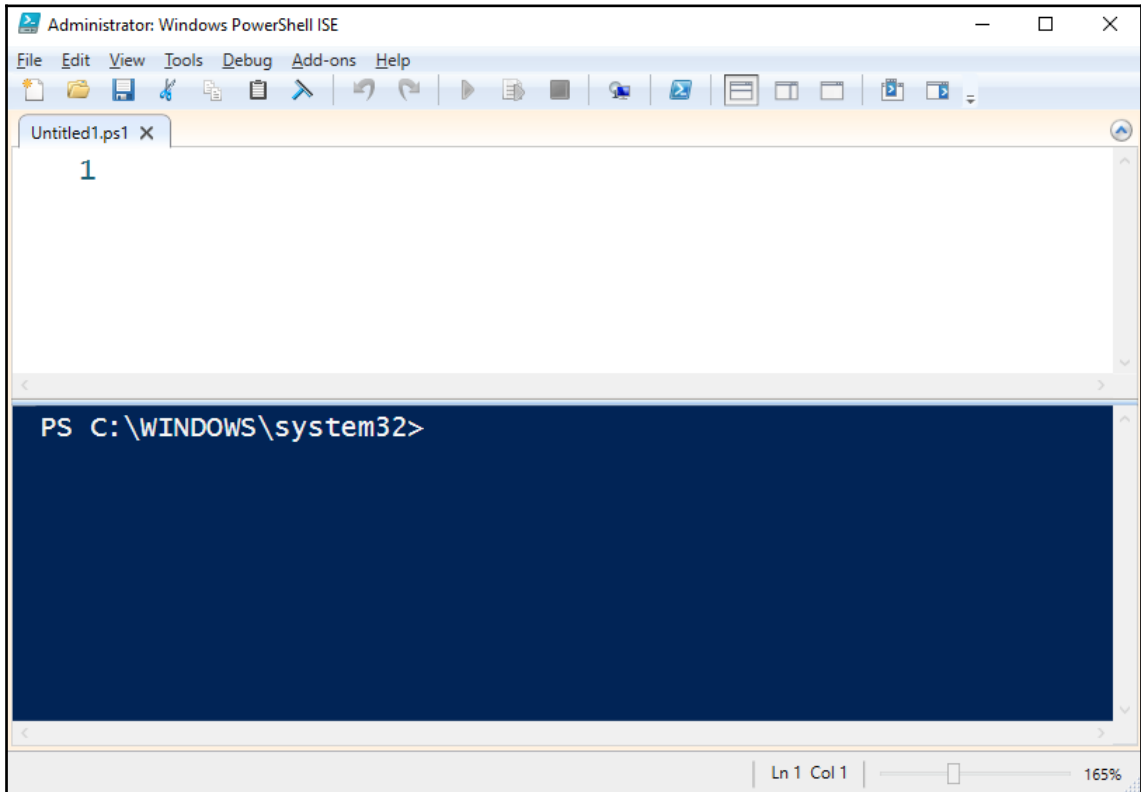


Chapter 1: Current PowerShell Versions



```
PS C:\> $PSVersionTable
```

Name	Value
----	-----
PSVersion	5.1.17046.1000
PSEdition	Desktop
PSCompatibleVersions	{1.0, 2.0, 3.0, 4.0...}
BuildVersion	10.0.17046.1000
CLRVersion	4.0.30319.42000
WSManStackVersion	3.0
PSRemotingProtocolVersion	2.3
SerializationVersion	1.1.0.1

Version	Release Date	Default OS Versions	Available OS Versions	PSEdition
1	Nov-06		Windows XP SP2, SP3	Desktop
			Windows Server 2003 SP1, SP2	
	Downloadable		Windows Server 2003 R2	
			Windows Vista	
			Windows Vista SP2	
2	Oct-09	Windows 7	Windows XP SP3	Desktop
		Windows Server 2008 R2	Windows Server 2003 SP2	
	WMF 2.0		Windows Vista SP1, SP2	
			Windows Server 2008 SP1, SP2	
3	Sep-12	Windows 8	Windows 7 SP1	Desktop
		Windows Server 2012	Windows Server 2008 SP2	
	WMF 3.0		Windows Server 2008 R2 SP1	
4	Oct-13	Windows 8.1	Windows 7 SP1	Desktop
		Windows Server 2012 R2	Windows Server 2008 R2 SP1	
	WMF 4.0		Windows Server 2012	
5	Feb-16	Windows 10	Windows 7 SP1	Desktop
			Windows 8.1	
	WMF 5.0		Windows Server 2012	
			Windows Server 2012 R2	
5.1	Jan-17	Windows 10 1607	Windows 7 SP1	Desktop
		Windows Server 2016	Windows 8.1	
	WMF 5.1		Windows Server 2008 R2 SP1	Core
		Windows Server 2016 Nano Server	Windows Server 2012	
		Windows Server 2012 R2		
Core 6	Dec-17		macOSX	Core
			Linux	
	Downloadable package		Windows	

Operating System	Prerequisites	Package Links
Windows Server 2012 R2		https://go.microsoft.com/fwlink/?linkid=839516
Windows Server 2012		https://go.microsoft.com/fwlink/?linkid=839513
Windows Server 2008 R2	.NET Framework 4.5.2	https://go.microsoft.com/fwlink/?linkid=839523
Windows 8.1		x64: https://go.microsoft.com/fwlink/?linkid=839516
		x86: https://go.microsoft.com/fwlink/?linkid=839521
Windows 7 SP1	.NET Framework 4.5.2	x64: https://go.microsoft.com/fwlink/?linkid=839523
		x86: https://go.microsoft.com/fwlink/?linkid=839522

PowerShell / PowerShell Watch 769 Unstar 8,755 Fork 1,319

Code Issues 1,119 Pull requests 45 Projects 12 Insights

PowerShell for every system! <https://microsoft.com/powershell>

powershell windows macos linux command-line shell netcore

5,682 commits 3 branches 41 releases 165 contributors

Branch: master New pull request Create new file Upload files Find file Clone or download

PowerShell Documentation

Get Started

Features

Reference

Community



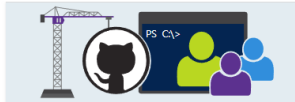
Get started with Windows PowerShell
Learn how to use PowerShell.



Setup and installation
Get PowerShell installed in your environment.



Tutorials
A cookbook of common scripting tasks.



PowerShell on GitHub
PowerShell is an open-source project and available for Windows, Linux and macOS.



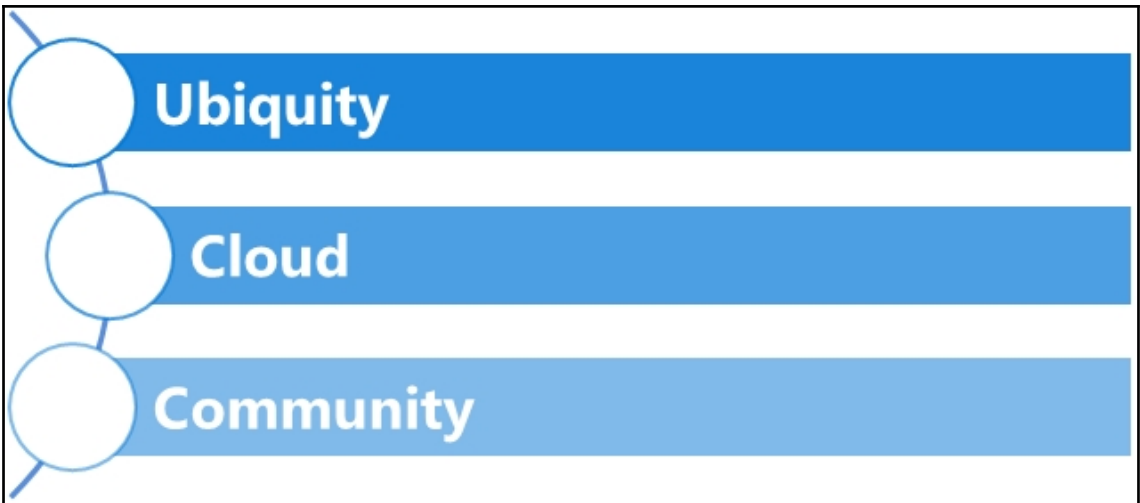
Download WMF
Windows Management Framework contains the latest versions of PowerShell, DSC, WMI, and WinRM for older versions of Windows.

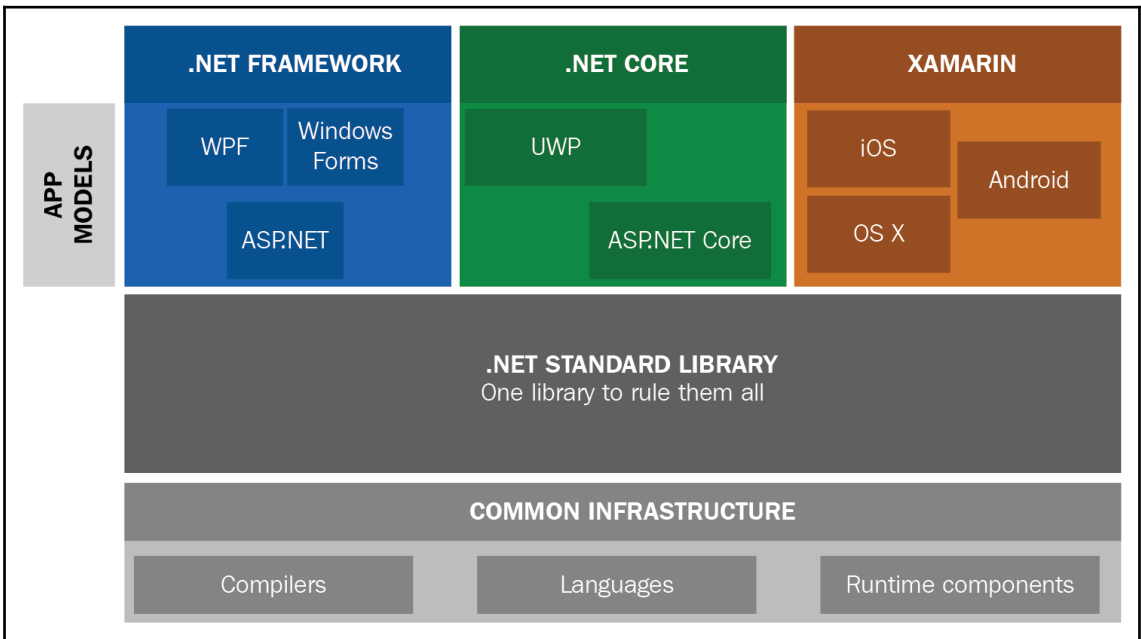
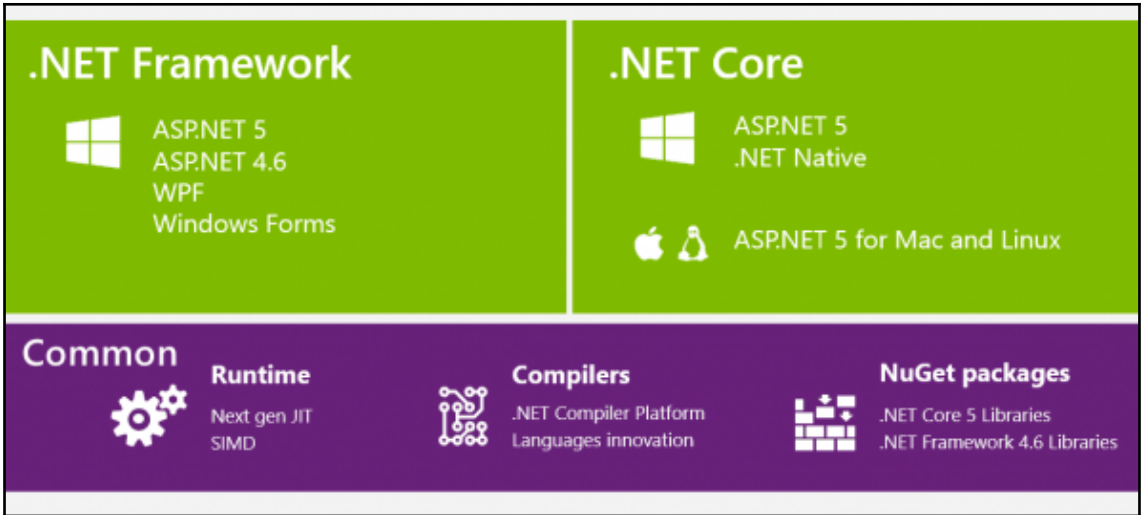


