

**Cmdlets are the basic, lightweight commands in the Windows PowerShell environment.** They are designed to work in conjunction with the pipeline, processing objects as input and outputting objects. Cmdlets are named using a "Verb-Noun" format, where the verb represents the action and the noun represents the object of that action. [1, 2, 3, 4, 5]

Here's a more detailed explanation:

### Key Characteristics of Cmdlets:

- **Verb-Noun Naming:** Cmdlet names are structured as "Verb-Noun" pairs, clearly indicating the action and the target object (e.g., Get-Process, Start-Service, New-Item). [1, 1, 5, 5]
- **Pipeline-Oriented:** Cmdlets are designed to work with the PowerShell pipeline, meaning they can be chained together to perform complex tasks. [1, 1, 2, 2]
- **Object-Oriented:** Cmdlets process and output objects, not just text streams. This allows for more flexible and powerful scripting. [2, 2, 4, 4, 6, 7]
- **Built-in and Custom:** PowerShell includes a vast library of cmdlets for various tasks, and you can also create your own custom cmdlets. [1, 1, 5, 5]
- **Not Executables:** Cmdlets are not standalone executable files but are part of PowerShell's core functionality. [1, 1]

### How Cmdlets Work:

1. **Input:** Cmdlets can receive input from the pipeline (other cmdlets or data streams) or can be provided with input directly as parameters. [2, 3]
2. **Processing:** They perform a specific action on the input, based on their verb and noun. [1, 5]
3. **Output:** Cmdlets return objects as output, which can then be piped to subsequent cmdlets in the pipeline. [1, 2]

Example:

The Get-Process cmdlet retrieves information about running processes. You can use it to get a list of all processes, filter them based on specific criteria, and then pipe the results to another cmdlet like Sort-Object to sort the list. [1, 5, 8, 9, 10, 11, 12]

