SQL Server and PowerShell

Let's Get Serious

About me

I'm a Senior SQL Server DBA at IGS Energy in Dublin, Ohio. I've been using SQL Server since SQL Server 2000 and I love it. I also enjoy DevOps, release management, and PowerShell.
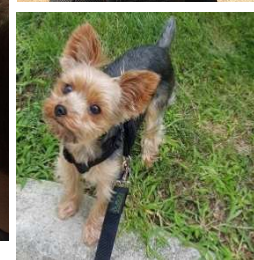
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AGENDA

1. Why using PowerShell will make your life more awesome

2. SQL Server PowerShell Provider

3. Code, code, and more code!

Using PowerShell Will Make Your Life Awesome!

"I don't want to learn PowerShell because I don't have time."

"Why would I waste time writing this in PowerShell when I can already do it in T-SQL?"

1. Understanding PowerShell in general increases your worth.
2. Helps you interact with System Administrators better.
3. Useful for deploying code or system changes.
4. Saves you a ton of time (automate all the things!).
5. Core Servers laugh at your puny GUI.
6. Let me know how you plan on automating things in Azure.

The SQL Server PowerShell Provider

- SQLPS Module
- It's where the awesome lives
- Provides a directory hierarchy for interacting with SQL Server
- For more information, including cmdlets and SMO objects:
  https://msdn.microsoft.com/en-us/library/cc281947(v=sql.110).aspx

Let's Just Do it!

Real-World Example: Export Database Objects (not just tables) for DR purposes

- Why backup an entire reporting replica when you can just grab the good bits?
- Perfect for reporting environments

Real-World Example: Dynamically Copy Database Tables From One Database to Another

- PowerShell makes it easy to iterate over a Database/Schema and script out objects while also copying the data.

- What about Foreign Keys?

- What about Indexes?

- Permissions?

Real-World Example: Copy SSIS Environments

- Need to clone that SSIS environment locally? What about to another server? Or another instance?

Real-World Example: Deploying Extended Events

- Want to shotgun a bunch of extended events to a lot of servers? PowerShell has got you covered!

Real-World Example: Managing Backups

- Managing backups in SQL server isn't neccesarily difficult, but being consistent can be.

- Using PowerShell you can keep your scripts unified across all servers for better naming conventions

- And you can use it to restore a database to a point in time by gathering all your log files together, too!

Real-World Example: Auditing SQL Server Group Permissions

- Just who has access to that database?
- In an active directory environment, guess what? There's a tool (and module!) for that…
- Great example about how you can marry multiple products together

Wrapping Up

- PowerShell is a great tool that you should be using, or trying to use.
- Not saying it should solve/replace all your tasks, just supplement them.
- Helps blur the line between a SQL Server Professional/DevOps/Iteration Management/etc
- A more robust you = a more in-demand you.

Would you like to know more?

MSDN Resources:

- SQL Server PowerShell Provider: https://msdn.microsoft.com/en-us/library/cc281947.aspx
- Windows PowerShell Reference: https://technet.microsoft.com/en-us/library/ms714469(v=vs.85).aspx

People/Blogs:

- Hey, Scripting Guy! http://blogs.technet.com/b/heyscriptingguy/
- Mike Fal (@mike_fal): http://www.mikefal.net/
- Allen White (@SQLRunr): http://sqlblog.com/blogs/allen_white/default.aspx

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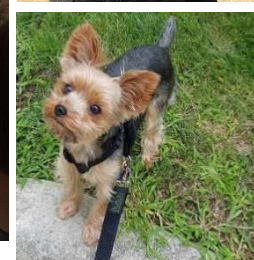
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Questions?