PowerShell Module Browser
Search for PowerShell modules and cmdlets.



PowerShell in Azure Cloud Shell
PowerShell in Azure Cloud Shell is now available in public preview. Learn more!





.NET STANDARD 2.0

XML

XLing • XML Document • XPath • XSD • XSL

SERIALIZATION

BinaryFormatter • Data Contract • XML

NETWORKING

Sockets • Http • Mail • WebSockets

IO

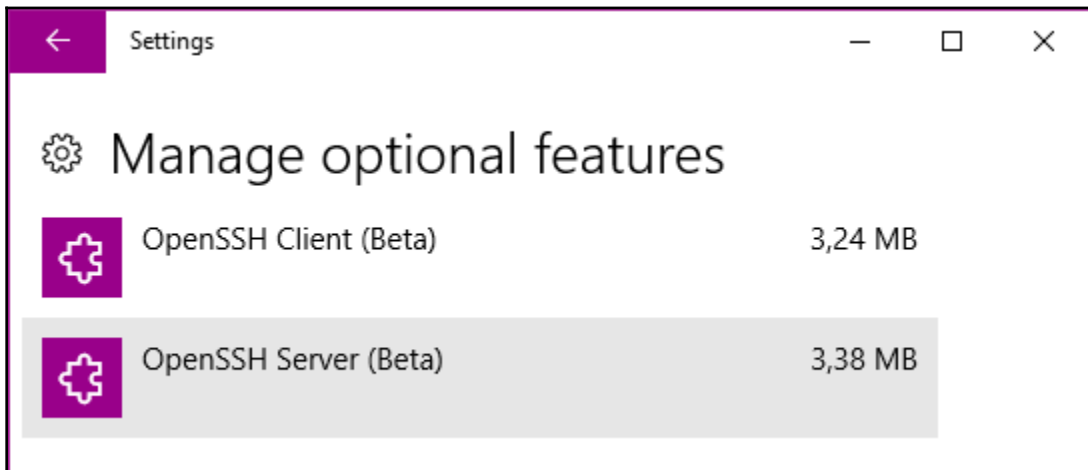
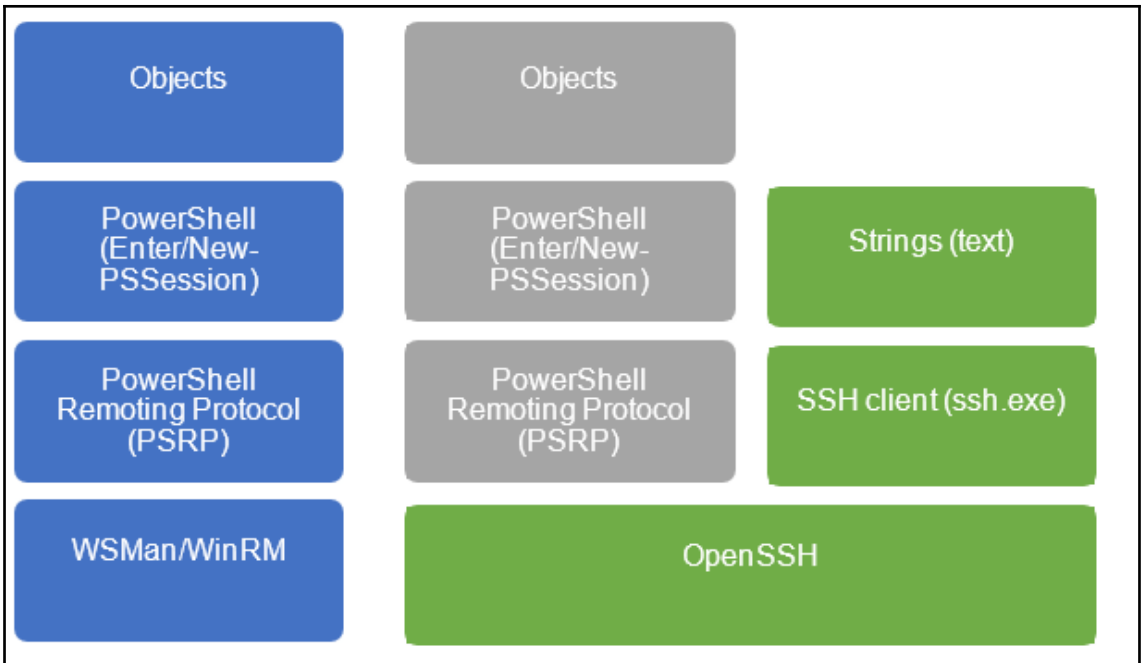
Files • Compression • MMF

THREADING

Threads • Thread Pool • Tasks

CORE

Primitives • Collections • Reflections • Interop • Linq



```
PowerShell v [power] ? [gear]
Requesting a Cloud Shell.
PowerShell may take up to a minute...Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell (Preview)

Type "dir" to see your Azure resources
Type "help" to learn about Cloud Shell

VERBOSE: Authenticating to Azure ...
VERBOSE: Building your Azure drive ...
Azure:\
PS Azure:\> █
```

```
PS Azure:\> $PSVersionTable

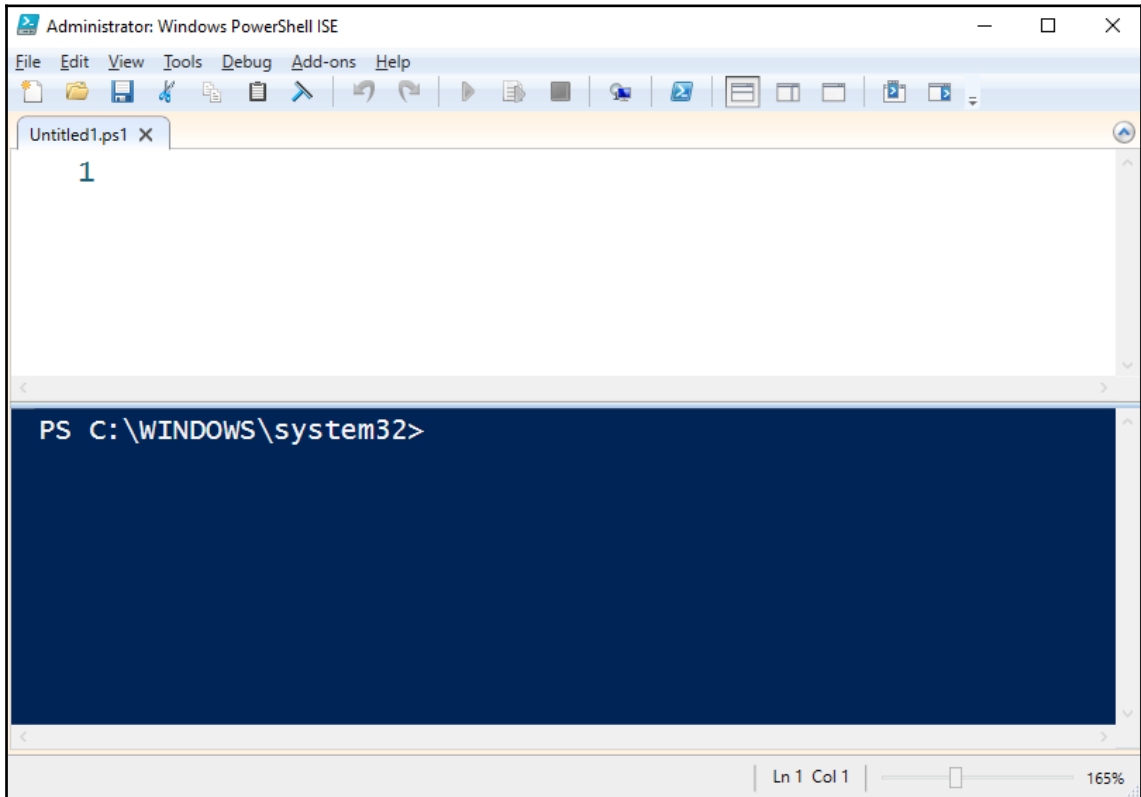
Name                           Value
----                           -
PSVersion                       5.1.14393.1480
PSEdition                       Desktop
PSCompatibleVersions            {1.0, 2.0, 3.0, 4.0...}
BuildVersion                    10.0.14393.1480
CLRVersion                      4.0.30319.42000
WSManStackVersion              3.0
PSRemotingProtocolVersion      2.3
SerializationVersion           1.1.0.1
```

```
PS Azure:\> dir
```

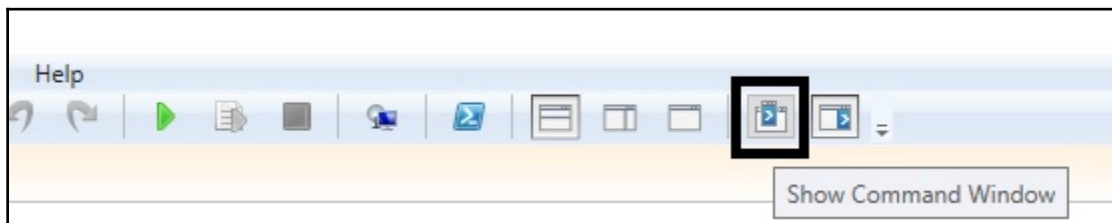
```
Directory: Azure:
```

Mode	SubscriptionName	SubscriptionId	TenantId
-----	-----	-----	-----
+	Visual Studio Enterprise	7e1608e1-6d7e-4dda-890a-36247e29af4b	34c7837c-56b1-461e-b38...

