



# PowerShell Fundamentals for the Absolute Beginner

[mikefrobbins.com](http://mikefrobbins.com)



# Get-Help -Name 'about\_Presenter'

- Mike F Robbins
- Microsoft MVP
- SAPIEN Technologies MVP
- Leader & Co-Founder of Mississippi PowerShell User Group
- Co-Author of Windows PowerShell TFM 4th Edition
- Author of Chapter 6 in the PowerShell Deep Dives book
- Winner of the Advanced Category in the 2013 Scripting Games
- Learn more about me @ [mikefrobbins.com](http://mikefrobbins.com)



# Write-Output 'Questions for Audience'

- IT Pro's
- Developers
- PowerShell
- One-Liners
- Scripts
- Functions
- Modules
- .NET Framework
- Source Control
- Unit Testing



# Set-Content 'Information to Cover'

- Basics
  - Discoverability
  - Objects
    - Methods
    - Properties
- Pipeline
- Extending PowerShell
- Remoting
- Best Practices
- SQL Server



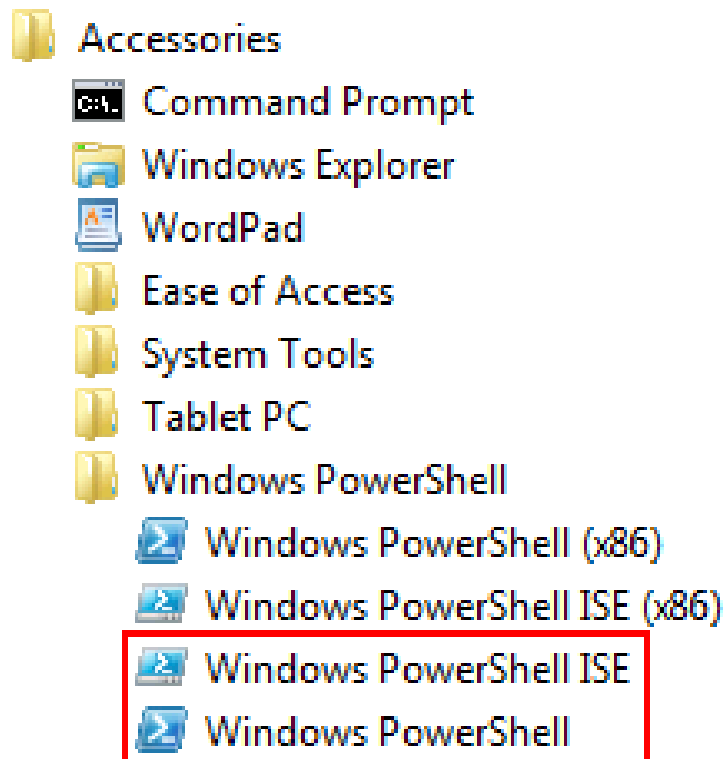
# Supported PowerShell Versions by OS

Windows Operating System Version	Default PowerShell Version	Supported PowerShell Versions	Default Execution Policy	Remoting Enabled by Default
Vista	1.0*	1.0, 2.0	Restricted	No
Server 2008	1.0*	1.0, 2.0, 3.0	Restricted	No
7	2.0	2.0, 3.0, 4.0, 5.0	Restricted	No
Server 2008 R2	2.0	2.0, 3.0, 4.0, 5.0	Restricted	No
8	3.0	3.0	Restricted	No
Server 2012	3.0	3.0, 4.0, 5.0	Restricted	Yes
8.1	4.0	4.0, 5.0	Restricted	No
Server 2012 R2	4.0	4.0, 5.0	Remote Signed	Yes
10	5.0	5.0	Restricted	No



