

A woman with dark hair is sitting up in a bed that is covered with a pink blanket and a blue blanket. The room is dimly lit, with light coming from a window with blinds in the background. There is a wooden dresser to the left of the bed, and a nightstand with a lamp to the right. A dreamcatcher hangs on the wall. The overall atmosphere is cozy but cluttered.

PowerShell

Continuous Delivery

aka.ms/mark/pscd



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Business Application – EMEA
Microsoft Services



<http://aka.ms/mark/>

Plaster

Pester

Git & GitHub

VSTS

CONTENT

Learn And Understand Powershell Modules with Plaster

How To Create Powershell Tests with Pester

How & Why To Use Version Control Systems Like Git

How To Setup Easy Continuous Deployment With VSTS

OBJECTIVE

A low-angle, blue-tinted photograph of several people's legs and feet in a meeting room. The people are standing on a dark floor, and their legs are spread out in various directions. Some are wearing dark trousers, while others are wearing shorts. One person is wearing a dark sneaker with yellow laces. The background is slightly blurred, showing the legs of other people and the floor.

UNDERSTAND

UNDERSTAND

What Is A Module ?

Package

Distributable

Shareable

Reusable

Partition, Organize & Abstract PowerShell Code Into
Self-Contained, Reusable Units

UNDERSTAND

Module

CODE

Functional

CODE SUP

Assemblies

MANIFEST

Describes,

DIRECTORY

Contains Content





TOOLS

TOOLS

What Is Plaster ?

Scaffold

Parametrization

Repeatable

Automate The Process To Create Modules
_ Module Framework

TOOLS

What Is Pester ?

Verify Work

Design
Guidance

Documentation

ScriptAnalyser
& Help

Define What Is Expected & Prove It,
Create Quality & Ensure Reusability

TOOLS

What Is Git ?

Version
Control

Track
Changes

Coordinate

Work
Together

Work On A Module Like A Developer

TOOLS

What Is VSTS?

Platform
Software
Development

Measure

Report

Data Storage

Collaborate

Source
Control

Work Item
Tracking

Build Server

Central Platform For Your Development, Maintenance
& Delivery Of Code

TOOLS

WH



aka.ms/mark/pscd/code

DEMO



Steps

Steps

PowerShellGet <https://docs.microsoft.com/en-us/powershell/gallery/readme>

Git <https://git-scm.com/>

VSTS <https://www.visualstudio.com/team-services/>

Github <https://github.com/>

Install-Module Plaster <https://github.com/PowerShell/Plaster>

Install-Module -Name Pester <https://github.com/pester/Pester>

(Install-Module posh-git) <https://github.com/dahlbyk/posh-git>

The background of the image is a blue-tinted photograph of a row of school lockers. The lockers are arranged in two rows, with the top row being more prominent. Each locker has a small rectangular label at the top with a number. The numbers visible are 147, 149, 151, and 153. The lockers have horizontal ventilation slats and vertical locking mechanisms. The word "Plaster" is written in a large, white, sans-serif font across the middle of the image, centered over the lockers.

Plaster

Plaster

Plaster Manifest

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<plasterManifest schemaVersion="0.4" xmlns="http://www.microsoft.com/schemas/PowerShell/Plaster/v1">
```

```
<metadata></metadata>
```

```
<parameters></parameters>
```

```
<content></content>
```

```
</plasterManifest>
```

XSD Validation

Template Metadata

Module Parameter

Files, Folders Templates, Validation

Plaster

Metadata

<metadata>

<name>NewPowerShellModule</title>

<id>38bd80d9-3a47-4916-9220-bed383d90876</id>

<version>0.2.0</version>

<title>New PowerShell Module</title>

<description>Plaster template for creating the files for a PowerShell module.</description>

<author>Plaster Project</author>

<tags>Module, ModuleManifest, Build</tags>

</metadata>

Plaster

Parameters

```
<parameter name='Version'
  type='text'
  default='0.1.0'
  prompt='Enter the version number for the module'/>

<parameter name='License' type='choice' default='2' store='text' prompt='Select a license'>
  <choice label='&Apache'
    help="Adds an Apache license file."
    value="Apache"/>
    type='multichoice' default='0,1,..'
  <choice label='&MIT'
    help="Adds an MIT license file."
    value="MIT"/>
</parameter>
```


Plaster

Content Elements

```
<file source='Tests\*.tests.ps1'
```

```
  destination='test\'
```

```
  condition='$PLASTER_PARAM_Options -contains "Pester"/>
```

```
<templateFile source='test\Shared.ps1'
```

```
  destination='test\Shared.ps1'
```

```
  condition="$PLASTER_PARAM_Options -contains 'Pester'"/>
```

```
<message newline='true'>`n`nYour new PowerShell module project $PLASTER_PARAM_ModuleName </message>
```

Plaster

Manifest File