Chapter 2: PowerShell ISE Versus VSCode



Step Over	F10
Step Into	F11
Step Out	Shift+F11



Commands

Modules: All

Name: service

Get-Service
Get-ServiceEndpoint
Get-VMIntegrationService
Get-WAPackCloudService

Name: Get-Service
Module: Microsoft.PowerShell.Management (Imported)

Parameters for "Get-Service":

Default	DisplayName	InputObject
ComputerName:		
<input type="checkbox"/> DependentServices		
Exclude:		
Include:		
Name:		
<input type="checkbox"/> RequiredServices		

Common Parameters

Debug

ErrorAction:

ErrorVariable:

InformationAction:

InformationVariable:

OutBuffer:

Run Copy Cancel

Windows PowerShell ISE

File Edit View Tools Debug Add-ons Help




Untitled1.ps1* X

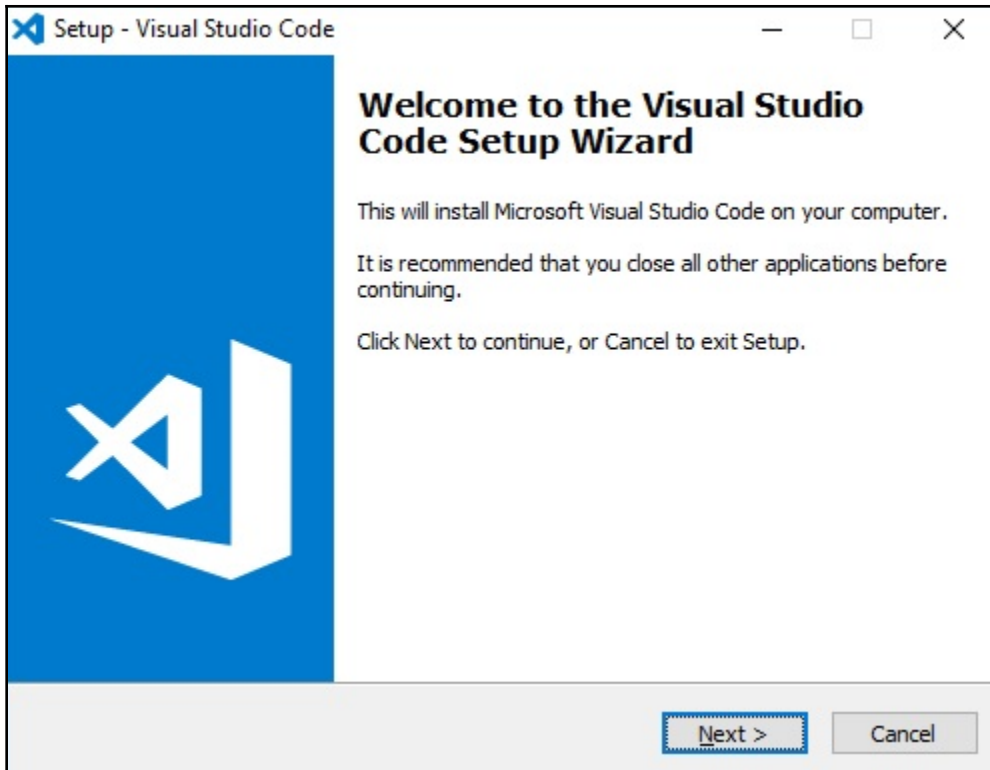
1

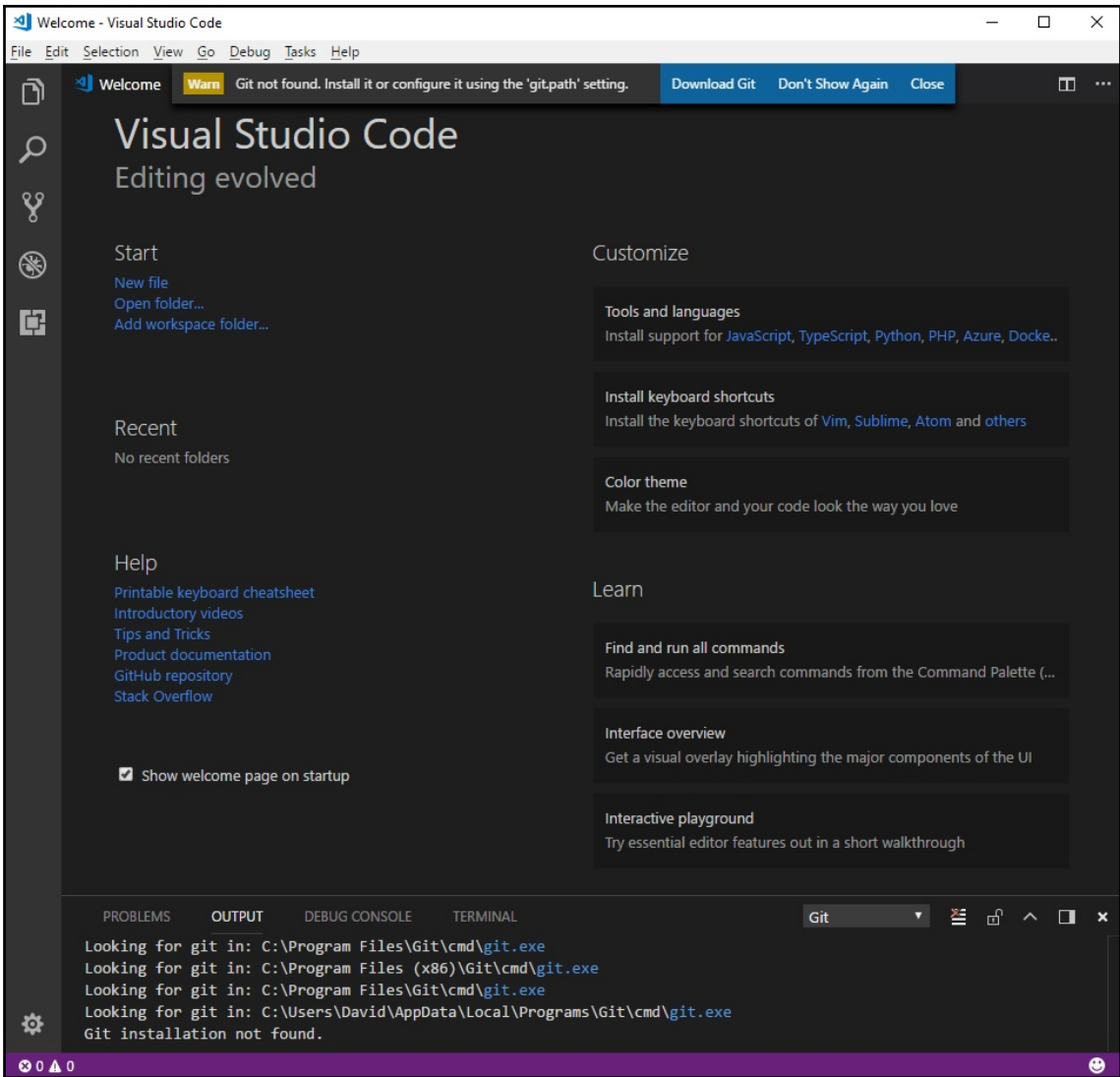
- class (simple)
- Cmdlet (advanced function)
- Cmdlet (advanced function) - complete
- Comment block
- do-until**
- do-while
- DSC Configuration (simple)
- DSC Configuration (using ConfigurationData)
- DSC ConfigurationData

Description: do-until loop
Path: Built-in

```
do
{
}
until ($x -gt 0)
```

		
↓ Windows Windows 7, 8, 10	↓ .deb Debian, Ubuntu	↓ .rpm Red Hat, Fedora, SUSE
↓ Mac macOS 10.9+	↓ .tar.gz 32 bit versions	
.zip 32 bit versions		





Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient **staging areas**, and **multiple workflows**.



 **Learn Git in your browser for free with Try Git.**



About

The advantages of Git compared to other source control systems.



Documentation

Command reference pages, Pro Git book content, videos and other material.



Downloads

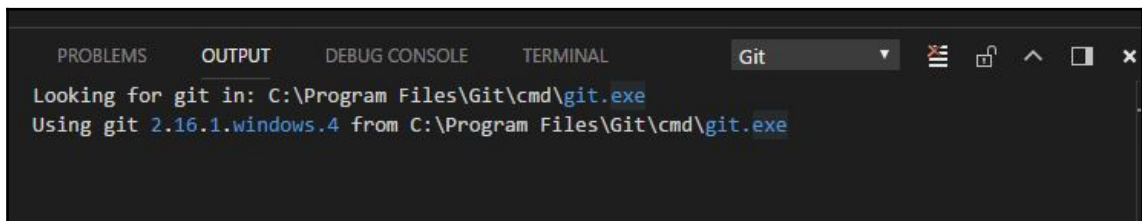
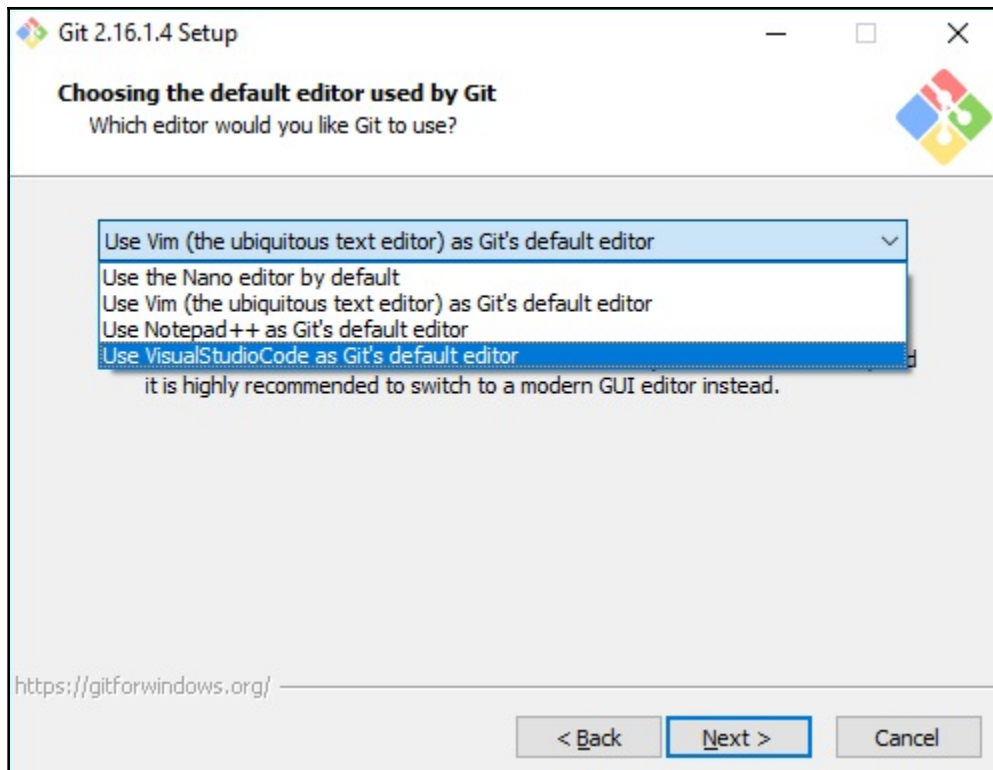
GUI clients and binary releases for all major platforms.

