



SharePoint CONFERENCE

IT Pros, Get Relevant!

Upskilling for today's Cloud

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Premier Field Engineers
Microsoft

Demographics

- Dev vs IT Pros?
- Used AutoSPInstaller?
- Used PowerShell DSC?
- Interested in On-Prem vs O365?



Agenda

- Current State & Roadmap for AutoSPInstaller;
- DSC & ReverseDSC Overview;
- Introduction to Office365DSC;
- Azure DevOPS for Office 365 Admins;



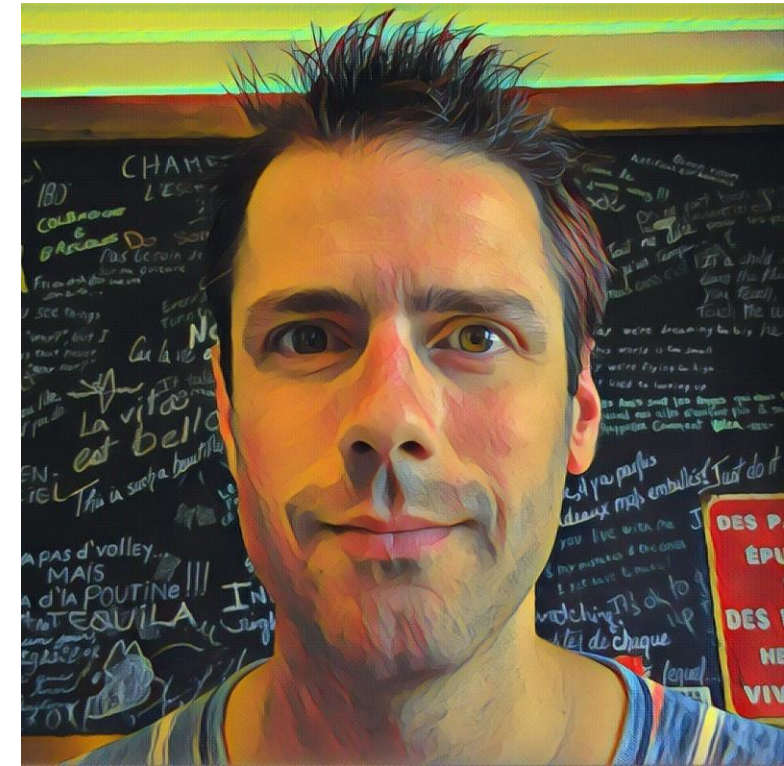


❑ Microsoft Premier Field Engineer

- Focus on DevOPS & Automation;

❑ About Me

- Ex-PowerShell MVP;
- Author of several books on SP Development & PowerShell;
- Based in Quebec
- Owner & Creator of:
 - ReverseDSC
 - Office365DSC
- Co-Owner of:
 - SharePointDSC
 - 2 kids





@brianlala

❑ Microsoft Premier Field Engineer

- SharePoint, Automation, Infrastructure;

❑ About Me

- Creator of AutoSPInstaller;
- Co-creator of <https://autospinstaller.com>;
- Based in Toronto
- Infrequent blogger (<http://blog.lalancette.ca>)
- Also responsible for:
 - ❑ AutoSPSourceBuilder
 - ❑ AutoSPUpdater
 - ❑ MSCLoudLoginAssistant
 - ❑ Contributions to Office365DSC
 - 👨‍👩‍👧‍👦 12 4 kids



AutoSPInstaller

State of the Union



DEMO

Single configuration change using AutoSPInstaller

Search Service Application Provisioning – Kick Off

AutoSPInstaller

- Essentially in maintenance mode
- Recently gained support for SharePoint 2019
- Feature parity with SharePointDSC
- Can still be the path of least resistance
- SharePoint 2010 support

AutoSPInstaller

- AutoSPInstallerFunctions.ps1 has been converted to a module (.psm1)
- Better suited for running individual functions
 - E.g. if we want to provision a single service application vs. building a whole farm
- Blog post recently updated to reflect this:
 - <http://spinsiders.com/brianlala/2014/04/30/autospinstaller-for-specific-config-changes/>
- Still need to pass an XML input file as parameter for most functions
 - However you can easily build a (partial) one at <https://autospinstaller.com>

DEMO

Single configuration change using AutoSPInstaller

Checking Progress...

PowerShell Desired State Configuration (DSC)

Make it So!



