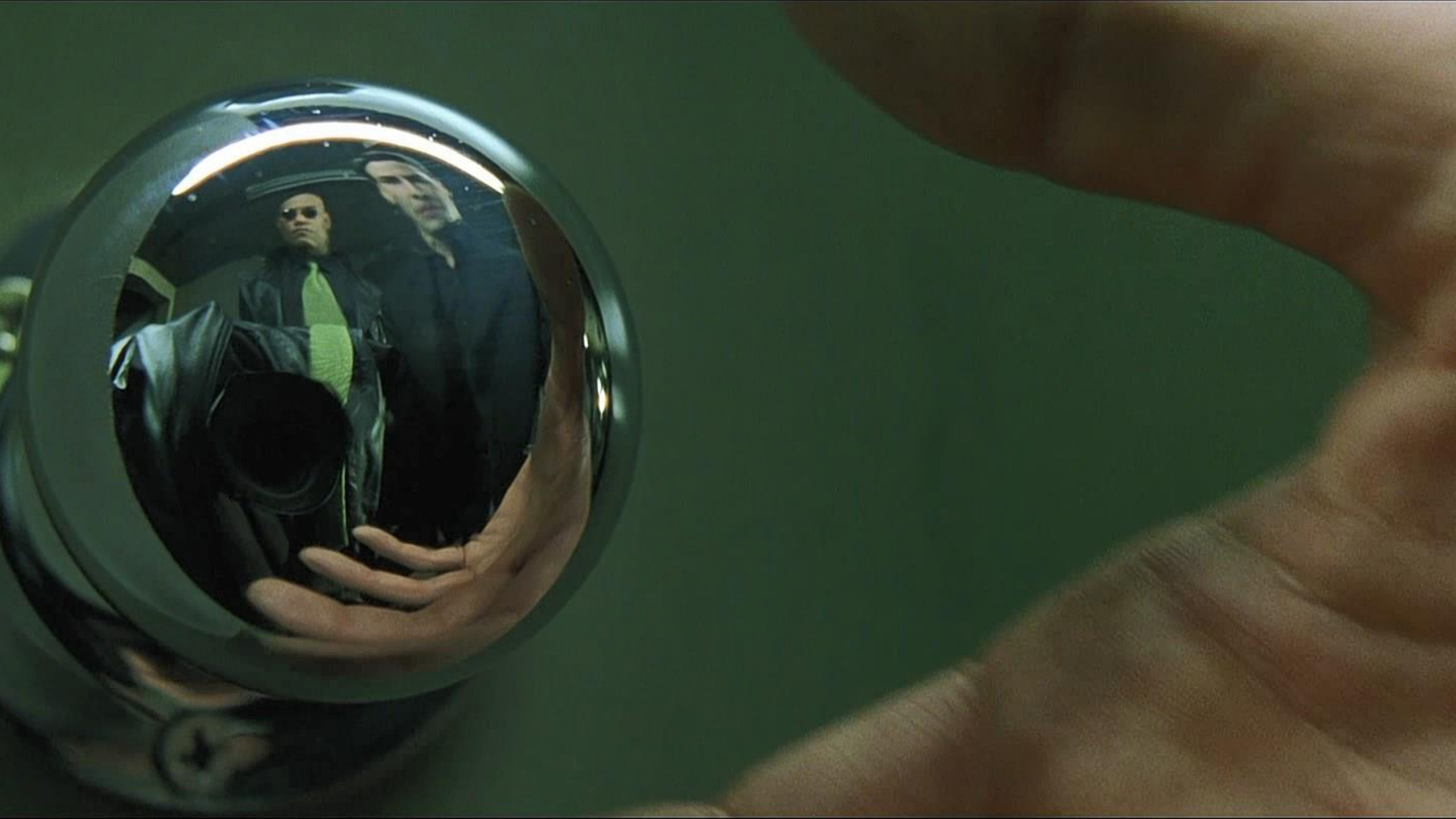