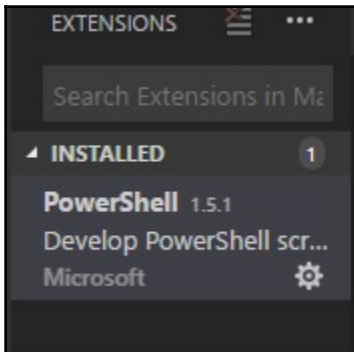
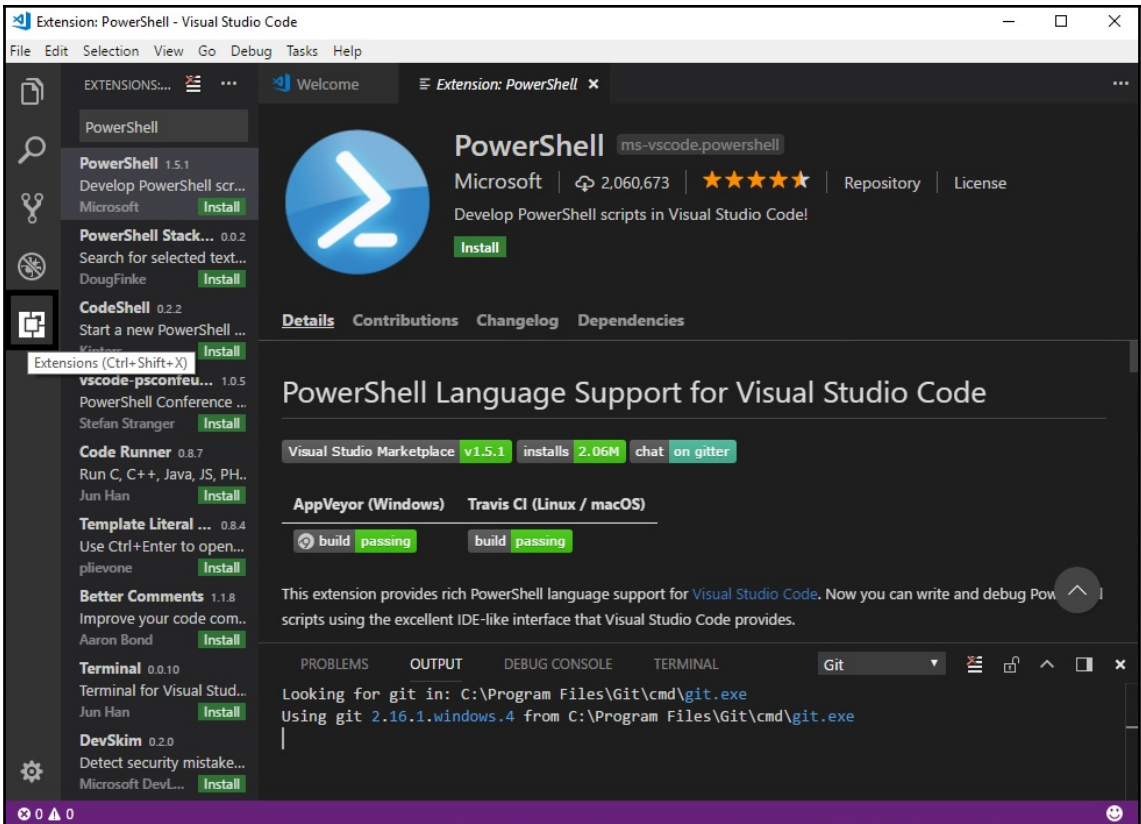


Community

Get involved! Bug reporting, mailing list, chat, development and more.





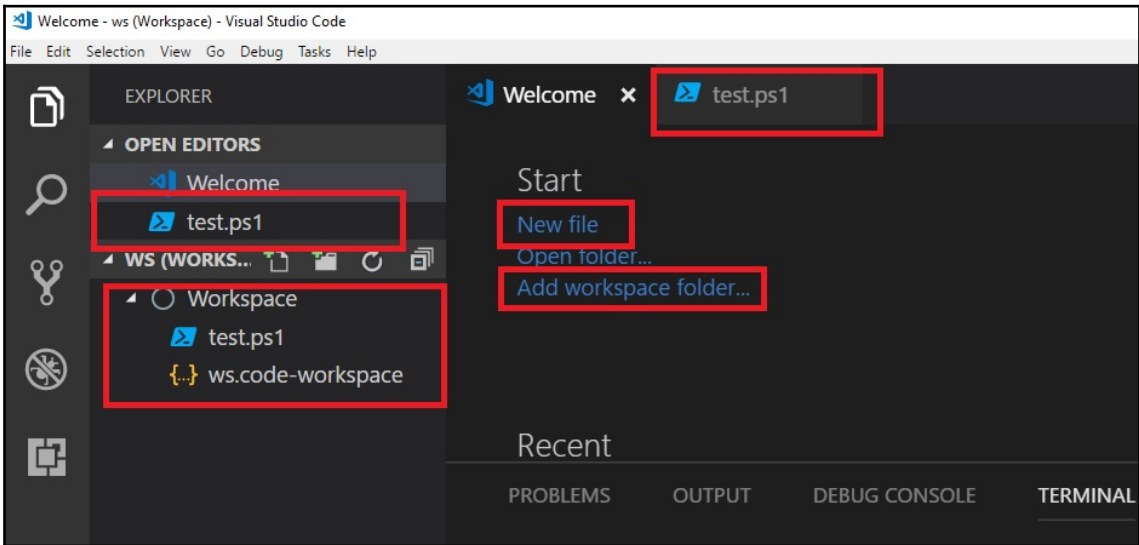


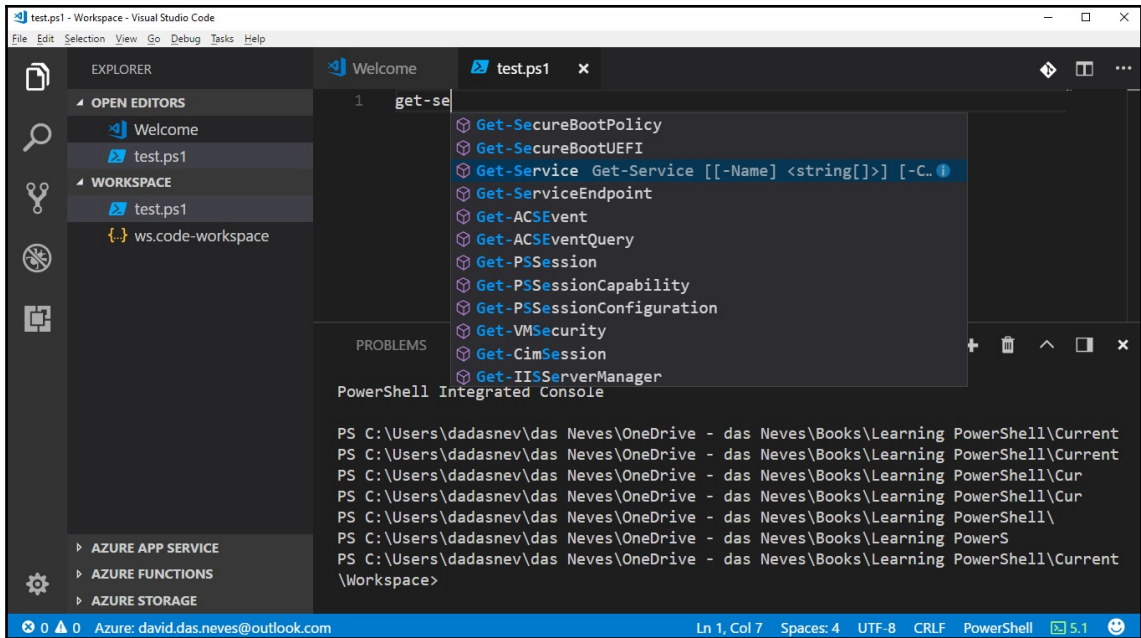
PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** 1: powershell + ^ □ ×

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\David> $PSVersionTable
```

Name	Value
PSVersion	5.1.16299.98
PSEdition	Desktop
PSCompatibleVersions	{1.0, 2.0, 3.0, 4.0...}
BuildVersion	10.0.16299.98
CLRVersion	4.0.30319.42000
WSManStackVersion	3.0
PSRemotingProtocolVersion	2.3
SerializationVersion	1.1.0.1





Chapter 3: Basic Coding Techniques

```
16
17  ▣ #region MyFirstRegion
18     #comment 1
19     #endregion
20
21  ▣ #region BigRegion
22  ▣ #region FirstSmallRegion...
24  ▣ #region SecondSmallRegion...
26     #endregion
27
```

Chapter 4: Advanced Coding Techniques

foreach-Construct was 267.11% faster than the LINQ-like query, and 633.58% faster than Foreach-Object!
Where-Construct was 232.40% faster than the LINQ-like query, and 274.20% faster than Where-Object!