DSC

- It's a Declarative approach;

```
SPWebApplication RootWebApp
{
    Name = "Root web Application"
    ApplicationPool = "SharePoint - 80"
    ApplicationPoolAccount = "Contoso\sp_webapp"
    webAppUrl = "http://niksp.contoso.com"
    Port = 80
}
```

Imperative

```
New-SPWebApplication -Name "Root Web Application" `
                    -ApplicationPool "SharePoint - 80" `
                    -ApplicationPoolAccount "contoso\sp_AppPool" `
                    -Url "http://root.contoso.com" `
                    -Port 80
```

Declarative

```
SPWebApplication RootWebApp
{
    Name = "Root Web Application"
    ApplicationPool = "SharePoint - 80"
    ApplicationPoolAccount = "Contoso\sp_webapp"
    webAppUrl = "http://niksp.contoso.com"
    Port = 80
}
```

Easy as cake!

BAKE 350° ABOUT 25 MIN. 3-9" CAKE PANS GREASED & FLOURED.
CAKE!
SIFT ALL DRY INGREDIENT IN BOWL, SET ASIDE.
IN LARGE BOWL MIX WATER, OIL, AND VANILLA.
MIX IN DRY INGREDIENTS, MIX WELL SCRAPING BOWL.
DIVIDE BATTER BETWEEN PANS, SPRINKLE 1/2 CUP CHOC.
CHIPS OVER BATTER IN EACH PAN.
BAKE. COOL IN PAN ON RACK 10 MIN. REMOVE
FROM PANS. COOL COMPLETELY. FROST.
FROSTING!
BEAT BUTTER TILL LIGHT AND FLUFFY, GRADUALLY ADD
3 CUPS XXX SUGAR, BEAT IN 6 TBS. MILK ADD VANILLA, STIR.
ADD COCOA AND REMAINING SUGAR. BEAT, ADD MORE MILK
IF NECESSARY.
PLACE CAKE CHOC CHIPS UP AND FROST, TOP LAYER CHOC
CHIPS DOWN FROST. TOPS & SIDES.

How to make it
(Imperative)

Versus



What I want
(Declarative)

PowerShell DSC (10,000 feet overview)

- Deployment Automation and monitoring solution;
- Ensures that environments stay in their Desired State;
- PowerShell 4.0 and above (therefore no support for SP2010);



Monitoring Configuration Drifts

Configuration Modes:

- ApplyOnly
- ApplyAndMonitor
- ApplyAndAutoCorrect

Monitoring Configuration Drifts

Configuration Modes:

- ApplyOnly



- Configure server as specified, then done;
- Equivalent to using sequential scripts (or AutoSPInstaller).

- ApplyAndMonitor

- ApplyAndAutoCorrect

Monitoring Configuration Drifts

Configuration Modes:

- ApplyOnly
- ApplyAndMonitor
- ApplyAndAutoCorrect



- Monitors Configuration Drifts;
- Logs drifts in Event Viewer;

Monitoring Configuration Drifts

Configuration Modes:

- ApplyOnly
- ApplyAndMonitor
- ApplyAndAutoCorrect



- Monitors Configuration Drifts;
- Automatically fixes drifts.

Ensure

- DSC is not only about making sure that certain components are configured on a sever;
- Every resource has a parameter **Ensure** exposed;
- Setting **Ensure = Absent** makes sure that the specified component is **NEVER** configured on the server;
- Hard to define all "non-config" scenarios....it's actually impossible;

```
SPServiceInstance SearchAdmin
{
    Name      = "WSSSearch"
    Ensure    = "Absent"
}
```