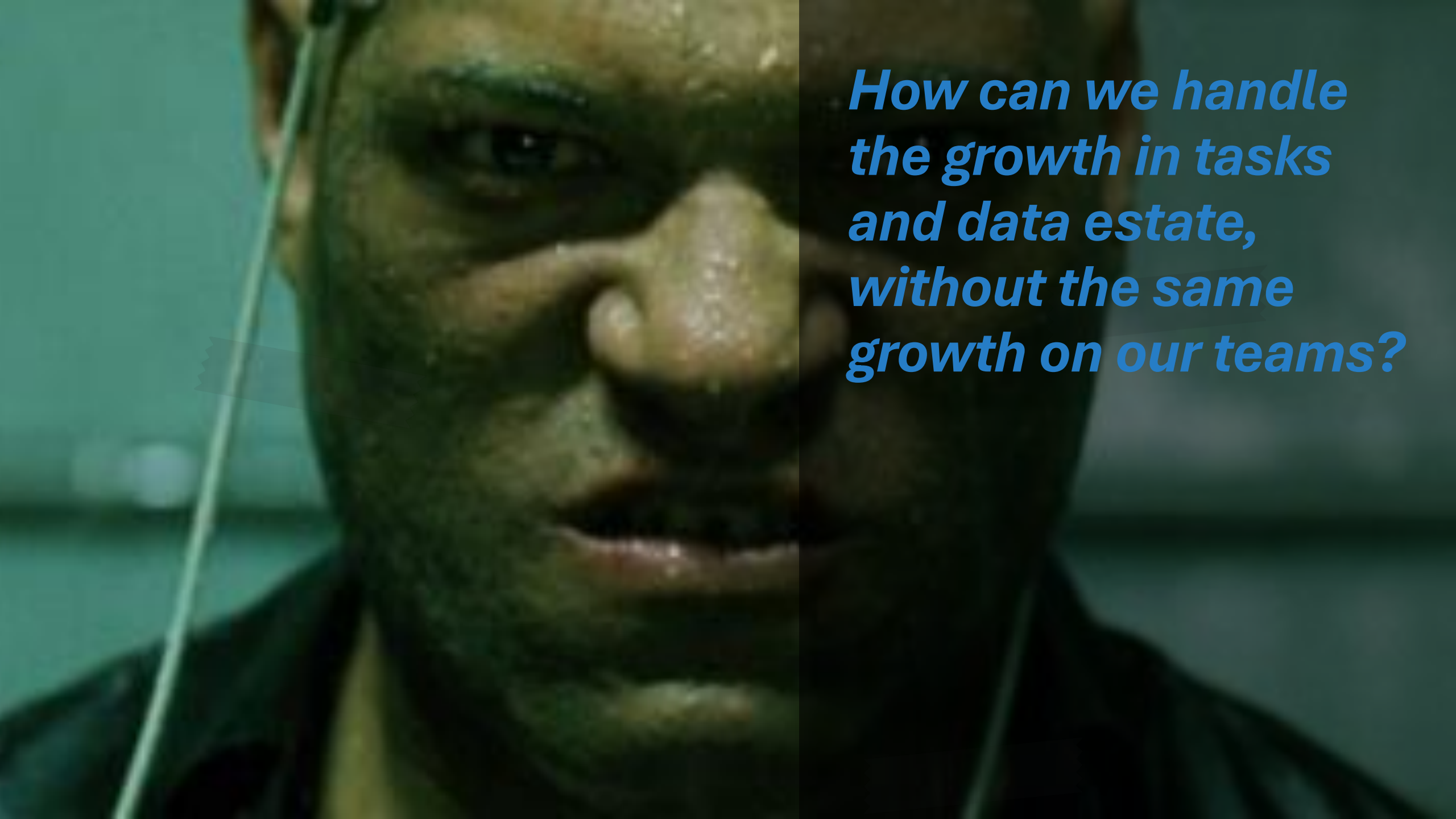