```
PS C:\Users\install>
Name          Description          StartMode SideIndicator
----          -
LanmanServer DifferentDescription Auto        =>
LanmanServer NewDescription      Auto        <=
```

```
PS D:\> get-filehash .\build.ps1
```

```
Path          Hash
----          -
D:\build.ps1 75414CC048D4E0EEBE20716B12E76072659AB760E0CC586AA29BAB0CBF89EE49
SHA256
```

```
PS D:\>
```

```
PowerShell-6.0.1
```

```
PS C:\Program Files\PowerShell\6.0.1> d:
```

```
PS D:\> get-filehash .\build.ps1
```

```
Algorithm     Hash
-----
SHA256        75414CC048D4E0EEBE20716B12E76072659AB760E0CC586AA29BAB0CBF89EE49
D:\build.ps1
```

```
[00:00:00]PS C:\Users\JHP> get-process -id $pid
```

```
Name          WS in MB
----          -
powershell 113.16
```

TypeName: System.IO.FileInfo

Name	MemberType	Definition
------	------------	------------

Hash	ScriptProperty	System.Object Hash {get=Get-FileHash -Path \$this.FullName;}
------	----------------	--

Algorithm : SHA256

Hash : 6C81DBBC01C37B3A39EA3E5379AA05FF72CB2EC825093BE0F8F3D652FF4B5FB8

Path : D:\Backup\MyCustomType.ps1xml

Chapter 5: Writing Reusable Code

```
# Acceptable one-liner if e.g. a condition is not met  
if ( -not $condition) {return}
```

```
# Good style, closing brace has new line
```

1 reference

```
function Get-SomeThing  
{  
|   # Do your thing  
}
```

```
Get-SomeThing
```

```
# Spacing
```

```
# Bad
```

```
if($condition){  
|   "do Stuff"  
}
```

```
# Good
```

```
if ($condition)  
{  
|   "Do stuff"  
}
```

```
# Use parentheses to make expressions apparent
# Bad
if (3 -gt 2 -and (Get-Date).DayOfWeek -eq 'Friday')
{
|   'Good things happen'
}

# Good
if ((3 -gt 2) -and ((Get-Date).DayOfWeek -eq 'Friday'))
{
|   'Good things happen'
}
```

```
# Bad
```

```
3 references
```

```
function Get-Something
```

```
{
```

```
    param
```

```
    (
```

```
    |     $parametername
```

```
    )
```

```
    $somevariable
```

```
}
```

```
# Good
```

```
3 references
```

```
function Get-Something
```

```
{
```

```
    param
```

```
    (
```

```
    |     $ParameterName
```

```
    )
```

```
    $someVariable
```

```
}
```

```

# Bad
$a = 'contoso.com'
$aa = $false
$b = 'administrator'

while (-not $aa)
{
    $bb = Get-AdUser $b -Server $a -ErrorAction SilentlyContinue
    if ($bb) {$aa = $true}
}

$bb | Set-AdUser -EmployeeNumber 42

# Good
$domainName = 'contoso.com'
$userCreated = $false
$samAccountName = 'administrator'
$employeeNumber = 42

while (-not $userCreated)
{
    $userObject = Get-AdUser $samAccountName -Server $domainName -ErrorAction SilentlyContinue
    if ($userObject) {$userCreated = $true}
}

$userObject | Set-AdUser -EmployeeNumber $employeeNumber

```

```

# Bad
gci C:\temp -ea SilentlyContinue
gsv | ? CanStop

# Good
Get-ChildItem -Path C:\temp -ErrorAction SilentlyContinue
Get-Service | Where-Object -Property CanStop

```

```

# Bad
Set-ADUser -Identity janhendrik -AccountExpirationDate (Get-Date).AddMonths(6) -City Duesseldorf -C

# Good
$userParameters = @{
    Identity           = 'janhendrik'
    AccountExpirationDate = (Get-Date).AddMonths(6)
    City               = 'Duesseldorf'
    Country            = 'Germany'
    Company             = 'Contoso Ltd.'
    Department         = 'R & D'
    DisplayName        = 'Jan-Hendrik Peters'
    GivenName          = 'Jan-Hendrik'
    Surname             = 'Peters'
}

Set-ADUser @userParameters

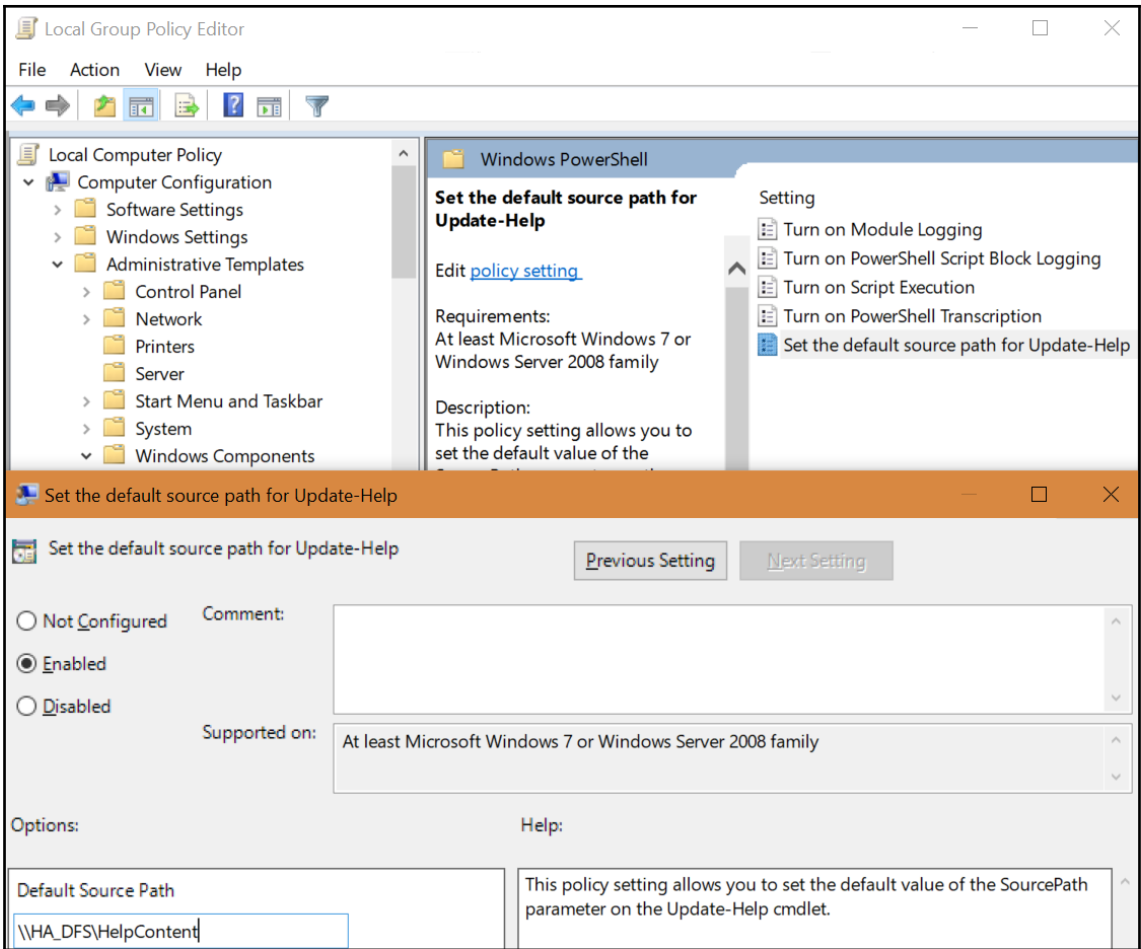
```

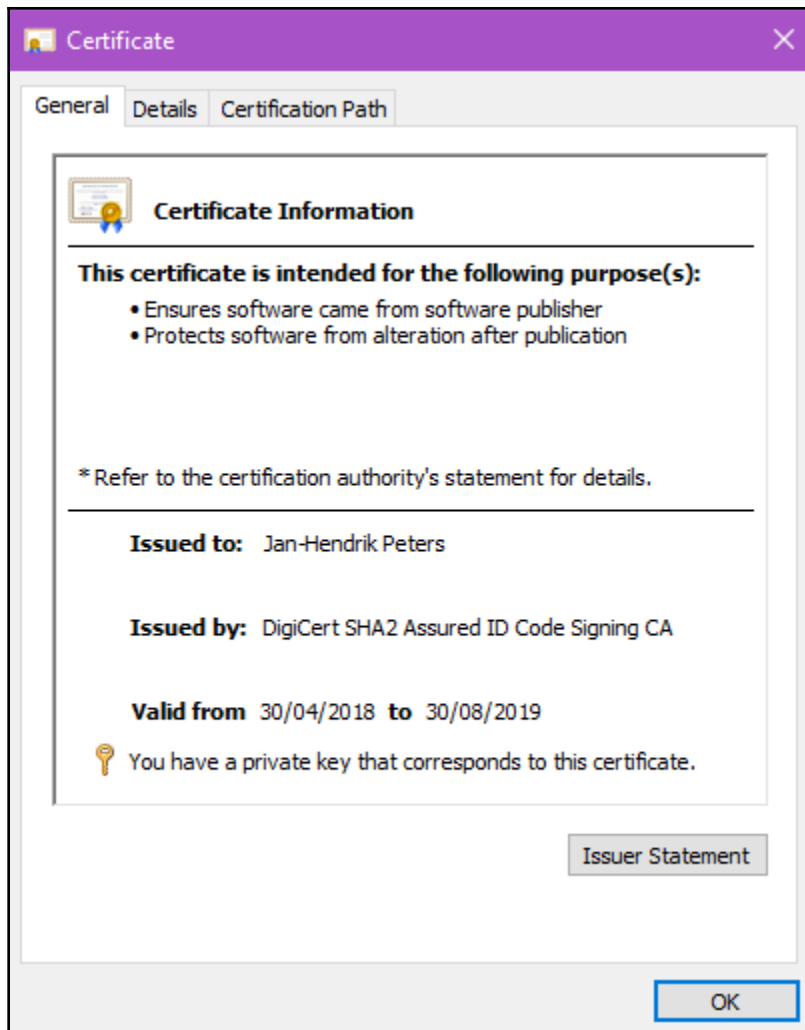
```

# Proper naming with the approved verbs
# Adding a company prefix distinguishes your cmdlet from builtin ones
# Bad
0 references
function foo {
    'does something'
}

# Good
1 reference
function Get-ContosoVm
{
    'does something'
}

```



- ▾ MyManifestModule
 - MyManifestModule.psd1
 - MyManifestModule.psm1
- ▾ MyScriptModule
 - MyScriptModule.psm1

- ▾ MyWellStructuredModule
 - ▾ Private
 - Get-MyInternalData.ps1
 - ▾ Public
 - Get-MyData.ps1
 - ▾ Types
 - MyCustomType.ps1
 - MyWellStructuredModule.psd1
 - MyWellStructuredModule.psm1

```
Data.ps1  ➤ Get-MyInternalData.ps1  ✕  ➤ Test-Data
1 reference
function Get-MyInternalData
Data.ps1 Code\BookCode\Ch5\MyWellStructuredModule\Public
/
# Maybe call some internal validation method
if (Test-DataKey -DataKey $DataKey)
{
  Get-MyInternalData @PSBoundParameters
}
}
```

C: > Local Disk (C:) > Program Files > WindowsPowerShell > Modules > AzureRM >

Name	Date modified	Type
4.4.0	10/10/2017 09:42	File folder
5.0.1	16/11/2017 11:22	File folder
5.1.1	12/12/2017 11:52	File folder
5.4.1	12/03/2018 09:23	File folder
5.5.0	26/03/2018 15:52	File folder



SOURCE CONTROL: GIT



Message (press Ctrl+Enter to commit)



CHANGES

9



- > 02_Functions.ps1 Code\BookCode\Ch5 M
- > 03_Help.ps1 Code\BookCode\Ch5 M
- > MyManifestModule.psd1 Code\BookCode\Ch5\MyM... M
- > MyWellStructuredModule.psd1 Code\BookCode\Ch5... U
- > MyWellStructuredModule.psm1 Code\BookCode\Ch... U
- > Get-MyInternalData.ps1 Code\BookCode\Ch5\MyWe... U
- > Test-DataKey.ps1 Code\BookCode\Ch5\MyWellStructu... U
- > Get-MyData.ps1 Code\BookCode\Ch5\MyWellStructur... U
- > MyCustomType.ps1 Code\BookCode\Ch5\MyWellStru... U



