



CONTINUOUS TESTING OF POWERSHELL WITH PESTER AND VISUAL STUDIO TEAM SERVICES

Jeff Scriptor

JPScriptor@gmail.com

Application Systems Engineer

Wells Fargo

Christopher Mank

christopher@whiteficus.com

Chief Technologist

White Ficus



▶ Jeff Scripter



▶ Christopher Mank

▶ @JeffTheScripter



▶ @cmank7

▶ NA



▶ Microsoft MVP

▶ 10 years



▶ 13 Years

▶ Brewing Beer and Coffee



▶ Faith, Family, Baseball

TESTING TERMINOLOGY

- ▶ Unit
 - ▶ Testing the functionality of individual sections of code.
- ▶ Integration
 - ▶ Tests the integrations and handoffs between different systems.
- ▶ UAT (User acceptance testing)
 - ▶ Tests performed by the business in order to verify that the finished code meets their requirements.
- ▶ Regression
 - ▶ Tests that ensure that all previous requirements of the code are still met after updates.
- ▶ Stress
 - ▶ Tests to make sure your code is able to handle a full production work load.

WHAT IS PESTER?

- ▶ Pester is an open source PowerShell testing framework developed about 5 years ago.
 - ▶ <https://github.com/pester/pester>
- ▶ Pester is designed to preform unit testing.
 - ▶ Focus on logic
 - ▶ Something is better than nothing
- ▶ Clever people have been able to use pester to do a lot more (Integration testing, monitoring, etc.)
- ▶ Why look at Pester?
 - ▶ If done right, it can save you time when doing code updates down the road.
 - ▶ It is the best way to preform a self-peer review.

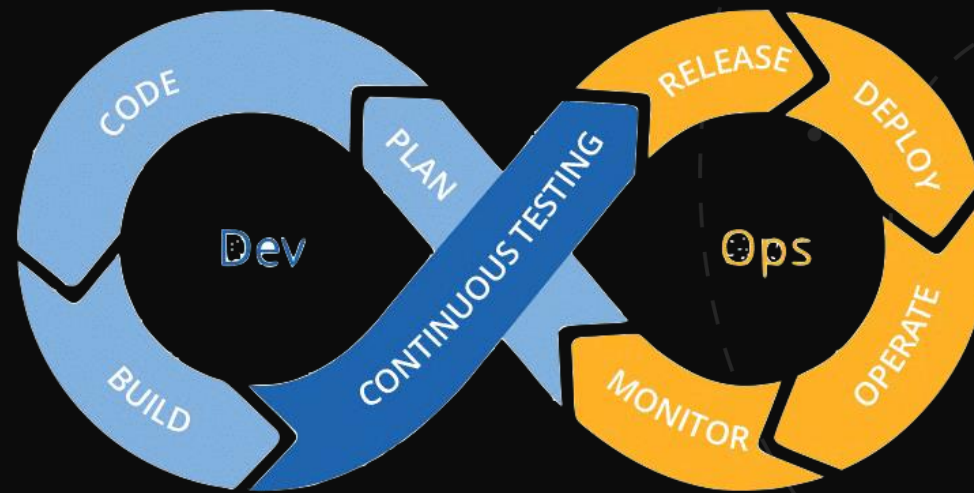


Pester



CONTINUOUS TESTING

- ▶ Automated tests as part of a delivery pipeline
- ▶ Fail fast
- ▶ Immediate feedback
- ▶ Reducing change risk



VISUAL STUDIO TEAM SERVICES (VSTS)

- ▶ End-to-end DevOps solution
 - ▶ Plan, Source Control, Build, Test, Release, Reporting, Wiki, and more!
- ▶ Gartner Leader

Visual Studio Team Services

CI/CD. Git. Agile.

Get started for free >

Directory / Orange | Dashboards | Code | Work | Build and Release | Test | Wiki | Search work items in

Team Status

Fabrikam.CI

Ready for Testing: 0 Work items

Active Bugs: 4 Work items

Active Tasks: 4 Work items

Open User Stories: 3 Work items

Completed: 11/28/2017

Release Definition Overview

Ring 0 (PPE)	Ring 1 (SU0 / SU5...)	Ring 2 (SU3 / SU4...)
FAB.MMS - ...	FAB.MMS - ...	FAB.MMS - ...

+1

Fabrikam - Prod 30	✓	✓	✓	✓	✓	✓	✓	✓
Fabrikam - Prod 29	✓	✓	✓	✓	✓	✓	✓	✓
Fabrikam - Prod 28	✓	✓	✓	✓	✓	✓	✓	✓
Fabrikam - Prod 27	✗	✗	✗	✗	✓	✓	✓	✓

Sprint 13 Burndown

11/15/2017 - 11/20/2017

Completed: 0%

Average burndown: 10

Remaining Work: 37

Projected completion: 11/20/2017

Items not estimated: 6



VSTS and Pester

BEST PRACTICES

- ▶ Build testable code
 - ▶ Use functions
 - ▶ Use parameters
 - ▶ Tightly scope commands
 - ▶ Modular and not Monolithic
 - ▶ Write-Output
- ▶ Pester is more about the code than the test
- ▶ Test-Driven Development (TDD)

COMMON STUMBLING BLOCKS

- ▶ Objects
- ▶ Creating tests on existing scripts
- ▶ Scopes and Modules
- ▶ ScriptSafe cmdlets

RESOURCES

- ▶ Pester

- ▶ <https://github.com/pester/Pester>

- ▶ VSTS Documentation

- ▶ <https://docs.microsoft.com/en-us/vsts/index?view=vsts>

- ▶ Microsoft DevOps Resource Center

- ▶ <https://docs.microsoft.com/en-us/azure/devops/>

- ▶ Release Flow Git Branching

- ▶ <https://blogs.msdn.microsoft.com/devops/2018/04/19/release-flow-how-we-do-branching-on-the-vsts-team/>

- ▶ Pester and PSScriptAnalyzer Tests

- ▶ <https://workingsysadmin.com/invoking-pester-and-psscriptanalyzer-tests-in-hosted-vsts/>

Extended Q&A



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