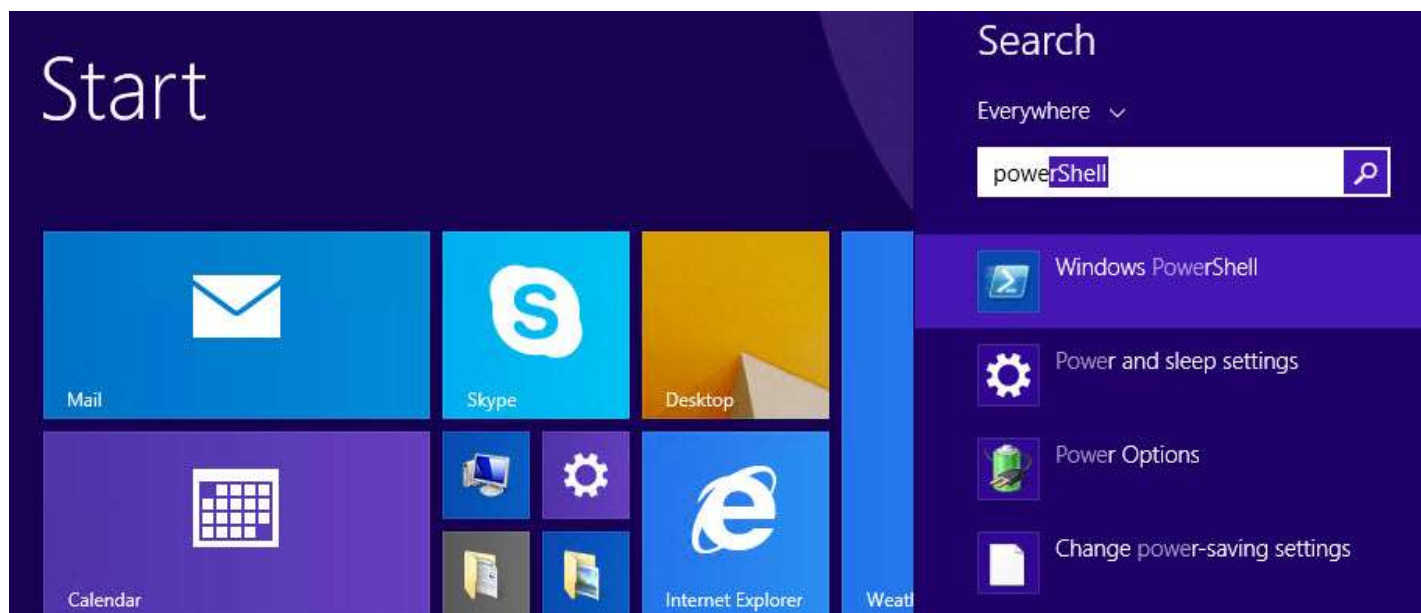
# How do I Start PowerShell?

- Windows 7 / Server 2008 R2 and Prior OS's
  - Start > All Programs > Accessories > Windows PowerShell



