



OVF - getting fun from boring tasks



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Agenda

- Pester – what, how and why
- PPOSh OVF – the Story, the Concept
 - Baseline your service
 - „Describe“ your needs
 - Test it! Monitor it! Report it!
- PPOSh OVF Diagnostics
 - AD, DHCP, S2D Checks
- What's next?
- Summary

Pester -- Powered by Community

- Format-Pester <https://github.com/equelin/Format-Pester>
- PSCribo - <https://github.com/iainbrighton/PSCribo>
- PoshSpec - expand the Pester DSL to test infrastructure - <https://github.com/Ticketmaster/poshspec>
- ReportUnit - <https://mcpmag.com/articles/2016/12/01/create-a-simple-pester-test-report.aspx>
- NUnit output – integration with CI tools - [https://github.com/pester/Pester/wiki/Showing-Test-Results-in-CI-\(TeamCity,-AppVeyor\)](https://github.com/pester/Pester/wiki/Showing-Test-Results-in-CI-(TeamCity,-AppVeyor))
<http://www.dexterposh.com/2015/06/powershell-pester-jenkins-ci.html>

Great OVF Community Projects

- OVF - <https://github.com/PowerShell/Operation-Validation-Framework>
- DBAChecks - <https://dbatools.io/introducing-dbachecks/>
- Vester - <https://github.com/WahlNetwork/Vester>

PPoSh OVF -- The Story

- Why OVF? Why not DSC?
- Why not
„Microsoft.PowerShell.Operation.Validation“?
- Why PPoSh OVF and PPoSh OVF Diagnostics?

The Story -- The Beginning

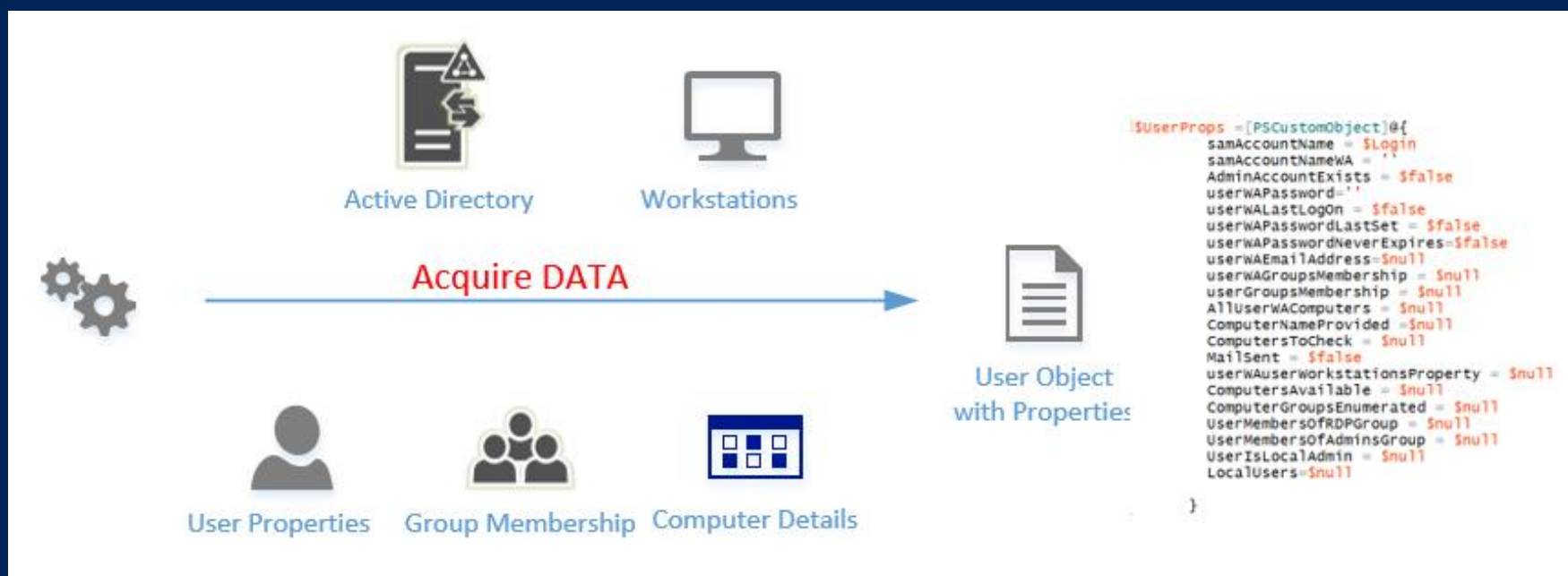
WorkAdmin account for local admin usage

- Planning phase:
 - Prepare business-to-technical requirements
 - Prepare list of steps to process
- Coding phase:
 - Prepare PS Object with all attributes and properties
 - Prepare Pester checklist
 - Combine