```
<newModuleManifest destination='src\${PLASTER_PARAM_ModuleName}.psd1'
```

```
  moduleVersion='${PLASTER_PARAM_Version}'
```

```
  rootModule='${PLASTER_PARAM_ModuleName}.psm1'
```

```
  author='${PLASTER_PARAM_FullName}'
```

```
  description='${PLASTER_PARAM_ModuleDesc}'
```

```
  encoding='UTF8-NoBOM'
```

```
  powershellVersion='5.1'/>
```

Plaster

Use Parameter

```
<%
```

```
if ($PLASTER_PARAM_Ensure -eq 'Yes') {
```

```
"    # Ensure the presence/absene of the resource."
```

```
"    [ValidateSet('Present','Absent')]"
```

```
"    [string]"
```

```
"    ` $Ensure = 'Present'"
```

```
}
```

```
%>
```

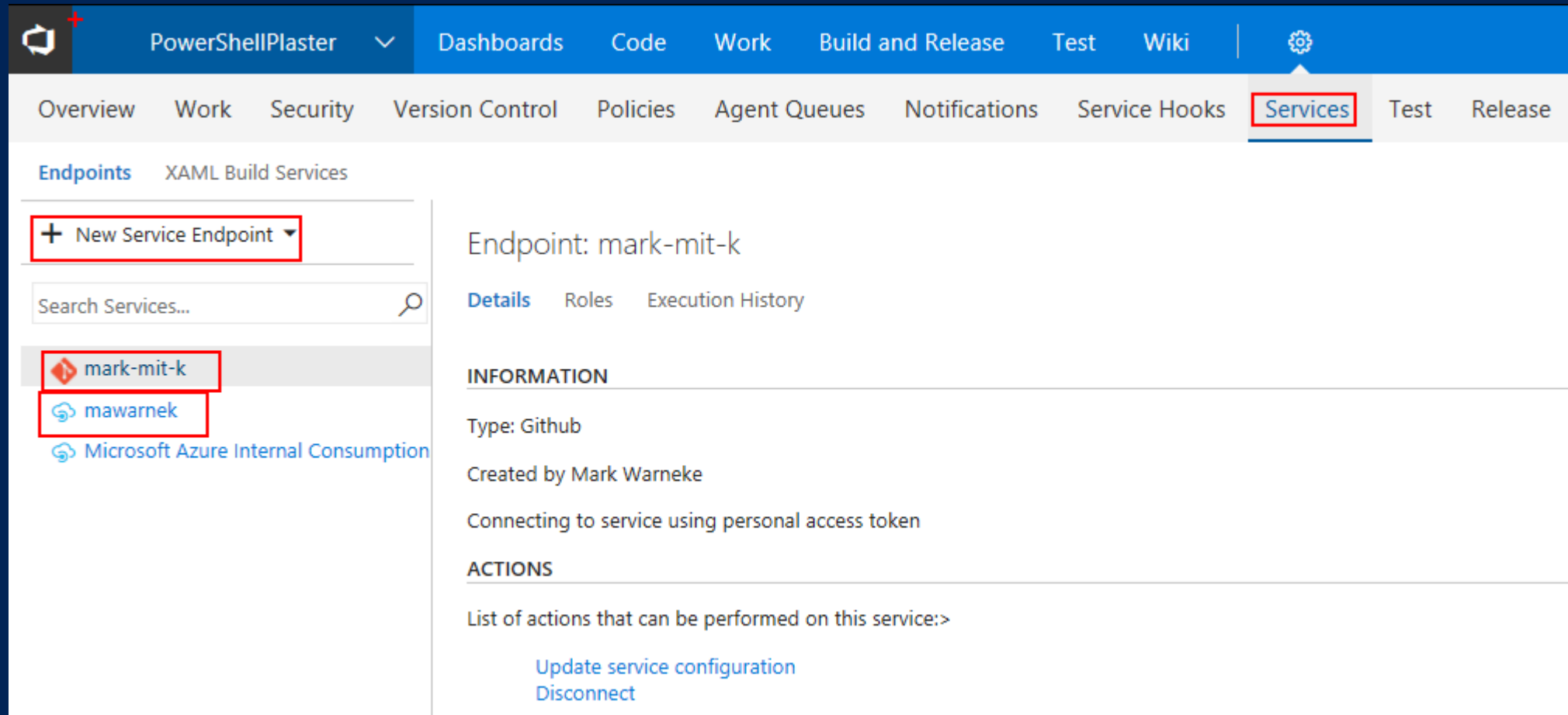
```
<%= $PLASTER_PARAM_ParameterName %>
```

Use Parameters Inside `<% %>` To Template

Single Output in Template `<%=`

VSTS

Visual Studio Settings



The screenshot shows the Visual Studio Settings application with the 'Services' tab selected. The left sidebar contains a list of service endpoints: 'mark-mit-k', 'mawarne', and 'Microsoft Azure Internal Consumption'. The main panel displays details for the 'mark-mit-k' endpoint, including its type (Github), creator (Mark Warneke), and connection method (personal access token). The 'ACTIONS' section lists 'Update service configuration' and 'Disconnect'.

PowerShellPlaster ▾ Dashboards Code Work Build and Release Test Wiki | ⚙️

Overview Work Security Version Control Policies Agent Queues Notifications Service Hooks **Services** Test Release

Endpoints XAML Build Services

+ New Service Endpoint ▾

Search Services... 🔍

- mark-mit-k
- mawarne
- Microsoft Azure Internal Consumption

Endpoint: mark-mit-k

[Details](#) Roles Execution History

INFORMATION

Type: Github

Created by Mark Warneke

Connecting to service using personal access token

ACTIONS

List of actions that can be performed on this service:>

- Update service configuration
- Disconnect

Configure
Services
- GitHub
- Azure



Visual Studio Team Services > Build and release > Pester Test Runner Build Task



Pester Test Runner Build Task

Richard Fennell (Black Marble) | 612 installs | (5)

Run Pester tests without the need to install Pester in with the PMModule folder or in the source repo (Using Pester 3.4.3 or 4.0.8).

Install**Download**

Click **Install** for Visual Studio Team Services and **Download** for Team Foundation Server.

Visual Studio Marketplace

[Overview](#) [Q & A](#) [Rating & Review](#)

