAvailable] [[-Name] <String[]>] [-FullyQualifiedName <ModuleSpecification[]>] [-All] [<CommonParameters>]* | Get-Module -Name Azure -ListAvailable -All |

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| Cmdlet Name | Description | Syntax | Example |
| New-PSSession | Creates a remote session to a computer. | *New-PSSession [-ComputerName] <String> [-Credential <PSCredential>] [-ConfigurationName <String>] [-ConnectionUri <Uri>] [-Authentication <AuthenticationMechanism>] [-AllowRedirection] [-SessionOption <PSSessionOption>] [<CommonParameters>]* | New-PSSession -ComputerName "localhost" |

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| Cmdlet Name | Description | Syntax | Example |
| Invoke-command | Runs a command on a remote computer. | *Invoke-Command -ScriptBlock <ScriptBlock> [-ArgumentList <Object[]>] [-ComputerName <String[]>] [-Credential <PSCredential>] [-Session <PSSession[]>] [-FilePath <String>] [-InputObject <PSObject>] [<CommonParameters>]* | Invoke-Command -ScriptBlock { Get-Date } |

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| Cmdlet Name | Description | Syntax | Example |
| Get-CimClass | Retrieves a Common Information Model class definition, | *Get-CimClass [-Name] <String[]> [-Namespace <String>] [-ComputerName <String>] [-Credential <PSCredential>] [-Session <CimSession>] [<CommonParameters>]* | Get-CimClass -Name "Win32\_OperatingSystem" |

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| Cmdlet Name | Description | Syntax | Example |
| Get-WmiObject | Retrieves management information using windows management instrumentation. | *Get-WmiObject [-Class] <String> [-ComputerName <String>] [-Credential <PSCredential>] [-Namespace <String>] [-Filter <String>] [-Property <String[]>] [-DisableInteraction] [<CommonParameters>]* | Get-WmiObject -Class Win32\_OperatingSystem |

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| Cmdlet Name | Description | Syntax | Example |
| Clear-host | Clears all content from console/terminal screen. | *No additional syntax* | Clear-host |

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| Cmdlet Name | Description | Syntax | Example |
| Set-location | Changes current session location. | *Set-Location [-Path] <String> [-Credential <PSCredential>] [-Force] [-Provider <String>] [-UseTransaction] [<CommonParameters>]* | Set-Location -Path "C:\Users\YourName\Documents" |

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| Cmdlet Name | Description | Syntax | Example |
| New-Variable | Used to create a new variable in the current sessions. | *New-Variable -Name <String> [-Value <Object>] [-Force] [-Option <ScopedItemOptions>] [-Scope <String>] [<CommonParameters>]* | New-Variable -Name "MyVar" -Value 10 |

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| Cmdlet Name | Description | Syntax | Example |
| New-Item | Used to create a new item, like a file, directory etc. | *New-Item -Path <String> [-Name <String>] [-ItemType <String>] [-Value <Object>] [-Force] [-Credential <PSCredential>] [-WhatIf] [-Confirm] [<CommonParameters>]* | New-Item -Path "C:\Users\YourName" -Name "MyFolder" -ItemType Directory |

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| Cmdlet Name | Description | Syntax | Example |
| New-NetIpAddress | Used to configure a new ip address on a network interface. | *New-NetIPAddress -InterfaceIndex <Int32> -IPAddress <String> -PrefixLength <Int32> [-DefaultGateway <String>] [-AddressFamily <String>] [-PrefixOrigin <String>] [-SuffixOrigin <String>] [-InterfaceAlias <String>] [-SkipAsSource] [-PolicyStore <String>] [<CommonParameters>]* | New-NetIPAddress -InterfaceIndex 12 -IPAddress 192.168.1.10 -PrefixLength 24 -DefaultGateway 192.168.1.1 |

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| Cmdlet Name | Description | Syntax | Example |
| Install-windowsfeature | used to install server roles, role services, and features on Windows Server systems. | *Install-WindowsFeature -Name <String[]> [-IncludeAllSubFeature] [-IncludeManagementTools] [-Restart] [-WhatIf] [-Confirm] [<CommonParameters>]* | Install-WindowsFeature -Name Web-Server |

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| Cmdlet Name | Description | Syntax | Example |
| New-ADUser | Used to create a new user in active directory. | *New-ADUser -Name <String> -GivenName <String> -Surname <String> -SamAccountName <String> -UserPrincipalName <String> -Path <String> -AccountPassword <SecureString> [-Enabled <$true | $false>] [-Description <String>] [-Title <String>] [-Department <String>] [-Office <String>] [-EmailAddress <String>] [-OfficePhone <String>] [-MobilePhone <String>] [-City <String>] [-State <String>] [-Country <String>] [<CommonParameters>]* | $Password = ConvertTo-SecureString "P@ssw0rd" -AsPlainText -Force  New-ADUser -Name "John Doe" -GivenName "John" -Surname "Doe" -SamAccountName "jdoe" -UserPrincipalName "jdoe@domain.com" -AccountPassword $Password -Enabled $true -Path "OU=Users,DC=domain,DC=com" |