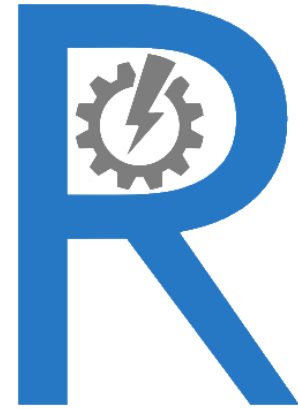
DEMO

Introduction to PowerShell DSC

Managed Paths

ReverseDSC

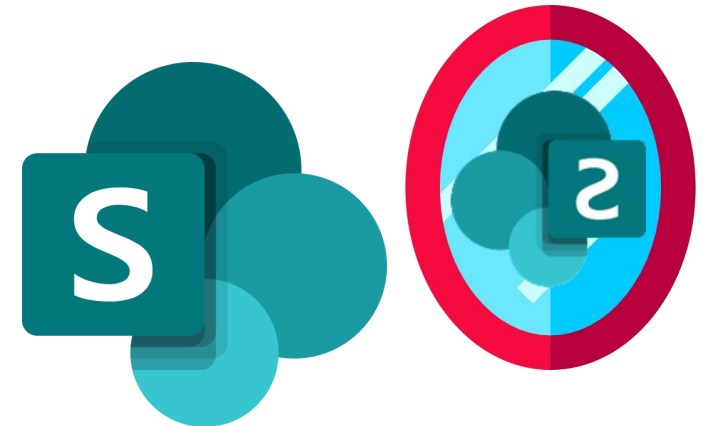
Using your Existing Investments



ReverseDSC for SharePoint

- Extract DSC Configuration from existing SharePoint environments.
- Framework that requires a technology specific Orchestrator to operate.
- ReverseDSC Orchestrator for SharePoint is available on the PowerShell Gallery;

Install-Script SharePointDSC.Reverse



ReverseDSC Scenarios

- Recreating an environment for Troubleshooting;
- On-boarding existing environment onto DSC for monitoring;
- Point-in-time snapshot;
- Delta Analysis;
- Disaster Recovery;
- Keeping environments in-sync;



DEMO

ReverseDSC in Action

ReverseDSC Orchestrator for SharePoint

Office365DSC

Configuration-as-Code for Office 365



Office365DSC

- Current support for SharePoint, OneDrive, Exchange and Teams;
- Will support all Office 365 Workloads:



`Install-Module Office365DSC`



[Aka.ms/Office365DSC](https://aka.ms/Office365DSC)

Office365DSC

- Handles Creation & Monitoring of:
 - Site collections
 - Teams & Channels
 - Office 365 Groups, users and licenses, etc.
- Makes it easy to configure multiple tenants the exact same way;
- Allows for integration between Office 365 Configs and Azure DevOPS;



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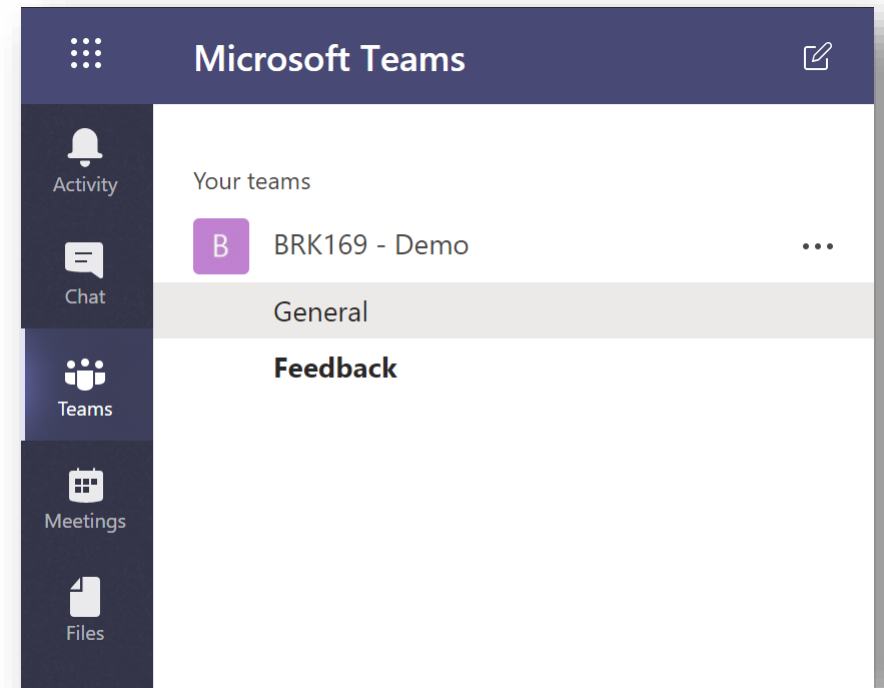
Office365DSC in Action

```
TeamsTeam BRK169Demo
```

```
{  
    DisplayName          = "BRK169 - Demo"  
    AllowGiphy           = $true  
    AllowUserDeleteMessages = $true  
    GlobalAdminAccount    = $Creds  
    Ensure                = "Present"  
}
```