Releases

- 1.0.x - initial public release (targets Pester 3.3.5)
- 4.0.x - changed versioning to fit with new release pipeline (still targets Pester 3.4.0)
- 4.1.x - now targets 3.4.3, but allows the path to the module to be overridden
- 4.2.x - removed non-required demand
- 4.3.x - Added support for Tag and ExcludeTag parameters
- 4.4.x - Added support for multiple comma separated tags
- 5.0.x - Added optional support for Pester 4.0.3
- 5.1.x - Fixes issue with running tests using the 32Bit process switch (#150)
- 6.0.x - Add support for JaCoCo code coverage as provided by Pester 4.0.8 ([issue #152](#))

Definitions / PowerShell | **Builds**

Build Options Repository Variables Triggers General Retention History

Save Queue build... Undo

+ Add build step...

Pester Test Runner
Pester Runner

Publish Test Results
Publish Test Results **/TEST-*.xml

Copy Files
Copy Files to: \$(build.artifactstagingdirectory)

Visual Studio Build Tasks

...

PowerShellPlaster-CI

Save & queue

Discard

Summary

Queue

...

Tasks

Variables

Triggers

Options

Retention

History

Process

Build process

Get sources

mark-mit-k/PowerShellPlaster

master

Phase 1

Run on agent

Pester Test Runner

Pester Test Runner from Black Marble

Copy files from MarkMitKAdvancedPlasterManifestTempl...

Windows Machine File Copy

Agent phase

Remove

Display name *

Phase 1

Agent selection

Agent queue

Manage

<inherit from definition>

Demands

Name	Condition	Value
------	-----------	-------

+ Add

Execution plan

Parallelism

None

Multi-configuration

Multi-agent

Timeout *

0

SUMMARY

SUMMARY

Continuous
Delivery
VSTS

Testing
Framework
Pester

Have Fun!
Create some
Modules
Today

Module
Framework
Plaster

\$

Free





Mark Warneke

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[@mark_mit_k_](https://aka.ms/mark/pscd)

Let me know what you think!



aka.ms/mark/pscd/voice

Resources

- <https://github.com/PowerShell/Plaster/>
- <https://github.com/pester/Pester>
- <https://github.com/>
- <https://github.com/dahlbyk/posh-git>
- <https://www.visualstudio.com/team-services/>
- <https://code.visualstudio.com/>
- <https://git-scm.com/>
- <https://docs.microsoft.com/en-us/powershell/gallery/readme>
- <http://overpoweredshell.com/Working-with-Plaster/>
- <https://www.youtube.com/watch?v=16CYGTKH73U&feature=youtu.be>

NEXT: scripts

Scripts

- Code can be found:
aka.ms/mark/pscd/code