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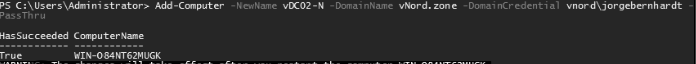
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| Cmdlet Name | Description | Syntax | Example |
| Set-DnsClientServerAddress | used to configure the DNS server addresses for a specific network interface on a client machine | *Set-DnsClientServerAddress -InterfaceIndex <Int32> -ServerAddresses <String[]> [-Validate] [-PassThru] [<CommonParameters>]* | Set-DnsClientServerAddress -InterfaceIndex 12 -ServerAddresses ("8.8.8.8", "8.8.4.4") |

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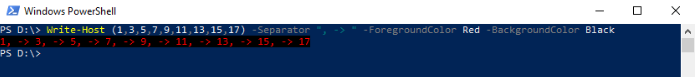


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| Cmdlet Name | Description | Syntax | Example |
| Add-Computer | used to join a computer to a domain or workgroup. | *Add-Computer -DomainName <String> -Credential <PSCredential> [-OUPath <String>] [-Restart] [-Force] [-Options <Object>] [-WorkGroup <String>] [-NewName <String>] [<CommonParameters>]* | $Credential = Get-Credential  Add-Computer -DomainName "example.com" -Credential $Credential -Restart |





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| Cmdlet Name | Description | Syntax | Example |
| Write-Host | used to display messages directly to the console. | *Write-Host [-Object] <Object> [-ForegroundColor <ConsoleColor>] [-BackgroundColor <ConsoleColor>] [-NoNewline] [-Separator <String>] [<CommonParameters>]* | Write-Host "Hello, World!" |





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| Cmdlet Name | Description | Syntax | Example |
| Set-TimeZone | Configures the system time-zone. | *Set-TimeZone -Name <String> [<CommonParameters>]* | Set-TimeZone -Name "UTC" |

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| Cmdlet Name | Description | Syntax | Example |
| Rename-Computer | Changes the name of a computer. | *Rename-Computer -NewName <String> [-Force] [-PassThru] [-DomainCredential <PSCredential>] [-Restart] [-WhatIf] [-Confirm] [<CommonParameters>]* | Rename-Computer -NewName "NewComputerName" -Restart |

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| Cmdlet Name | Description | Syntax | Example |
| New-SmbShare | Creates a new shared folder on the computer. | *New-SmbShare -Name <String> -Path <String> [-Description <String>] [-FullAccess <String[]>] [-ChangeAccess <String[]>] [-ReadAccess <String[]>] [-Force] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [-Confirm] [-WhatIf] [<CommonParameters>]* | New-SmbShare -Name "Documents" -Path "C:\Shared\Documents" |

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| Cmdlet Name | Description | Syntax | Example |
| Remove-ADUser | Deletes a user on active directory. | *Remove-ADUser -Identity <ADUser> [-Confirm] [-WhatIf] [-Force] [-CimSession <CimSession[]>] [-Partition <String>] [-PassThru] [-ProxyAddress <String>] [<CommonParameters>]* | Remove-ADUser -Identity "jdoe" |

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| Cmdlet Name | Description | Syntax | Example |
| Get-eventlog | Retrieves event log data from computers. | *Get-EventLog [-LogName] <String> [-Newest <Int32>] [-After <DateTime>] [-Before <DateTime>] [-ComputerName <String>] [-EntryType <EventLogEntryType[]>] [-Message <String>] [-InstanceId <UInt32>] [-Source <String[]>] [-UserName <String>] [-Index <Int32>] [<CommonParameters>]* | Get-EventLog -LogName "Application" -Newest 10 |

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| Cmdlet Name | Description | Syntax | Example |
| Set-ExecutionPolicy | Changes preference for script execution policy on system. | *Set-ExecutionPolicy -ExecutionPolicy <ExecutionPolicy> [-Scope <ExecutionPolicyScope>] [-Force] [-Confirm] [-WhatIf] [<CommonParameters>]* | Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope LocalMachine |

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| Cmdlet Name | Description | Syntax | Example |
| Get-NetAdapter | Retrieves info on network adapters within computers. | *Get-NetAdapter [-Name <String[]>] [-InterfaceAlias <String[]>] [-PhysicalAddress <String[]>] [-InterfaceDescription <String[]>] [-LinkSpeed <UInt64>] [-ComponentID <String[]>] [-CimSession <CimSession[]>] [-ThrottleLimit <Int32>] [<CommonParameters>]* | Get-NetAdapter -Name "Ethernet" |

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| Cmdlet Name | Description | Syntax | Example |
| Stop-Process | Stops one or more running process on the computer | *Stop-Process -Name <String[]> [-Force] [-PassThru] [-Confirm] [-WhatIf] [<CommonParameters>]*  *Stop-Process -Id <Int32[]> [-Force] [-PassThru] [-Confirm] [-WhatIf] [<CommonParameters>]* | Stop-Process -Name "notepad" |

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