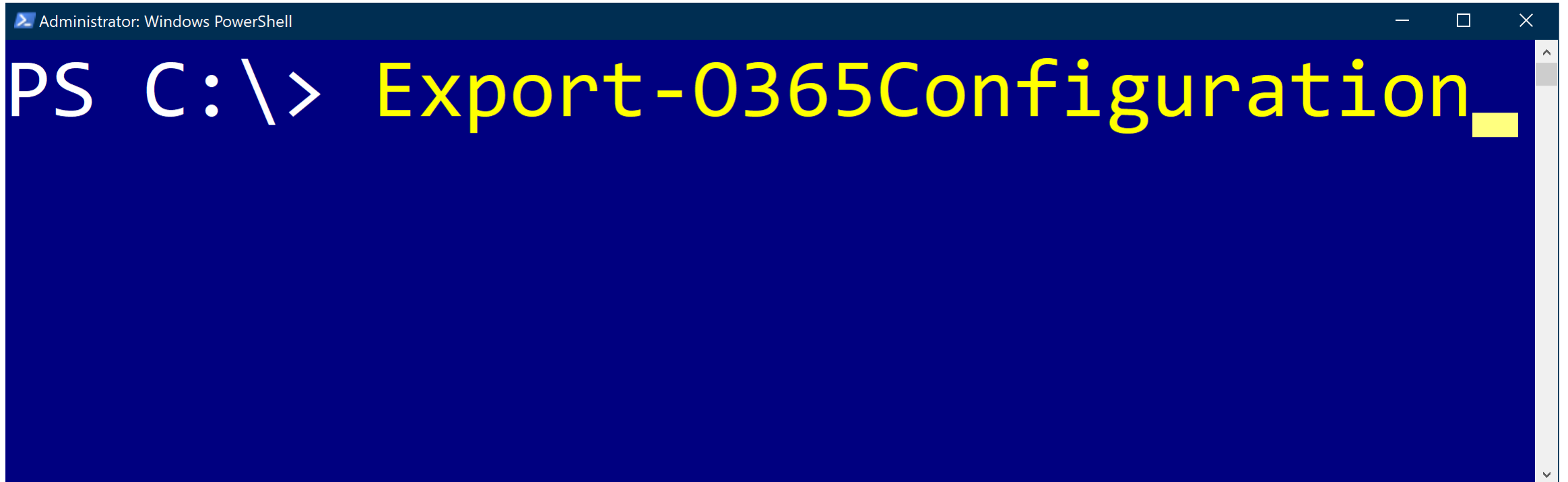
```
TeamsChannel UserFeedback
```

```
{  
    TeamName      = "BRK169 - Demo"  
    DisplayName   = "Feedback"  
    Description    = "Channel to capture feedback"  
    GlobalAdminAccount = $Creds  
    DependsOn     = "[TeamsTeam]BRK169Demo"  
    Ensure        = "Present"  
}
```



Native ReverseDSC Support

- Very first Module with Native Reverse capabilities!

A screenshot of a Windows PowerShell window titled "Administrator: Windows PowerShell". The window has a dark blue background. The command prompt shows "PS C:\> Export-0365Configuration_" in yellow text. The cursor is at the end of the command. The window includes standard Windows window controls (minimize, maximize, close) in the top right corner.

```
Administrator: Windows PowerShell
PS C:\> Export-0365Configuration_
```


Native ReverseDSC Support


ReverseDSC for Office 365

Unselect All


Tenant Admin:

Password:


Start Extraction

 Office 365


☐ Admin Audit Log Config
☐ Groups
☒ Users

 SharePoint


☒ Access Control Settings
☒ Apps
☐ Hub Sites
☐ Search Managed Properties
☒ Search Result Sources
☒ Sharing Settings
☒ Site Collections
☒ Site Design Rights
☐ Themes

 Teams

☒ Channels
☒ Teams
☒ Users

 OneDrive

☐ OneDrive Settings

 Exchange

☐ Advanced Threat Protection Policies
☐ Client Access Rule
☐ Client Access Service Mailbox Plan
☐ DKIM Signing Configuration
☐ Hosted Connection Filter Policy
☐ Hosted Content Filter Policy
☐ Hosted Content Filter Rule
☐ Mailbox Settings
☐ Mail Tips
☐ Outbound Spam Filter Policy
☐ Safe Attachment Policy
☐ Safe Attachment Rule
☐ Safe Links Policy
☐ Safe Links Rule
☒ Shared Mailboxes

