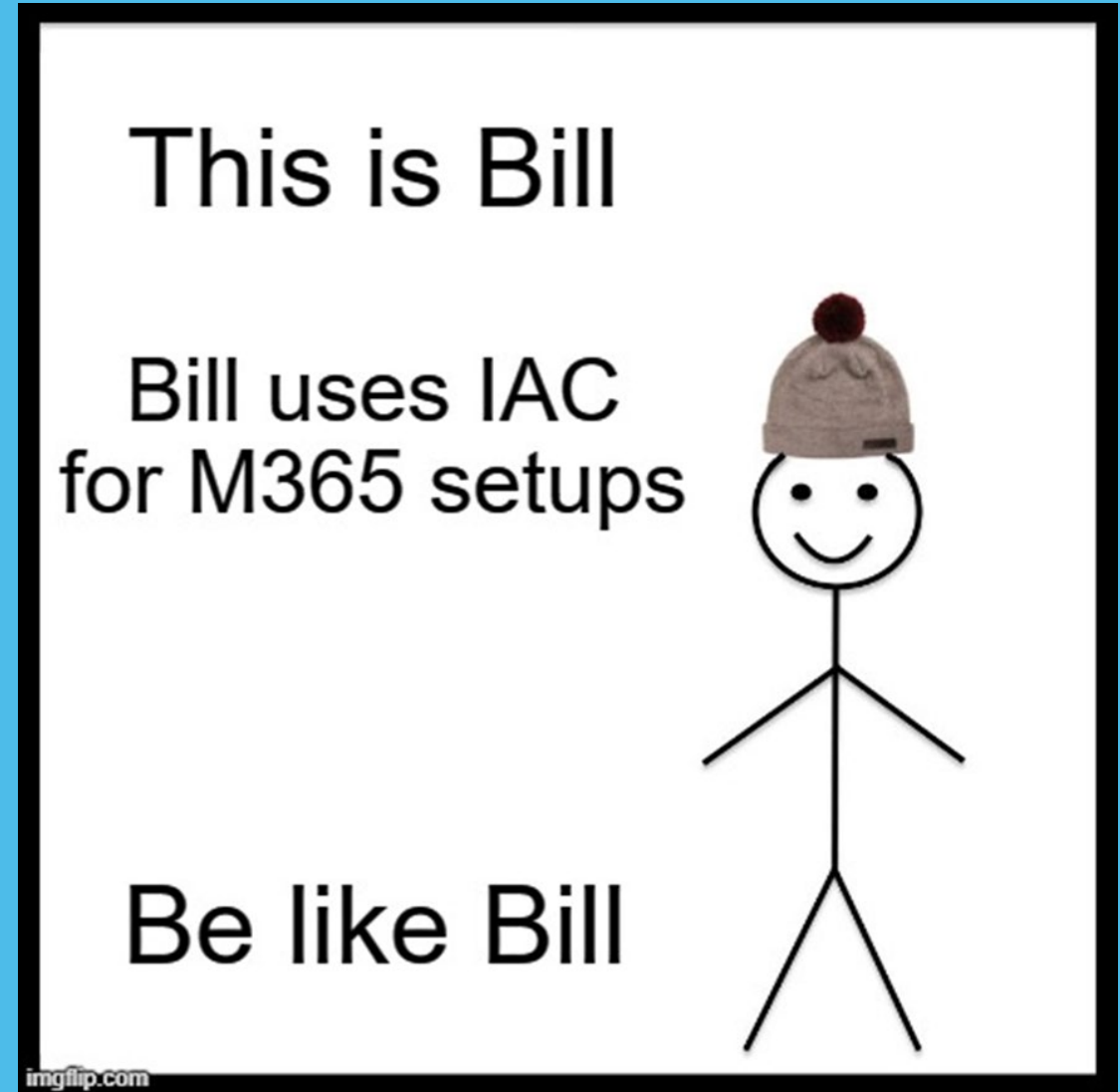WORKPLACEDUDES

meetup

Workplace As Code: Microsoft 365 DSC

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4 oktober 2023

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M365 DSC

- Desired state configuration for Modern Workplace
- Declarative syntax
- Open source, hosted on Github
- Led by Microsoft, but community maintained