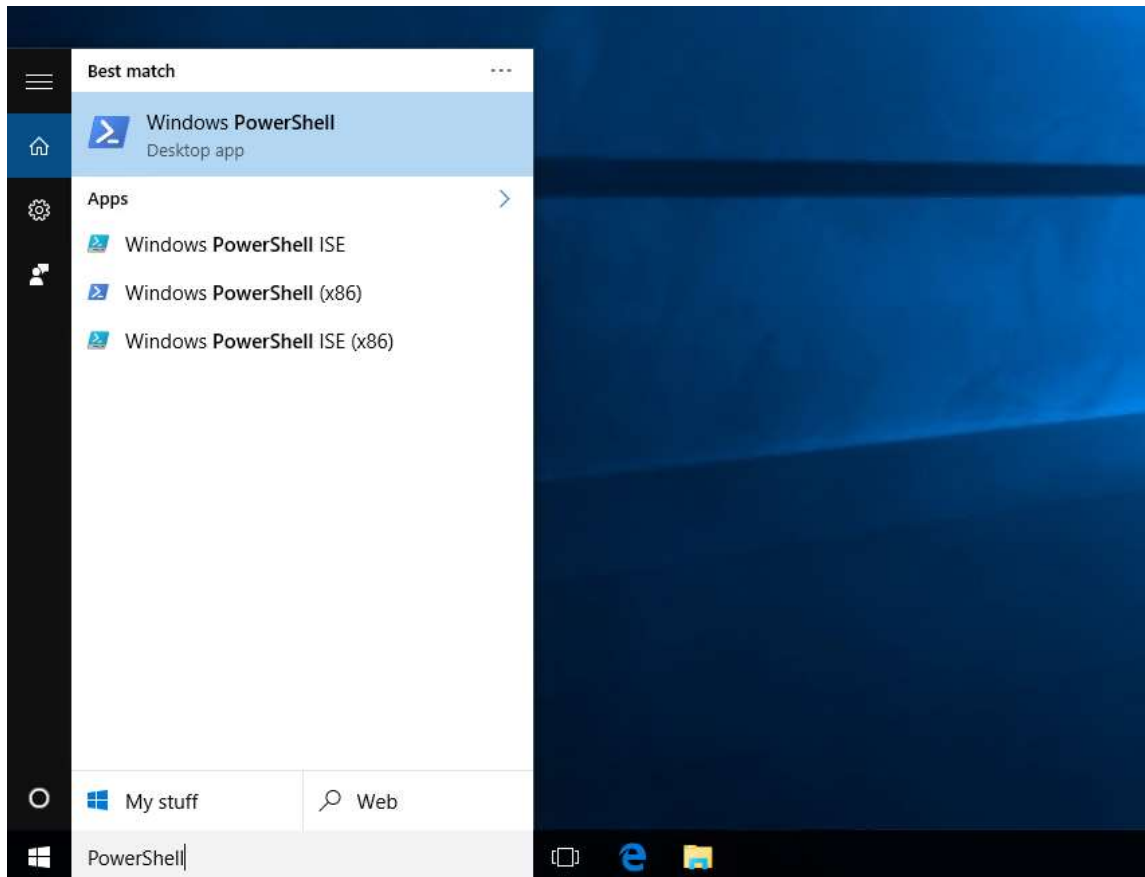
# How do I Start PowerShell?

- Windows 8, Windows 8.1, Server 2012, & Server 2012 R2
  - Accessed from the Start screen:



# How do I Start PowerShell?

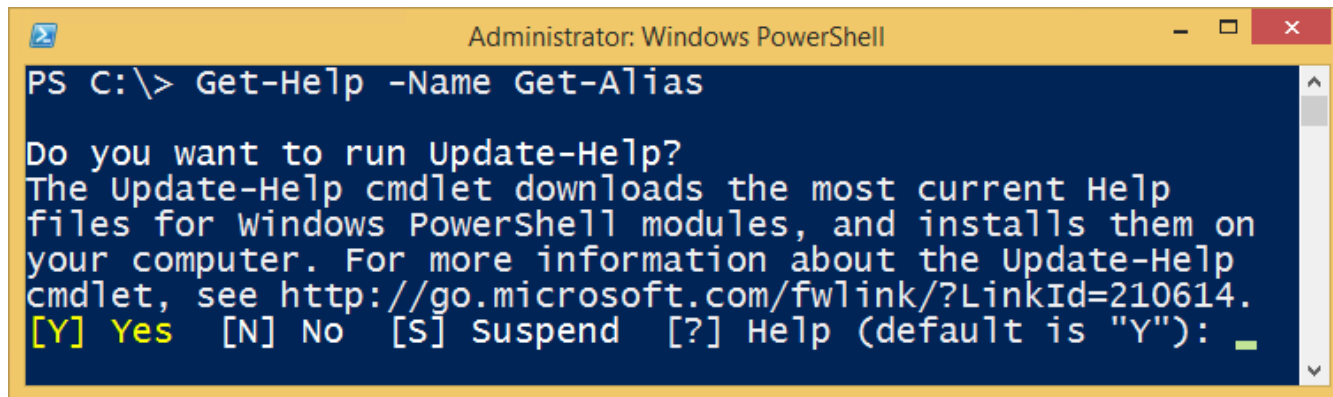
## ■ Windows 10





# Background Information

- PowerShell Commands are called Cmdlets
- Cmdlet is pronounced command-let (not CMD-let)
- Cmdlets are in the form of singular Verb-Noun commands
- Select “Run as Administrator” when opening PowerShell
  - PowerShell is unable to participate in User Access Control (UAC)
- Updatable Help



```
Administrator: Windows PowerShell
PS C:\> Get-Help -Name Get-Alias

Do you want to run Update-Help?
The Update-Help cmdlet downloads the most current Help
files for Windows PowerShell modules, and installs them on
your computer. For more information about the Update-Help
cmdlet, see http://go.microsoft.com/fwlink/?LinkId=210614.
[Y] Yes [N] No [S] Suspend [?] Help (default is "Y"): _
```