```
PS C:\Users\JHP\OneDrive\Career\PowerShell_Book_Pack\MyNewRepository> git log
commit 9eb3579f20014445bb8896277b8d3ffd188c8c04 (HEAD -> master)
Author: Jan-Hendrik Peters [MSFT] <nyanhp@users.noreply.github.com>
Date: Thu May 17 18:27:11 2018 +0200
```

Added .gitignore file

```
commit 23e16ac822dab6f7674608b58fe46a7b9bf038b8
Author: Jan-Hendrik Peters [MSFT] <nyanhp@users.noreply.github.com>
Date: Thu May 17 18:27:11 2018 +0200
```

Added new script to do stuff

```
PS C:\Users\JHP\OneDrive\Career\PowerShell_Book_Pack\MyNewRepository> git prettylog
* 9eb3579 - (HEAD -> master) Added .gitignore file (15 hours ago) <Jan-Hendrik Peters [MSFT]>
* 23e16ac - Added new script to do stuff (15 hours ago) <Jan-Hendrik Peters [MSFT]>
PS C:\Users\JHP\OneDrive\Career\PowerShell_Book_Pack\MyNewRepository> █
```

```
PS C:\Users\JHP\OneDrive\Career\PowerShell_Book_Pack\MyNewRepository> git merge develop
Auto-merging NewFile2.ps1
CONFLICT (content): Merge conflict in NewFile2.ps1
Automatic merge failed; fix conflicts and then commit the result.
```

```

Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
<<<<<<< HEAD (Current Change)
Restart-ComputerI can change
=====
Restart-ComputerI hate change
>>>>>> develop (Incoming Change)

```

TestProject / TestProject... | Dashboards | Code | Work | Build and Release | Test | Wiki | ⚙️

TestProject | Files | Commits | Pushes | Branches | Tags | Pull Requests

🔗 master | TestProject / Type to find a file or folder...

Contents		History	
Name ↑	Last change	Commits	
📁 .vs	just now	aa6e58a2	
📁 ConsoleApp1	just now	aa6e58a2	
📄 ConsoleApp1.sln	just now	aa6e58a2	

HomeAutomation

Source | Commits | Branches | Pull requests | Pipelines | Downloads | Boards | Settings

HomeAutomation

Here's where you'll find this repository's source files. To give your users an idea of what they'll find here, add a description to the repository.

🔗 master

Name	Size	Last commit
📁 ApiTester		2016-02-27
📁 <u>ProjectOxfordConnector</u>		2016-02-27
📁 openHABConnector		2016-02-27

This repository Search Pull requests Issues Marketplace Explore

AutomatedLab / AutomatedLab

Unwatch 66 Star 324 Fork 73

Code Issues 27 Pull requests 1 Projects 0 Wiki Insights Settings

AutomatedLab is a provisioning solution and framework that lets you deploy complex labs on HyperV and Azure with simple PowerShell scripts. It supports all Windows operating systems from 2008 R2 to 2016 including Nano Server and various products like AD, Exchange, PKI, IIS, etc.

powershell deployment active directory pki exchange scripted active-directory domain-controller automated-deployment scripted-deployment lab-machine azure hyperv hyper Manage topics

1,516 commits 7 branches 34 releases 18 contributors MIT

```
> 01_VariablesAndTypes.ps1 x > 05_VersionControl.ps1 •
1 # everything starts with an empty repo
2 mkdir MyNewRepository
3 cd MyNewRepository
4 git init
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL Filter: Eg: text, **/*.ts, !**/node_modules/**

> 05_VersionControl.ps1 Code\BookCode\Ch5 1

⚠ [PSScriptAnalyzer] 'cd' is an alias of 'Set-Location'. Alias can introduce possible problems and make scripts hard to maintain. Please consider changing alias to its full content. (PSAvoidUsingCmdletAliases) (3, 1)

Chapter 6: Working with Data

```
1 System.Diagnostics.Process (AgentService)
2 System.Diagnostics.Process (ApplicationFrameHost)
3 System.Diagnostics.Process (armsvc)
```

```
1
2 Handles  NPM(K)  PM(K)  WS(K)  CPU(s)  Id  SI ProcessName
3 -----  -
4      190    34    3160    6144           2424  0 AgentService
5      760    42   43732   37260    4,59  13224  1 ApplicationFrameHost
6      149     9    1384    3972           4172  0 armsvc
```

```

248 <Type>
249   <Name>System.ServiceProcess.ServiceController</Name>
250   <Members>
251     <MemberSet>
252       <Name>PSStandardMembers</Name>
253       <Members>
254         <PropertySet>
255           <Name>DefaultDisplayPropertySet</Name>
256           <ReferencedProperties>
257             <Name>Status</Name>
258             <Name>Name</Name>
259             <Name>DisplayName</Name>
260           </ReferencedProperties>
261         </PropertySet>
262       </Members>
263     </MemberSet>
264     <AliasProperty>
265       <Name>Name</Name>
266       <ReferencedMemberName>ServiceName</ReferencedMemberName>
267     </AliasProperty>
268     <AliasProperty>
269       <Name>RequiredServices</Name>
270       <ReferencedMemberName>ServicesDependedOn</ReferencedMemberName>
271     </AliasProperty>
272     <ScriptMethod>
273       <Name>ToString</Name>
274       <Script>
275         $this.ServiceName
276       </Script>
277     </ScriptMethod>
278   </Members>
279 </Type>

```

```
>configu
```

Preferences: **Configure** User Snippets

recently used

Configure Language

other commands

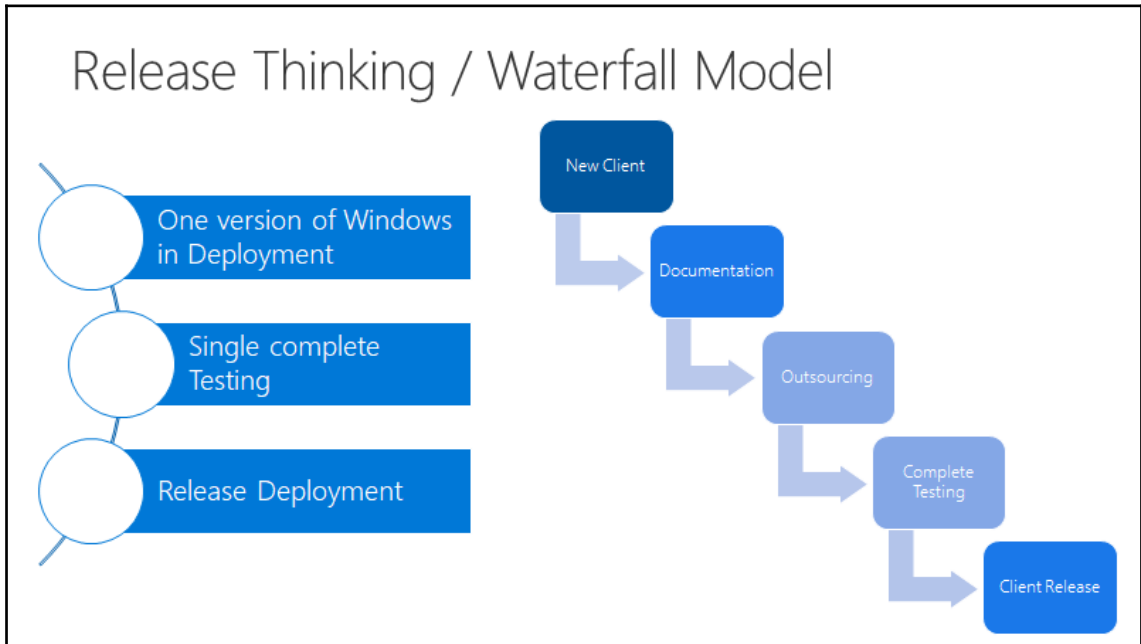
Extensions: **Configure** Recommended Extensions (Workspace Folder)

Preferences: **Configure** Language Specific Settings...

Major	Minor	Build	Revision
10	0	17134	0

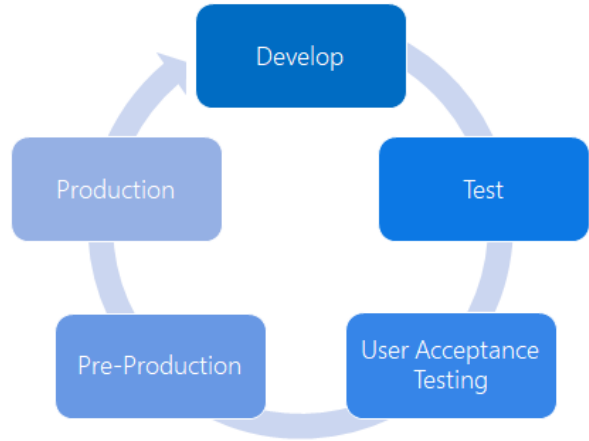
TypeName: System.Version

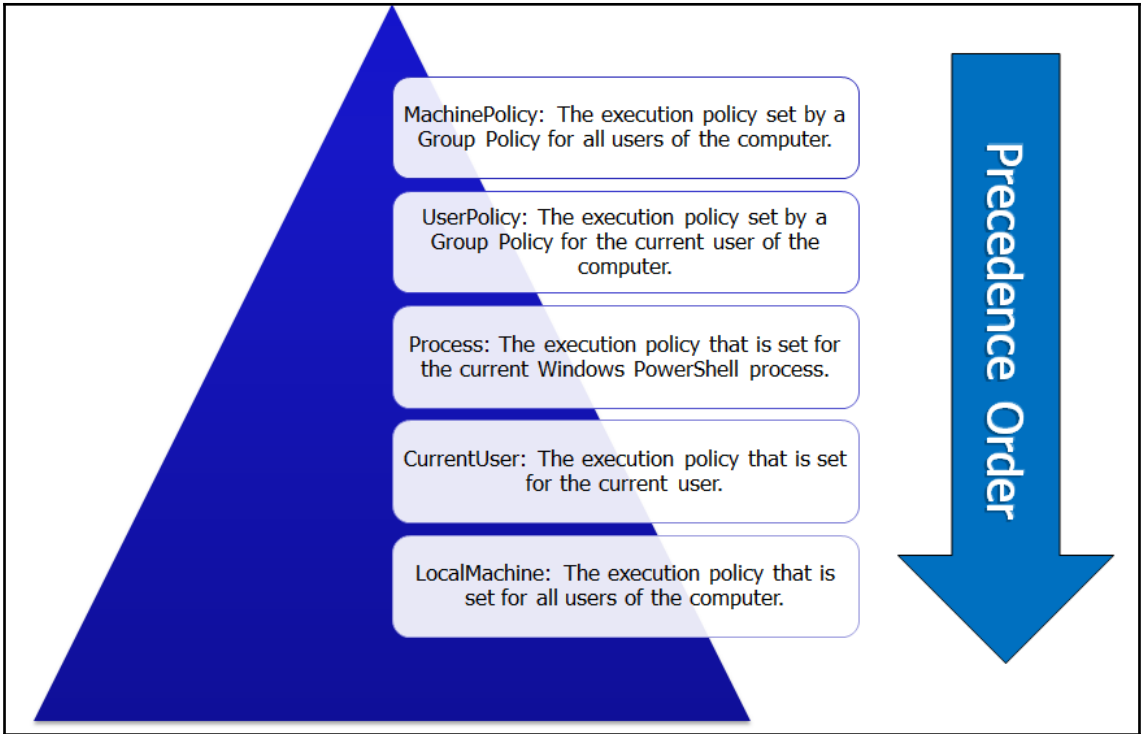
Chapter 7: Understanding PowerShell Security



