European SharePoint Office 365 & Azure Conference





AUTOMATION IN THE CLOUD for the reluctant IT Pro

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If you find yourself doing something more than once: automate it!

Automate what exactly?

- Microsoft Teams creation
- License management
- Reporting & auditing
- Monitoring
- More advanced business scenarios:

"When a user leaves the company, let other users know which shared documents they will lose access to"

Need to run something on a schedule?

• Task Scheduler in Windows

Cron jobs in Linux



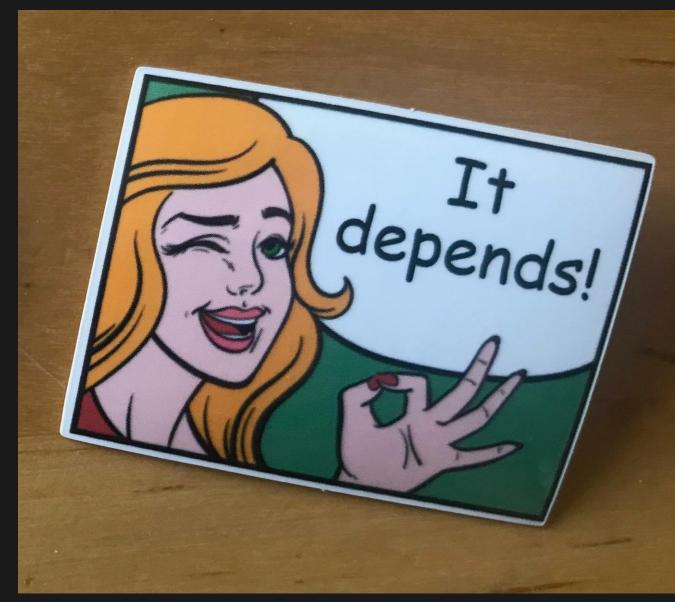


- Scheduled Tasks
- Azure Webjobs
- Azure Automation
- Azure Functions

- Azure Logic Apps
- Power Automate
- Azure DevOps / GitHub Actions
- Azure batch

When to use what?

flexibility • cost • complexity • resilience • orchestration • security • triggers • scaling • output needs



But I just want to run some PowerShell?

- Azure Automation
- Azure Functions



Running PowerShell in the cloud security considerations





Where do you store credentials?

What permissions do you need?

Azure Automation

- Process automation through Runbooks
- Runbook & PowerShell Gallery support
- Helpers for using variables and other dependencies
- Additional configuration & update management capabilities
- Good integration with laaS components of Azure
- The "tried & true" approach



Demo 1 - Azure Automation

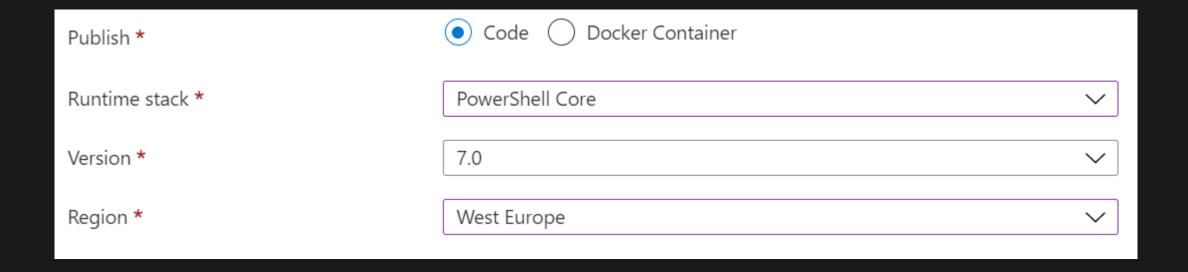
Creating a Team through the Microsoft Teams PowerShell module

Azure Functions

- Serverless
- Flexible & scalable
- Many triggers to choose from
- Very good integration with VSCode
- Support for the PowerShell Gallery
- If you need ultimate control
- Can be intimidating at first



PowerShell in a Function App



Demo 2 - Azure Functions

Creating a Team through the Microsoft Graph API for PowerShell





Justin Grote @JustinWGrote

My @AzureFunctions #Powershell, which processed 496,000 tickets last month, including a peak of 14,000 tickets a second, georedundant across 8 azure regions, cost \$8 to run last month (which was absorbed by our partner credit)

Serverless is the future.

1:43 AM · Mar 10, 2020 · Twitter Web App

Other important considerations

- Security
- Orchestration
- Resiliency
- Scale
- Performance
- Conflicts
- Logging & output
- ...

Maintainability of your scripts

- Have you thought about version control?
- Git is the de facto standard, and it's free!
- You don't have to be a developer to use git and GitHub



https://thvo.me/git

Useful reading

Background jobs best practices

Overview of all Azure Services



Key takeaways

- Use the simplest tool that could possibly work
- Balance cost, flexibility & complexity when making a choice
- Most common choices for running PowerShell in the cloud:
 - Azure Automation
 - Azure Functions
- Don't forget low-code solutions such as Power Automate
- Consider security aspects such as app permissions & secure storage of credentials (Keyvault)

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