The Story -- Pester checklist v 0.1

```
1 Describe "Validate if workAdmin is properly configured for user {}" {
2     Context "Check if workAdmin account {} is created for user {}" {
3         it "WorkAdmin Account {} should be created" {
4             $obj | should be True
5         }
6         it "Password should be set and written in SQL" {
7             $obj | Should Not BeNullOrEmpty
8         }
9         it "Password for {} should not be set to 'never expires'" {
10            $obj | should be $false
11        }
12        it "Email property for {} should be set" {
13            $obj | should not BeNullOrEmpty
14        }
15        it "Email property for {} should be same as for user {}" {
16            $obj -eq "$($obj)@objectivity.co.uk" | should be $true
17        }
18    }
19    Context "Check Group Memberships for WorkAdmin account {} and for user {}" {...}
31
32    Context "All computers for workAdmin account should match userWorkstations property" {...}
45
46    Context "Sanity checks" {...}
52    if ($obj.ComputersAvailable) {
53        Context "Computer Groups validation" {...}
76    }
77 }
78
79
```

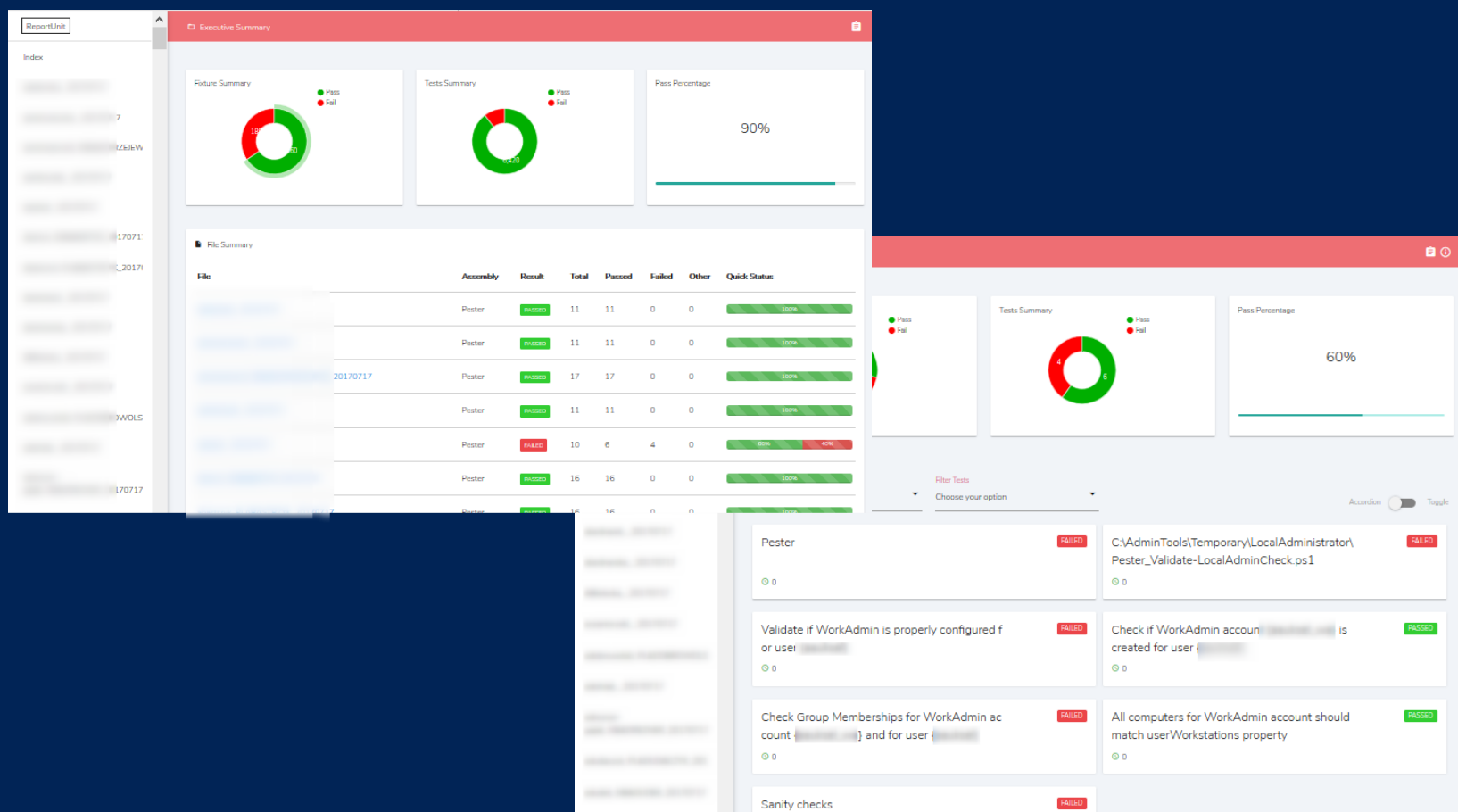
The Story -- The Process



The Story -- The Checks



The Story -- The Reports

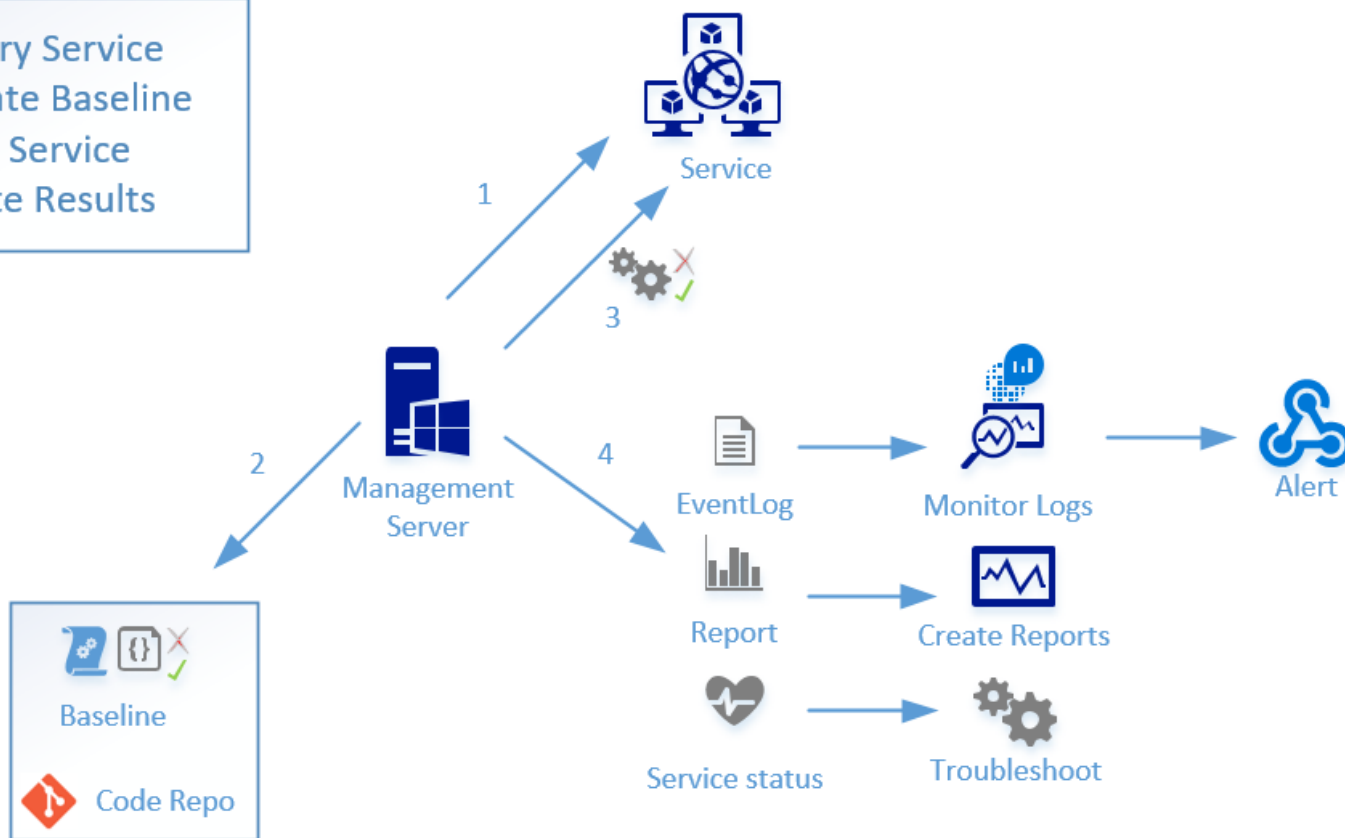


PPoSh OVF -- The Concept

- Document ever-changing environment