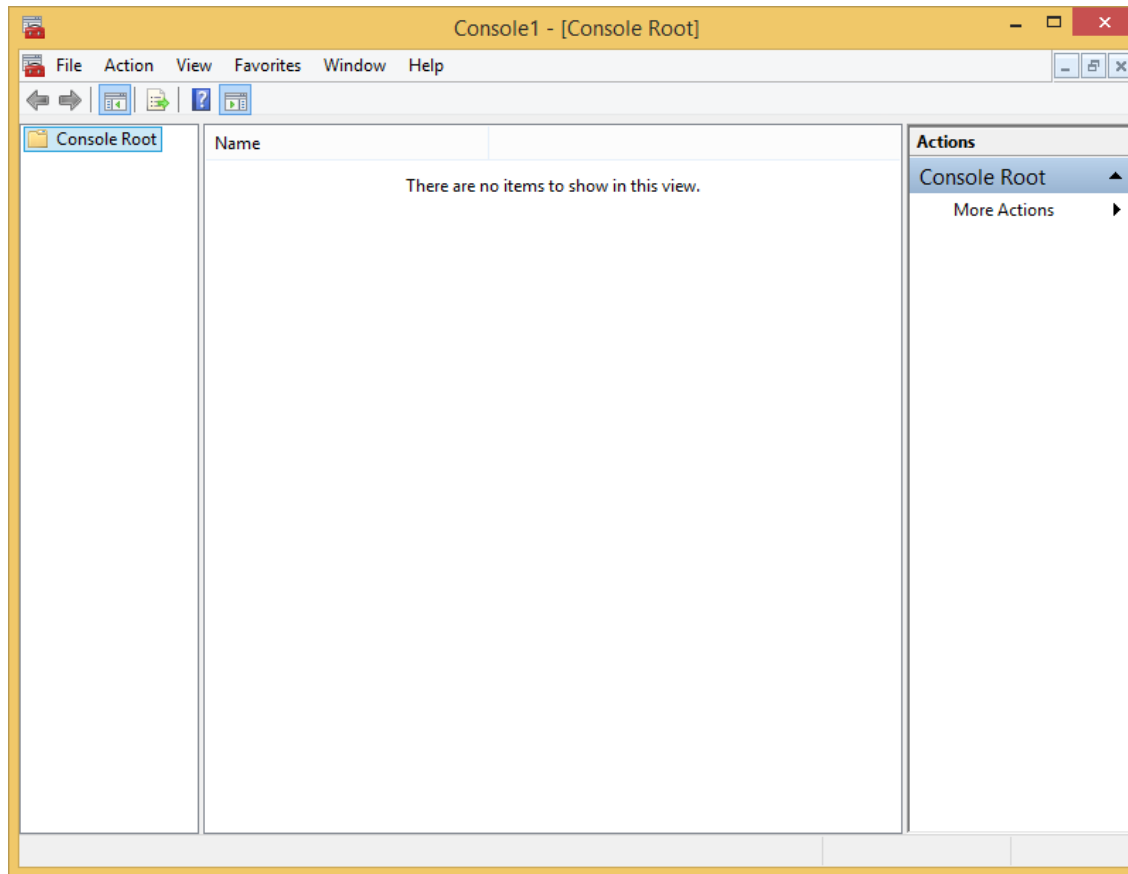


# How Do I Figure Out What the Commands Are?

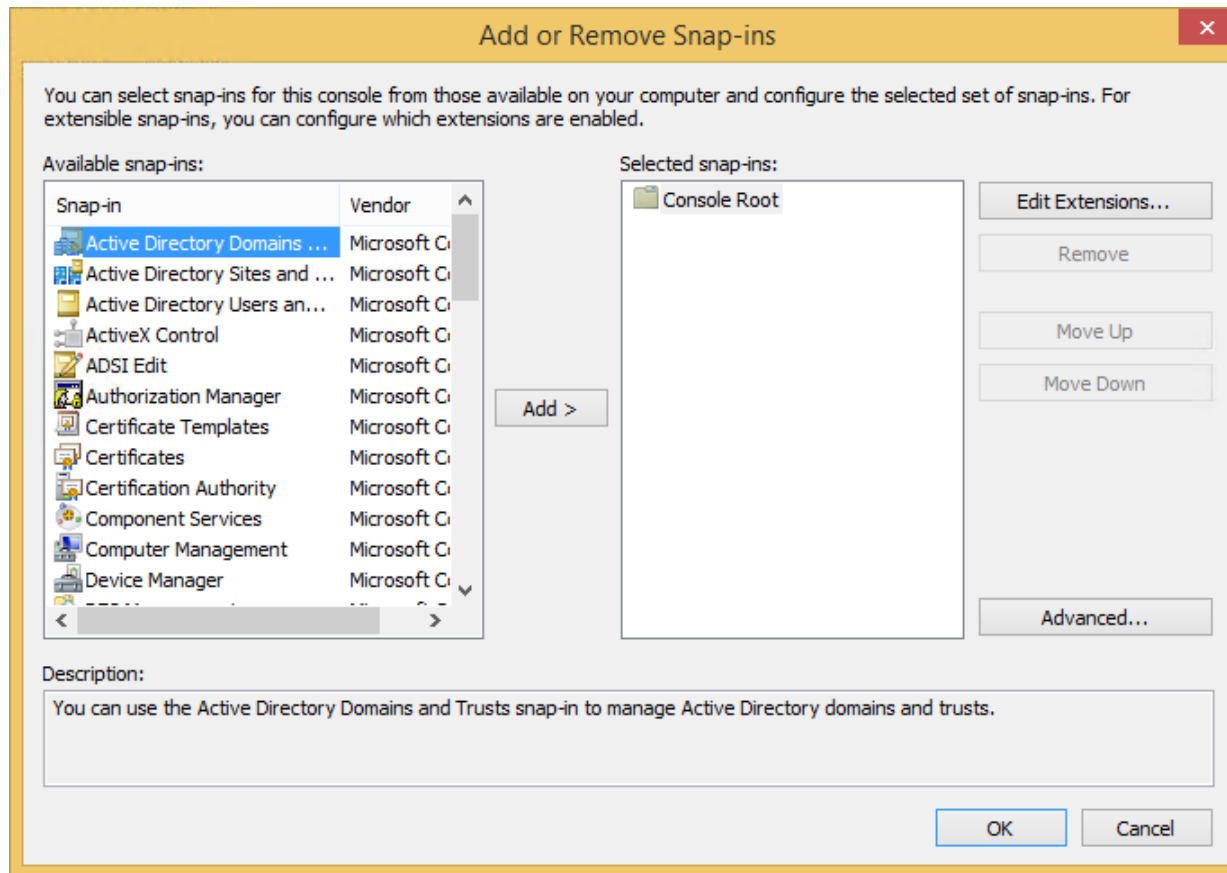
- Core Commands for Discovering How to Use PowerShell
  - **Get-Command**
    - Find what commands are available
  - **Get-Help**
    - Figure out how to use commands
  - **Get-Member**
    - Discover Objects, Properties, and Methods