Infrastructure as Code

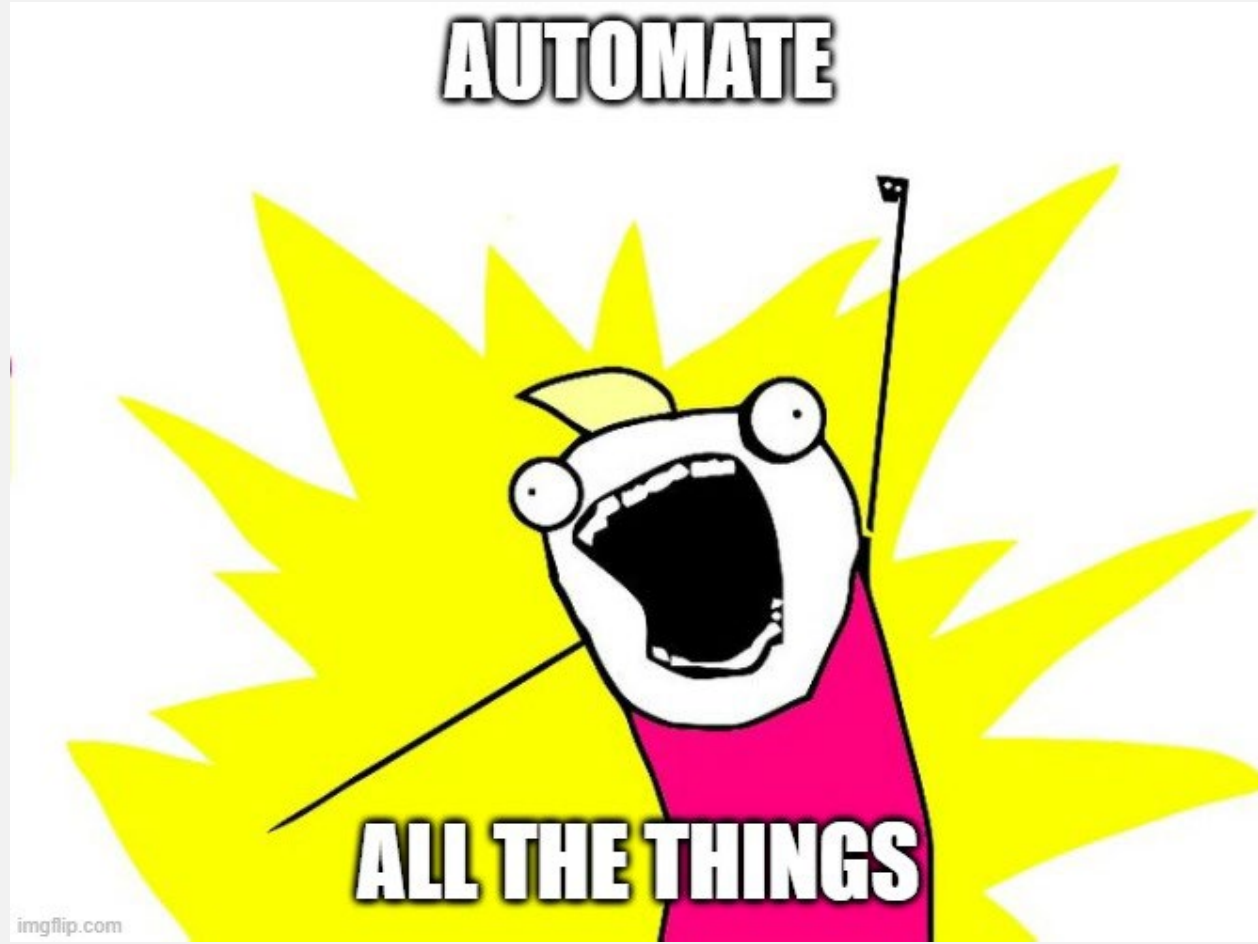| Imperative	Declarative
Explicit instructions	Describe the outcome
Basically running scripts to perform actions	The system will decided what needs to be done
The system is stupid, you are smart	The system is smart... You don't care.

M365DSC Capabilities

Automate
Export
Synchronize
Asses
Monitor
Report

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Getting started

- Get the prereqs
  - Prerequisites
  - PowerShell (see PowerShell 7 info)
  - Windows Terminal recommended
  - Install-Module Microsoft365DSC –Force
  - Update-M365DSCDependencies

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Workload	PowerShell Module	Credential	Service Principal			Managed Identity
			Certificate Thumbprint	Certificate Path	Application Secret	
AzureAD*	Microsoft.Graph.Authentication (Connect-MgGraph)	✔️	✔️	❌	✔️	✔️
Exchange Online	ExchangeOnlineManagement (Connect-ExchangeOnline)	✔️	✔️	✔️	❌	✔️
Intune*	Microsoft.Graph.Authentication (Connect-MgGraph)	✔️	✔️	❌	✔️	✔️
Office 365*	Microsoft.Graph.Authentication (Connect-MgGraph)	✔️	✔️	❌	✔️	✔️
OneDrive	PnP.PowerShell (Connect-PnPOnline)	✔️	✔️	✔️	✔️	✔️
Power Apps	Microsoft.PowerApps.Administration.PowerShell	✔️	✔️	❌	✔️	❌
Planner*	Microsoft.Graph.Authentication (Connect-MgGraph)	✔️	✔️	❌	✔️	✔️
Security & Compliance Center	ExchangeOnlineManagement (Connect-IPPSSession)	✔️	✔️	✔️	❌	❌
SharePoint Online	PnP.PowerShell (Connect-PnPOnline)	✔️	✔️	✔️	✔️	✔️
Teams	MicrosoftTeams (Connect-MicrosoftTeams)	✔️	✔️	❌	❌	❌

