

# Basic Powershell Commands to navigate files and directories

James Rourke has been the system administrator for Advanced Accounting for about 5 years. With the company's recent success and decision to migrate to the cloud, his workload has increased and the company decided to hire a second IT Professional to work with James as an assistant. Melissa Martin is just starting her career in IT, and the company is excited to help her expand her knowledge and contribute to the growth of the company. She has a good working knowledge of Windows but hasn't used Powershell very much.

James is showing her some basic commands for navigating Powershell and creating files and directories. Since she has some experience with Linux, James explains that many of the commands have aliases which are familiar Linux commands that carry out the same function.

The first alias she is already familiar with is the `ls` command. This can be used to show the current contents of a folder/directory.

```
PS C:\Users\feedt> cd "C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements"
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> ls

Directory: C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements

Mode                LastWriteTime         Length Name
----                -
-a---1             9/1/2024   1:20 PM        152410 personal-financial-statement.pdf
```

`dir` is also an alias that as seen from the screenshot below serves exactly the same purpose.

```
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> dir

Directory: C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements

Mode                LastWriteTime         Length Name
----                -
-a---1             9/1/2024   1:20 PM        152410 personal-financial-statement.pdf
```

The regular Powershell command is `Get-ChildItem`.

```
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> Get-ChildItem

Directory: C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements

Mode                LastWriteTime         Length Name
----                -
-a---1             9/1/2024   1:20 PM        152410 personal-financial-statement.pdf
```

These three commands will retrieve the contents of a folder. In order to retrieve the folder itself, you would use `Get-Item`. To make a new folder you would use `New-Item` followed by the name of the file you wish to create.

```
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> New-Item text1.txt

Directory: C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements

Mode                LastWriteTime         Length Name
----                -
-a-----          9/1/2024   2:49 PM             0 text1.txt
```

At this point James feels it is important to explain the concept of object classes within Powershell. First, he explains that the initial command is called a class and the syntax for the class consists of a verb followed by a noun: `Get-Item`, `New-Item`, `Add-Content`, etc. The verb indicates the action you wish to perform and the noun indicates the type of item on which you wish to perform the action.

The `Add-Content` command allows the user to add text directly to a file. In the following example basic identifiers like Client-ID, date, and company name are added as a simple template to the file. Using scripting and automation makes this process less tedious and will be a more indepth focus of a future project.

```
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> Add-Content .\text1.txt "Client ID: Employee
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> Get-Content .\text1.txt
Client ID: Employee ID: Company Name: Date:
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> cat .\text1.txt
Client ID: Employee ID: Company Name: Date:
```

As a final point of his explanation James explains the `Get-Alias` and `Get-Help` commands so Melissa can understand the parallels between Powershell and the Linux command line, and further explore Powershell on her own.

The `Get-Alias` command retrieves a list of aliases and their equivalent Powershell command, many of which Melissa is familiar with such as: `cat`, `cp`, `man`, and `pwd`.

```
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> Get-Alias

CommandType      Name                                Version      Source
-----
Alias             % -> ForEach-Object
Alias             ? -> Where-Object
Alias             ac -> Add-Content
Alias             asnp -> Add-PSSnapin
Alias             cat -> Get-Content
Alias             cd -> Set-Location
Alias             CFS -> ConvertFrom-String
Alias             chdir -> Set-Location
Alias             clc -> Clear-Content
Alias             clear -> Clear-Host
Alias             clhy -> Clear-History
```

Typing the **Get-Help** command by itself gives you more information on where to find help.

```
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> Get-Help
```

TOPIC

Windows PowerShell Help System

SHORT DESCRIPTION

Displays help about Windows PowerShell cmdlets and concepts.

LONG DESCRIPTION

Windows PowerShell Help describes Windows PowerShell cmdlets, functions, scripts, and modules, and explains concepts, including the elements of the Windows PowerShell language.

Windows PowerShell does not include help files, but you can read the help topics online, or use the Update-Help cmdlet to download help files to your computer and then use the Get-Help cmdlet to display the help topics at the command line.

You can also use the Update-Help cmdlet to download updated help files as they are released so that your local help content is never obsolete.

Without help files, Get-Help displays auto-generated help for cmdlets, functions, and scripts.

ONLINE HELP

You can find help for Windows PowerShell online in the TechNet Library beginning at <http://go.microsoft.com/fwlink/?LinkID=108518>.

Typing **help** followed by the command you want to know more about gives specific and detailed information about the aliases, syntax, and properties of that particular command.

```
PS C:\Users\feedt\OneDrive\Desktop\Cyber\Advanced_Accounting_Materials\Financial Statements> help Get-Content
```

NAME

Get-Content

SYNTAX

```
Get-Content [-Path] <string[]> [-ReadCount <long>] [-TotalCount <long>] [-Tail <int>] [-Filter <string>] [-Include <string[]>] [-Exclude <string[]>] [-Force] [-Credential <pscredential>] [-UseTransaction] [-Delimiter <string>] [-Wait] [-Raw] [-Encoding {Unknown | String | Unicode | Byte | BigEndianUnicode | UTF8 | UTF7 | UTF32 | Ascii | Default | Oem | BigEndianUTF32}] [-Stream <string>] [<CommonParameters>]
```

```
Get-Content -LiteralPath <string[]> [-ReadCount <long>] [-TotalCount <long>] [-Tail <int>] [-Filter <string>] [-Include <string[]>] [-Exclude <string[]>] [-Force] [-Credential <pscredential>] [-UseTransaction] [-Delimiter <string>] [-Wait] [-Raw] [-Encoding {Unknown | String | Unicode | Byte | BigEndianUnicode | UTF8 | UTF7 | UTF32 | Ascii | Default | Oem | BigEndianUTF32}] [-Stream <string>] [<CommonParameters>]
```

ALIASES

gc  
cat  
type

REMARKS

Get-Help cannot find the Help files for this cmdlet on this computer. It is displaying only partial help.  
-- To download and install Help files for the module that includes this cmdlet, use Update-Help.  
-- To view the Help topic for this cmdlet online, type: "Get-Help Get-Content -Online" or go to <https://go.microsoft.com/fwlink/?LinkID=113310>.

For now this is enough information to help Melissa get started managing files and directories before delving deeper into the world of Powershell.