



Adding PowerShell to your DBA Toolbox

Ben Miller - DBADuck

He/Him

Principal Consultant

DBADuck Consulting



Ben Miller



Principal Consultant DBADuck Consulting

ben.miller@dbaduck.com

www.dbaduck.com

@DBADuck everywhere

- SQL Server Certified Master
- PowerShell DBA / Trainer
- Data Platform MVP
- Bowler (Bowled a 300)



Agenda

- Introduction to PowerShell
- Ecosystem
- Versions of PowerShell
- Let's see some PowerShell

Introduction to PowerShell

- Verb-Noun is the command format (Get-Verb)
- \$var instead of @var int
 - PowerShell infers the data type when assigned and is dynamic which means that the variable does not need to be declared.
- Case Insensitive
- \$Profile and Start-Transcript
- String manipulation in PowerShell (single)' or (double)"

Commenting in PowerShell

- `--` is a single line comment in SQL Server
- `#` is the single line comment in PowerShell
- `/* */` is the multi-line comment in SQL Server
- `<# #>` is the multi-line comment in PowerShell

Select, Sort and dynamic columns

- Select is an Alias for Select-Object
 - Query objects for certain properties to output
- Sort is an Alias for Sort-Object
 - Allows sorting of a collection of objects by properties
- Dynamic ones are accomplished by using Hash Tables @{ }

EcoSystem of PowerShell

- Console vs IDE
- ExecutionPolicy of user or Computer
 - RemoteSigned is the normal one to use
- Windows 2016 / Windows 10+
- TLS 1.2 as the default protocol
- .NET is at the core of PowerShell (core or Framework)

EcoSystem of PowerShell

- Modules – PowerShell Gallery
 - Set-PSRepository
- SMO – Programmatically using objects to manage SQL Server
- \$env:PSModulePath is the governor of what PowerShell sees as far as modules

Versions of PowerShell

- WinRM (Windows Remote Management) 5.1
 - Windows 10, 11, Windows Server 2016,2019,2022
 - Windows Only
- PowerShell 7.x (cross-platform)
 - Windows or Linux
 - Uses .NET and not .NET Framework so some things may not be present like Windows

Let's See Some PowerShell

Demo

Review

- PowerShell is a great tool for DBAs
- Modules make the magic happen
- SMO is at the heart of all things DBA in PowerShell
- Practice is SUPER important to master this tool
- Do NOT give up. Keep at it and it will become your best tool

Session evaluation

Your feedback is important to us



Evaluate this session at:

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Thank you

SQL Server 2022 Contained Availability Groups

Ben Miller

@DBADuck - Everywhere

ben@benmiller.net

<https://www.dbaduck.com>