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```
PS C:\Users\ralph> Update-M365DSCAzureAdApplication -ApplicationName 'Microsoft365DSC' -AdminConsent -Type Certificate -CreateSelfSignedC
ertificate -CertificatePath c:\Temp\M365DSC.cer -Permissions @(@{Api='SharePoint';PermissionName='Sites.FullControl.All'})
```

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Set correct permissions

- Update-M365DSCAzureADApplication
- Azure AD Roles for App Registration
- SharePoint settings for App Secret
- Exchange Roles / RoleGroups

- Admin Consent for API access

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Exporting Config

- Export-M365DSCConfiguration
  - Use the –LaunchWebUI switch
- Specify the components to export
  - Or use workloads
- Optionally specify filename

Comparing Configurations

- New-M365DscDeltaReport
  - Specify source and destination
  - Outputs an HTML report
- Useful for comparing two tenants
  - i.e. Test and Production

Creating a configuration report

- New-M365DscReportFromConfiguration
  - Specify source file
  - Outputs Excel or HTML
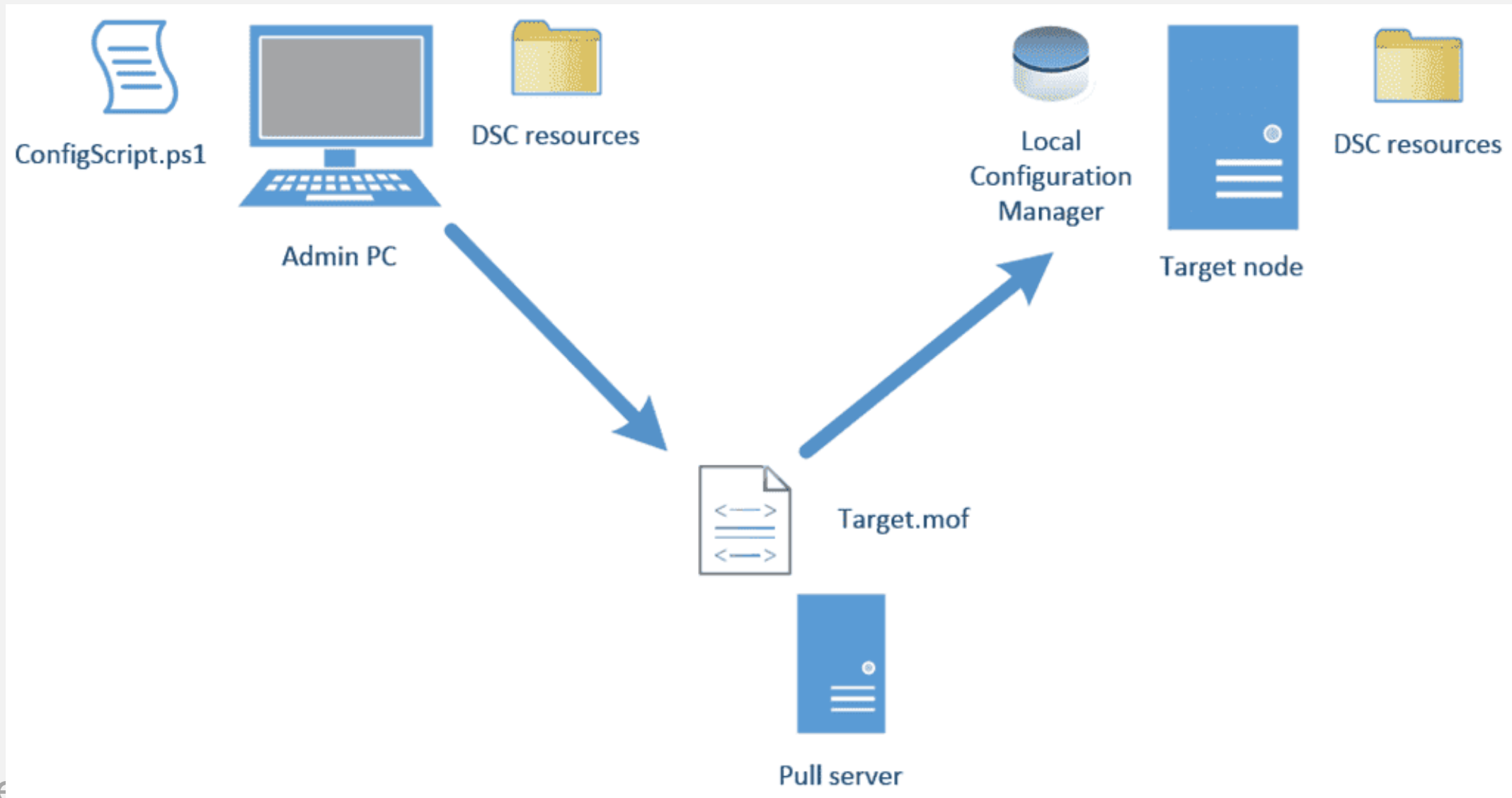- Point in time configuration reporting