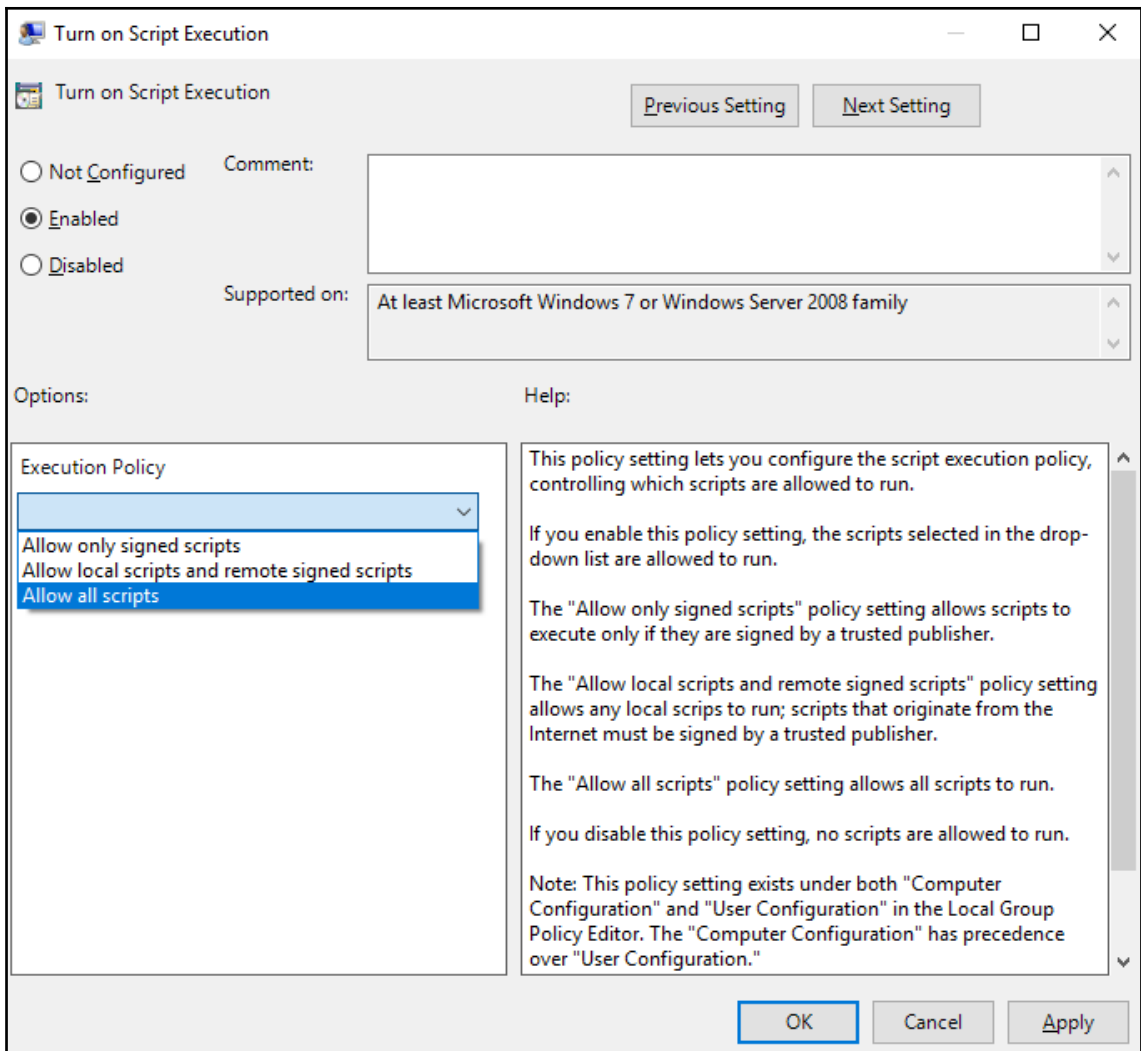
Agile Model

- Several Versions of Windows 10 in Deployment
- Continuous Testing
- Continuous Deployment





Scope	ExecutionPolicy
MachinePolicy	Undefined
UserPolicy	Undefined
Process	RemoteSigned
CurrentUser	Undefined
LocalMachine	Unrestricted



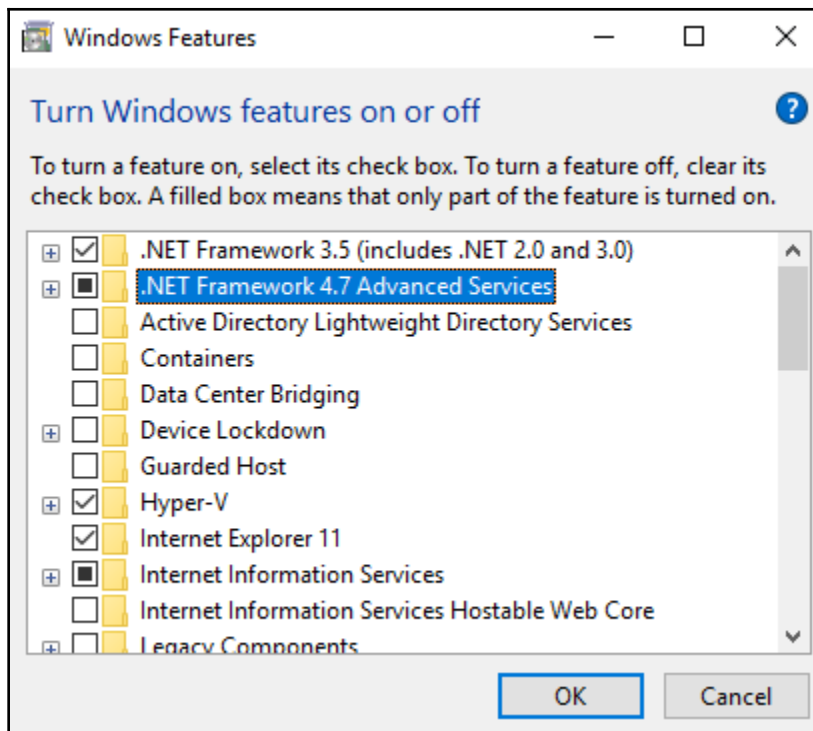
```
PS C:\> c:\temp\prog.exe c:\temp\test.ps1
PS C:\> Get-Content c:\temp\services.txt
```

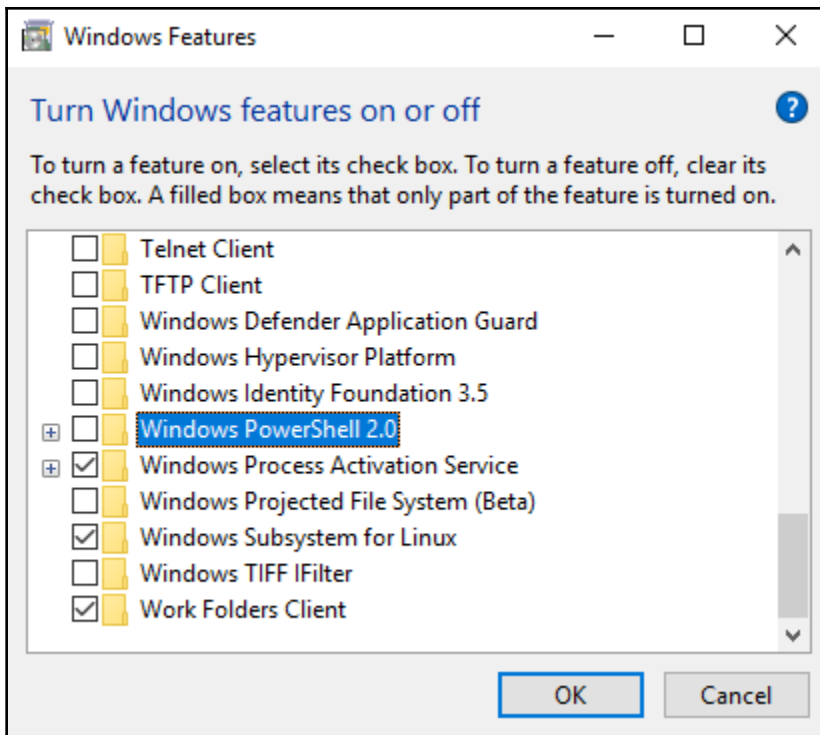
Status	Name	DisplayName
Running	AdobeARMSvc	Adobe Acrobat Update Service
Stopped	AJRouter	AllJoyn Router Service
Stopped	ALG	Application Layer Gateway Service
Running	AppHostSvc	Application Host Helper Service