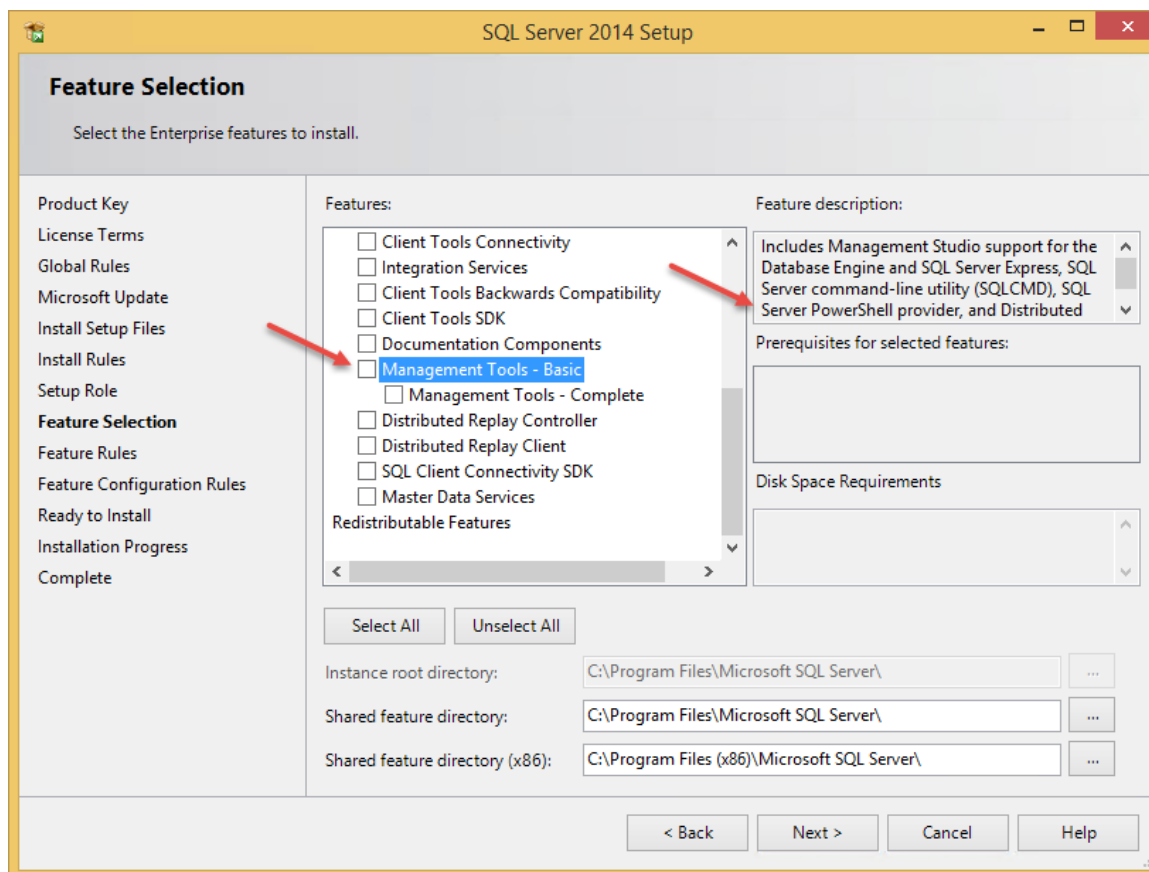
# PowerShell is like the Microsoft Management Console (MMC)



