Windows Server and PowerShell

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Module 1 – PowerShell fundamentals

- What is PowerShell and how did it start
- How to read the PowerShell language
- Different versions of PowerShell
- Help and command discovery in PowerShell
- What are objects in PowerShell
- The PowerShell pipeline

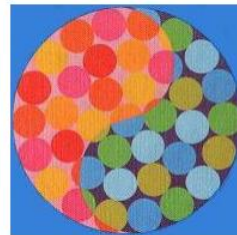# What is PowerShell and how did it start

- Development started in 2001
- First released in 2006
- Created by a team led by Jeffrey Snover
- Was initially codenamed Monad

Monad Manifesto

- Written by Jeffrey Snover in 2002
- Set the definition for what would be PowerShell
- The following 5 definitions:

  - *Monad Automation Model*

  - *Monad Shell*

  - *Monad Management Model*

  - *Monad Remote Scripting*

  - *Monad Management Console*
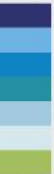
Monad^{12} **Manifesto**

Jeffrey P. Snover
Aug 8, 2002
Version 1.2

PowerShell naming

- Verb-SingularNoun
- Verb has to be 'approved'
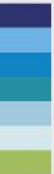- Noun should be descriptive, can contain a prefix
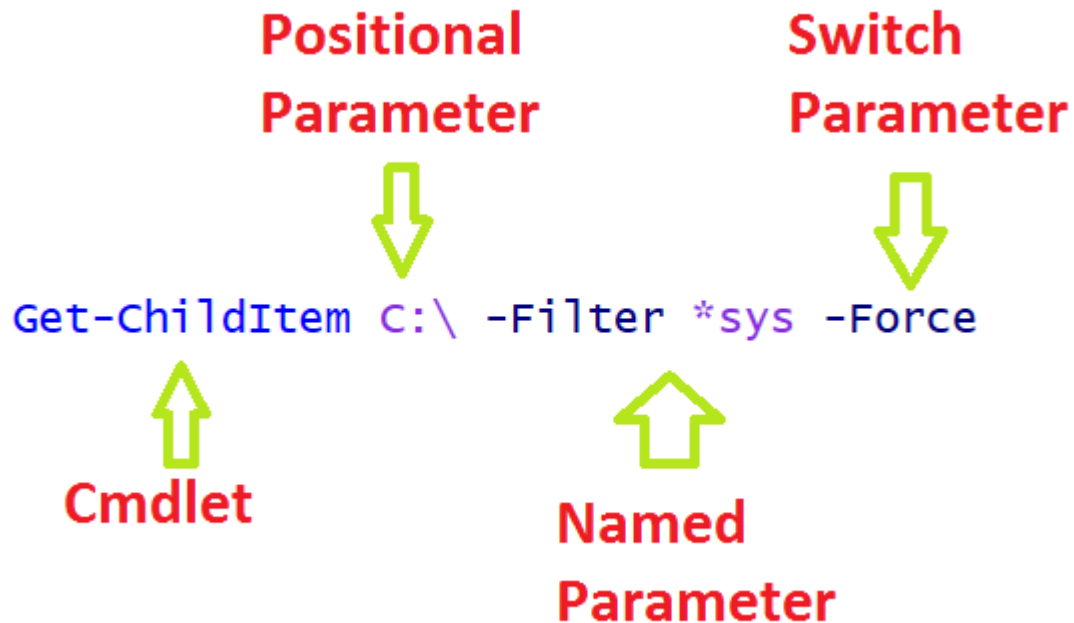
Demo Get-Verb

How to read the PowerShell language

- Parameters
- Positional parameters
- Arguments

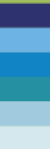# PowerShell language

Demo Get-ChildItem

PowerShell tools

- Cmdlets
- Functions
- Aliases
- External tools
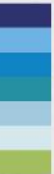
Cmdlets & Functions

- The core of PowerShell

- Structured output

- Pipeline aware

Aliases

- Provide familiarity
- Short hand notation
- Customizability
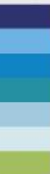- Not just cmdlets, parameters can also have an alias

External tools

- Can be executed in PowerShell like a command prompt

- Output can be stored and manipulated using PowerShell

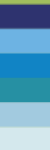- Does not adhere to PowerShell Language

Help and command discovery
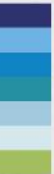
- Get-Help
- Get-Command
- Get-Member

Demo PowerShell Help
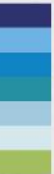
PowerShell objects

- Everything in PowerShell is an object
- The console displays objects
- Objects can be displayed, stored, converted or exported

PowerShell pipeline

- Can be used to transfer objects
- The output from one cmdlet can directly be used in the next cmdlet
- Output is transferred on a first out-first

Demo PowerShell Pipeline