Azure Automation Support

5/22/2019, 6:28 PM
Report

[View raw report](#)

Report details
Report ID
0ea0dd1d-7cfa-11e9-9019-000d3aff492c
Report status
⚠ Not compliant
Report time
5/22/2019, 6:28 PM
Start time
5/22/2019, 6:28 PM
Total runtime
11 seconds
Type
Consistency
Resources

O365User	✓ Compliant
SPOSite	✓ Compliant
TeamsTeam	✓ Compliant
TeamsChannel	⚠ Not compli...

Node state at report time
Node name
O365DSC-Dev

TeamsChannel
Resource report

NAME	RUN TIME	STATUS
Reviews	00:00:02	⚠ Not compliant

[TeamsChannel]Revie...
Resource instance report

Name
Reviews
Status
⚠ Not compliant
Properties

NAME	VALUE
Resource na...	TeamsChannel
Module name	Office365DSC
Module versi...	1.0.0.2
Source info	::59::9::TeamsChannel

Depends on
[TeamsTeam]WeeklyMeetings

Run time
2 seconds

DEMO

Office365DSC in Action

Keeping Tenants in Sync

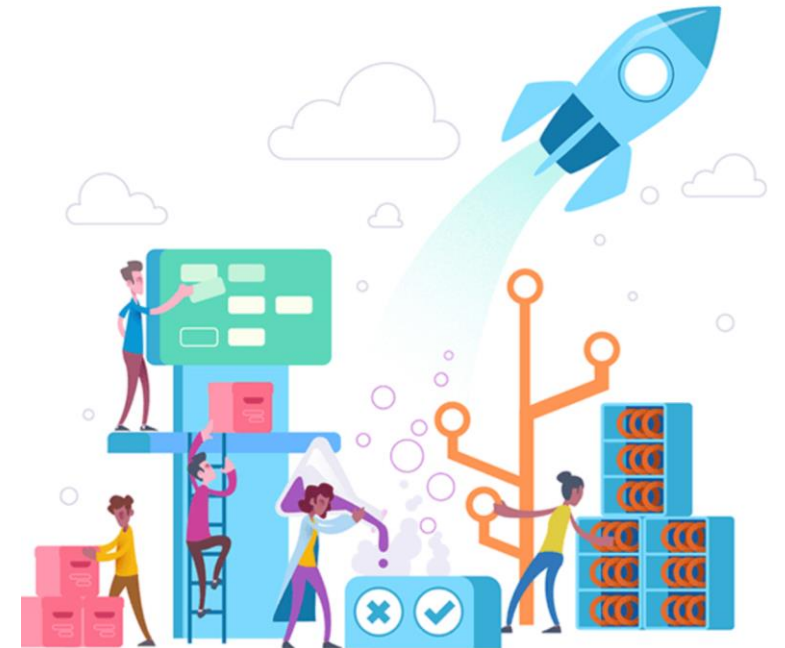
Azure DevOps for Office 365

Application Lifecycle Management for Everyone



Azure DevOPS

- Manage your Office 365 configuration as code;
- Automate deployments upon configuration changes;
- DevOPS at its best!
- Challenge is to convince IT Pros to use it.



DEMO

Azure DevOPS with Office365DSC

Continuous Integration & Delivery for Office 365 Admins

Questions?

Additional Resources

- Demos Available at:
 - <https://Github.com/NikCharlebois/Conferences>
- DevOps for Office 365 Blog:
 - <http://nikcharlebois.com/devops-for-office-365/>
- Repos:
 - <https://github.com/Microsoft/Office365DSC>
 - <https://github.com/Microsoft/SharePointDSC.Reverse>
 - <https://github.com/PowerShell/SharePointDSC>



Thank you

Ask Microsoft anything: <https://aka.ms/SPC/Ask>
Join the AMA session Thursday 4:45 for answers

Sign up for our new monthly newsletter: <https://aka.ms/SharePoint/Newsletter>
to stay up-to-date about all things SharePoint (and friends!)

Give us your feedback and evals: <https://sharepointconference.hub.events>

This is the same app as your "schedule builder". If you haven't created your account yet, look in your email (including "junk mail") for invite from info@sharepointconference.com