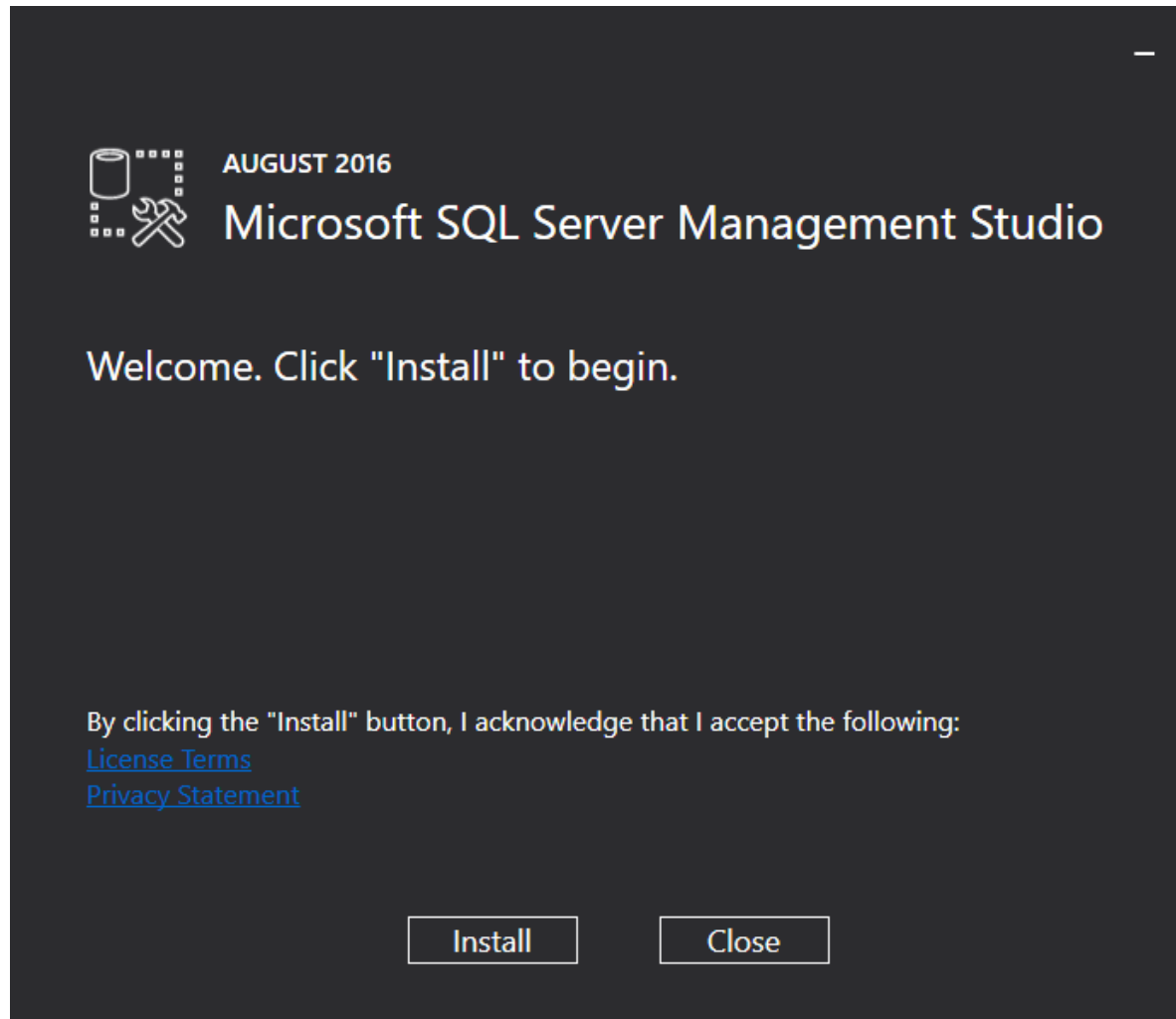
# Snap-ins (and Modules) extend its functionality



# Install the SQL PowerShell Module (Old)



# Install the SQL PowerShell Module (New)



# Start-Process 'Demo'

Demo Code: [github.com/mikefrobbins/Presentations](https://github.com/mikefrobbins/Presentations)



# Select-Object –Property ‘Resources’

- [PowerShell.org](http://PowerShell.org)
- [PowerShell Virtual Chapter of SQL PASS](#)
- [Microsoft Virtual Academy](#)
- [User Groups](#)
- [Twitter](#)
- [GitHub](#)
- [Blogs](#)
- [PowerShell Best Practices and Style Guide](#)
- [Trello](#)
- [Slack](#)





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- **Book Ticket Winner:** Bring your ticket to the user group booth in the main atrium to redeem (supplies limited)



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