- Checklists as Pester Tests
- Compare live and documented environment
- Output data
 - Console – Human readable
 - File – Reports, Release Pipeline
 - EventLog – Monitoring
- Remote, Cross-Domain, No-Copy

PPoSh OVF -- The Concept

1. Query Service
2. Create Baseline
3. Test Service
4. Write Results



PPoSh OVF & Diagnostics -- Internals



Demo

Baseline, Configuration,
Checks

PPoSh OVF & Diagnostics -- Demo

- Creating Baseline
- Operational Checks
- Comparing Configuration
- Reports with ReportUnit
- EventLogs
- Scheduled Tasks on Management Server and OMS

PPoSh OVF Composition

- PPOsh OVF:
 - Invoke-Pester
 - Write-Event
 - Invoke-ReportUnit
- PPOsh OVF Diagnostics:
 - Documentation
 - Operational and Configuration Checks
 - Tagging, Node Selection
 - Invoke-Command

Where to get it

PPoShOVF
PPoShOVFDiagnostics

PPoShTools

- <https://github.com/pposhgroup>

What's Next

- Update Help and Examples
- Split Diagnostics Module
- Publish to PSGallery
- JEA
- Security Best Practice related Checks



Summary

- Document services
- Check services
- Monitor the outcome of checks
- Release Pipeline compatible
- Create Scheduled Reports

Questions?

Next Steps

- Now: 15 min break
- Grab a coffee
- Stay here to enjoy next presentation
- Change track and switch to another room
- Ask me questions or meet me in a breakout session room afterwards