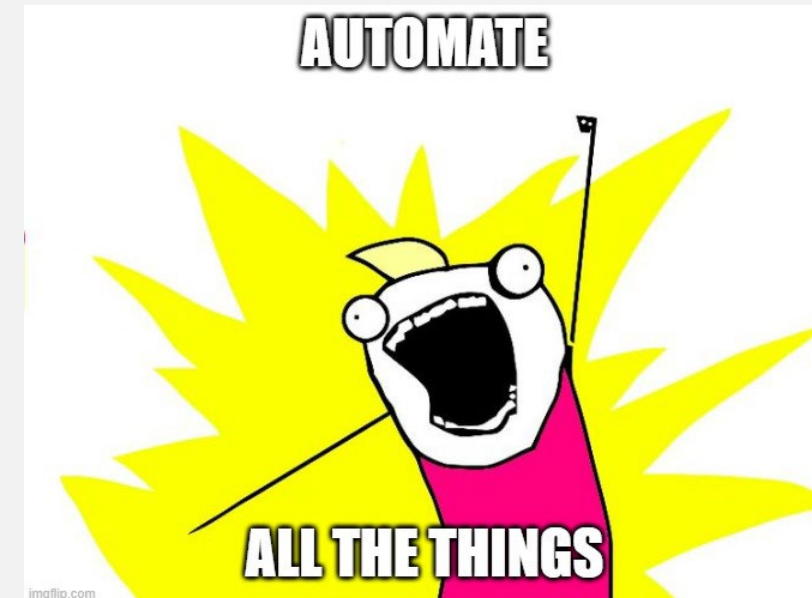Export

Asses

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Synchronize

ConfigScript.ps1

Admin PC

DSC resources

Target.mof

Pull server

Local Configuration Manager

Target node

DSC resources

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Leveraging actual DSC

- Create a DSC Configuration
  - Simply run the .ps1-file from the export
- Deploy the DSC Configuration
  - Start-DSCConfiguration

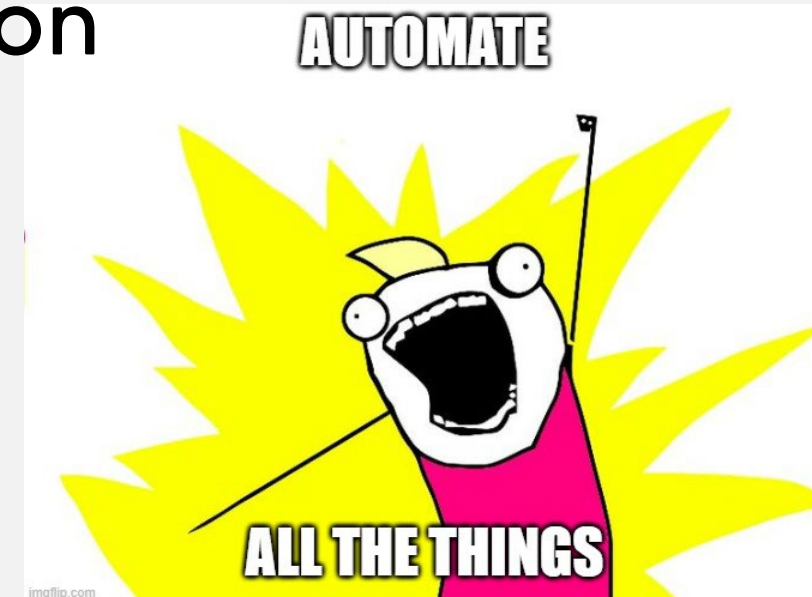# Using DevOps for Automation

Export

Asses

Report

Automate

Monitor

Synchronize

- When changing the configuration, create a new mof
- Move the mof to a server
- Apply the DSC configuration

Monitoring

- Monitor locally using the LCM
- Monitor using a pipeline in DevOps

Synchronize

- Basically, takes the export from one tenant to apply it to another tenant
  - Export-M365DSCConfiguration
  - Run the .ps1 file to create the mof
    - Think about authentication!
  - Start-DSCConfiguration

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Q&A

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https://linkedin.com/in/ralpheckhard
https://github.com/ralpje