David Seis - DBA
Straight Path I.T. Solutions, LLC.
SQL Saturday South Florida
6-29-2024

Intro to PowerShell
Automation for the SQL
Server DBA







***How can we handle
the growth in tasks
and data estate,
without the same
growth on our teams?***



*How can we handle
the growth in tasks
and data estate,
without the same
growth on our teams?*



PowerShell
Basics

Advanced
Automation

Thank
You!

Basic
Automation



PowerShell Basics

PowerShell Basics



COMMANDS

ARGUMENTS

VARIABLES

PIPING

MODULES

PowerShell Basics

COMMANDS

Commands (and functions) are similar in use and concept to SQL server stored procedures and functions.

ARGUMENTS

VARIABLES

PIPING

MODULES

PowerShell Basics

ARGUMENTS

Similar to stored procedures, arguments can be used to change the behavior of a command.

PowerShell Basics

VARIABLES

1. Typically \$ defined
2. Declared but flexible
3. Session persistent

PowerShell Basics

PIPING

The pipe “|” is the way to take the results of one command and give it as input into another command (chaining work)

COMMANDS

ARGUMENTS

VARIABLES

MODULES

PowerShell Basics

MODULES

Similar to Ola, First Responder, Etc. These are groups of commands you can use after installing.

COMMANDS

ARGUMENTS

VARIABLES

PIPING

Questions?

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Basic Automation

TIPS

REPORTS

CHANGES

FIXES

ONE OFFS

ROLLOUTS

Basic Automation

REPORTS

Simple reports:

- Are jobs enabled?
- Are configurations correct?
- Is the XE running?

TIPS

CHANGES

FIXES

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CHANGES

Making simple changes:

- Turning off a job.
- Changing Configurations.
- Adding a user.

REPORTS

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ROLLOUTS

TIPS

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FIXES

Fixing simple problems

- Fixing a job command
- Moving databases off C:\
- Moving Tempdb

REPORTS

CHANGES

ONE OFFS

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ONE OFFS

Occasional Tasks

- Adding a one-off schedule for a job
- Copying jobs or users from another server.

REPORTS

CHANGES

FIXES

ROLLOUTS

TIPS

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ROLLOUTS

Building IaC solutions for maintenance and Installs.

- Ola
- Standard jobs
- SQL installs

REPORTS

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- Script to window
- Escaping

TIPS

REPORTS

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FIXES

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FILES

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Advanced Automation

A background image of Keanu Reeves as Neo from the movie The Matrix, wearing sunglasses and holding up his right hand in a stopping gesture. The background is a dark, green-tinted digital space with floating binary code.

FILES

Saving script outputs:

- HTML
- CSV
- Etc.

EMAILS

SCHEDULES

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EMAILS

Automating alerts and reporting via email

- Attaching files
- Adding content to the body of an email.

FILES

SCHEDULES

LOADING

TOOLS

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SCHEDULES

Calling a PowerShell script in task scheduler, offering scheduling.

- Login reports
- Configuration tracking

FILES

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LOADING

Taking the output of CSVs:

- Loading proactive data into a master table.
- Tracking metrics in a single location.

FILES

EMAILS

SCHEDULES

TOOLS

Advanced Automation

A background image of Keanu Reeves as Neo from the movie The Matrix. He is wearing his iconic black suit and sunglasses, with his right hand raised in a stopping gesture. The background is a dark, green-tinted digital space filled with floating binary code (0s and 1s).

TOOLS

Keeping tools up to date:

- SSMS Quiet install
- Community tools

FILES

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SCHEDULES

LOADING

Advanced Automation



FILES

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TOOLS

QUESTIONS?



Thank You!

Thank You!

David Seis

- DBA at Straight Path IT Solutions, LLC.
- Blog - tinyurl.com/SP-Blog
- sp_CheckSecurity - tinyurl.com/SP-CheckSec
- This Presentation - tinyurl.com/dbapowershell
- Auto Ola Rollout - <http://tinyurl.com/OlaBlog>
- Tampa SQL User group Leader - aka.ms/TSUG
- <https://www.DBATools.io>



[linkedin.com/in/davidseis/](https://www.linkedin.com/in/davidseis/)
David.Seis@straightpathsql.com



John 3:14-21