Process Monitor - Sysinternals: www.sysinternals.com

File Edit Event Filter Tools Options Help

Time	Process Name	PID	Operation	Path	Result	Detail
15.3...	powershell.exe	23444	Load Image	C:\Windows\assembly\NativeImages_v4.0.30319_64\System\6e689e963bccd90580ac7c199fa1f1\System.ni.dll	SUCCESS	Image Base: 0x7fd...
15.3...	powershell.exe	23444	Close File	C:\Windows\assembly\NativeImages_v4.0.30319_64\System\6e689e963bccd90580ac7c199fa1f1\System.ni.dll	SUCCESS	
15.3...	powershell.exe	23444	Close File	C:\Windows\assembly\NativeImages_v4.0.30319_64\System	SUCCESS	
15.3...	powershell.exe	23444	RegOpenKey	HKLM\SOFTWARE\Microsoft\Fusion\PublisherPolicy\Default	SUCCESS	Query: HandleTag...
15.3...	powershell.exe	23444	RegOpenKey	HKLM\SOFTWARE\Microsoft\Fusion\PublisherPolicy\Default\policy.3.0.System.Management.Automation__31bf3856ad364e35	SUCCESS	NAME NOT FOUND Desired Access: R
15.3...	powershell.exe	23444	RegOpenKey	HKLM\SOFTWARE\Microsoft\Fusion\PublisherPolicy\Default\policy.3.0.System.Management.Automation__31bf3856ad364e35	SUCCESS	Query: HandleTag...
15.3...	powershell.exe	23444	RegOpenKey	HKLM\SOFTWARE\Microsoft\Fusion\PublisherPolicy\Default\policy.3.0.System.Management.Automation__31bf3856ad364e35	SUCCESS	NAME NOT FOUND Desired Access: R
15.3...	powershell.exe	23444	CreateFile	C:\Windows\Microsoft.NET\assembly\GAC_MSIL\System.Management.Automation\v4.0_3.0.0.0__31bf3856ad364e35\System.Management.Automation.dll	SUCCESS	Desired Access: R...
15.3...	powershell.exe	23444	QueryNetwo...	C:\Windows\Microsoft.NET\assembly\GAC_MSIL\System.Management.Automation\v4.0_3.0.0.0__31bf3856ad364e35\System.Management.Automation.dll	SUCCESS	Creation Time: 08.0...
15.3...	powershell.exe	23444	CreateFile	C:\Windows\Microsoft.NET\assembly\GAC_MSIL\System.Management.Automation\v4.0_3.0.0.0__31bf3856ad364e35\System.Management.Automation.dll	SUCCESS	
15.3...	powershell.exe	23444	CreateFile	C:\Windows\Microsoft.NET\assembly\GAC_MSIL\System.Management.Automation\v4.0_3.0.0.0__31bf3856ad364e35\System.Management.Automation.dll	SUCCESS	Desired Access: R...
15.3...	powershell.exe	23444	QueryNetwo...	C:\Windows\Microsoft.NET\assembly\GAC_MSIL\System.Management.Automation\v4.0_3.0.0.0__31bf3856ad364e35\System.Management.Automation.dll	SUCCESS	Creation Time: 08.0...
15.3...	powershell.exe	23444	Close File	C:\Windows\Microsoft.NET\assembly\GAC_MSIL\System.Management.Automation\v4.0_3.0.0.0__31bf3856ad364e35\System.Management.Automation.dll	SUCCESS	





```
Select Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\david> (Get-ChildItem -Path c:\ -Filter *.dll -Recurse -ErrorAction Ignore).FullName | Where-Object { $_.Name -match 'System\.Management\.Au
tomation\(.dll)?$ }
C:\Program Files\PowerShell\6.0.0-beta.1\System.Management.Automation.dll
C:\Program Files\PowerShell\6.0.1\System.Management.Automation.dll
C:\Program Files\WindowsPowerShell\Modules\ProcessMitigations\1.0.7\System.Management.Automation.dll
C:\Program Files (x86)\Google\Cloud SDK\google-cloud-sdk\platform\PowerShell\GoogleCloud\1.0.1.7\coreclr\System.Management.Automation.dll
C:\Program Files (x86)\Google\Cloud SDK\google-cloud-sdk\platform\PowerShell\GoogleCloud\1.0.1.7\fullclr\System.Management.Automation.dll
C:\Program Files (x86)\Google\Cloud SDK\google-cloud-sdk\platform\PowerShell\GoogleCloudBeta\1.0.1.7\coreclr\System.Management.Automation.dll
C:\Program Files (x86)\Google\Cloud SDK\google-cloud-sdk\platform\PowerShell\GoogleCloudBeta\1.0.1.7\fullclr\System.Management.Automation.dll
C:\Program Files (x86)\Microsoft Visual Studio\2017\Enterprise\Common7\IDE\Extensions\0vv0kia1.i0j\System.Management.Automation.dll
C:\Program Files (x86)\Microsoft Visual Studio\2017\Enterprise\Common7\IDE\Extensions\Microsoft\ADL Tools\2.2.5000.0\System.Management.Automation.d
ll
C:\Program Files (x86)\Microsoft Visual Studio\2017\Enterprise\Common7\IDE\Extensions\xo14lba1.n5k\System.Management.Automation.dll
C:\Program Files (x86)\Microsoft Visual Studio\2017\Enterprise\MSBuild\PowerShell Tools for Visual Studio\System.Management.Automation.dll
C:\Program Files (x86)\Reference Assemblies\Microsoft\WindowsPowerShell\3.0\System.Management.Automation.dll
C:\Users\dadasnev\das Neves\OneDrive - das Neves\Knowledge\PS\_Versionen\6.0 Alpha\System.Management.Automation.dll
C:\Users\dadasnev\das Neves\OneDrive - das Neves\Repos\Carbon\Tools\PowerShell\2.0\System.Management.Automation.dll
C:\Users\dadasnev\das Neves\OneDrive - das Neves\Repos\Carbon\Tools\PowerShell\3.0\System.Management.Automation.dll
C:\Users\dadasnev\das Neves\OneDrive - das Neves\Repos\PSConfEU2018\2018\0yvind Kallstad\Using other languages with PowerShell\demos\PowerShellFrom
CSharp\System.Management.Automation.dll
C:\Users\david\OneDrive - das Neves\Knowledge\PS\_Versionen\6.0 Alpha\System.Management.Automation.dll
C:\Users\david\OneDrive - das Neves\Repos\Carbon\Tools\PowerShell\2.0\System.Management.Automation.dll
C:\Users\david\OneDrive - das Neves\Repos\Carbon\Tools\PowerShell\3.0\System.Management.Automation.dll
C:\Users\david\OneDrive - das Neves\Repos\CScriptShell\System.Management.Automation.dll
C:\Users\david\OneDrive - das Neves\Repos\PSConfEU2018\2018\0yvind Kallstad\Using other languages with PowerShell\demos\PowerShellFromCSharp\System
.Management.Automation.dll
C:\Windows\assembly\NativeImages_v4.0.30319_64\System.Manaa57fc8cc#\d6592025a7ef3a065cf2e2c0455468e6\System.Management.Automation.ni.dll
C:\Windows\Microsoft.NET\assembly\GAC_MSIL\Policy.1.0\System.Management.Automation\v4.0.1.0.0__31bf3856ad364e35\Policy.1.0\System.Management.Auto
mation.dll
C:\Windows\Microsoft.NET\assembly\GAC_MSIL\System.Management.Automation\v4.0.3.0.0__31bf3856ad364e35\System.Management.Automation.dll
C:\Windows\WinSxS\msil_policy.1.0.system.management.automation_31bf3856ad364e35_10.0.17134.1_none_36ddb4b96c8fa37c\Policy.1.0\System.Management.Auto
mation.dll
C:\Windows\WinSxS\msil_system.management.automation_31bf3856ad364e35_10.0.0_none_6340379543bd8a03\System.Management.Automation.dll
C:\Windows\WinSxS\msil_system.management.automation_31bf3856ad364e35_10.0.17134.112_none_e70e28b67df167f6\System.Management.Automation.dll
C:\Windows\WinSxS\msil_system.management.automation_31bf3856ad364e35_10.0.17134.1_none_aac6f754911eaced\System.Management.Automation.dll
C:\Windows\WinSxS\msil_system.management.automation_31bf3856ad364e35_10.0.17134.48_none_bed81ae1021746ee\System.Management.Automation.dll
C:\Windows\WinSxS\msil_system.management.automation_31bf3856ad364e35_10.0.17134.81_none_bf23d1ed01de77f3\System.Management.Automation.dll
PS C:\Users\david>
```

PowerShellScripting

Script

```
Get-Process
```

Run Script

Output

Handles	NPM(K)	PM(K)	WS(K)	CPU(s)	Id	SI	ProcessName
190	33	2980	2476		2512	0	AgentService
543	32	33704	16004	24,70	12872	1	ApplicationFrame
149	9	1372	140		4268	0	armsvc
140	11	8488	1304		4224	0	atkexComSvc
254	15	45004	13668	974,89	29996	0	audiodg
405	32	10936	10628	4,08	15672	1	BrCcUxSys

Windows PowerShell Number of events: 1,142

Level	Date and Time	Source	Event ID	Task Category
Information	20.06.2018 17:43:04	PowerS...	800	Pipeline Execution Details
Information	20.06.2018 17:43:04	PowerS...	1339	Engine Health
Information	20.06.2018 17:43:04	PowerS...	800	Pipeline Execution Details
Information	20.06.2018 17:43:04	PowerS...	800	Pipeline Execution Details

Event 1339, PowerShell (PowerShell)

General Details

```

Date/Time: 06/20/2018 17:43:03
Process ID: 31364
Process Name: Magic.exe
Command Line: "C:\Users\david\OneDrive - das Neves\Books\Learning PowerShell\Github\Book_Learn_PowerShell\Ch7
\02_Executing PowerShell differently\03_Magic.exe\Magic.exe"
StateUsedHost: bad
StateUsedDll: good
Dll loaded: \Windows\assembly\NativeImages_v4.0.30319_64\System.Manaa57fc8cc#\d6592025a7ef3a065cf2e2c0455468e6
\System.Management.Automation.ni.dll
  
```

Log Name: Windows PowerShell

Source: PowerShell (PowerShell) Logged: 20.06.2018 17:43:04

Event ID: 1339 Task Category: Engine Health

Level: Information Keywords: Classic

User: N/A Computer: dadasnev-Home

OpCode:

More Information: [Event Log Online Help](#)

The screenshot shows the Windows Local Group Policy Editor interface. On the left, the navigation tree is expanded to 'Local Computer Policy' > 'Computer Configuration' > 'Software Settings' > 'Windows Settings' > 'Security Settings' > 'Application Control Policies' > 'Script Rules'. The main window displays the 'Create Script Rules' wizard, currently on the 'Conditions' step. The wizard has a sidebar with 'Before You Begin', 'Permissions', 'Conditions', and 'Publisher'. The 'Conditions' step is active and contains the following text: 'Select the type of primary condition that you would like to create.' Below this, there are three radio button options: 'Publisher' (selected), 'Path', and 'File hash'. Each option has a brief description. At the bottom of the wizard, there is a link that says 'More about rule conditions'.

Create Script Rules

Conditions

Before You Begin

Permissions

Conditions

Publisher

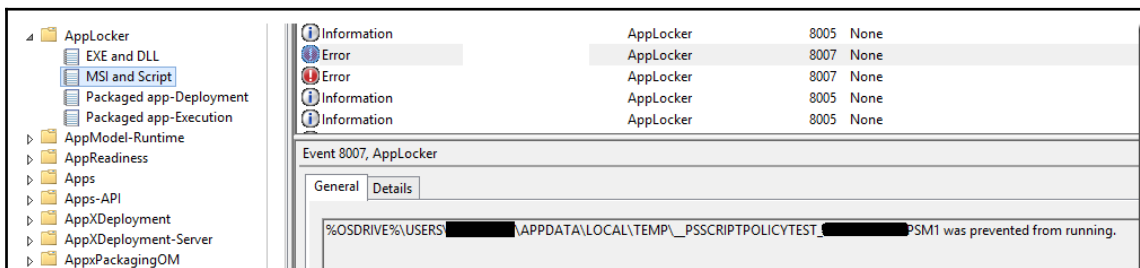
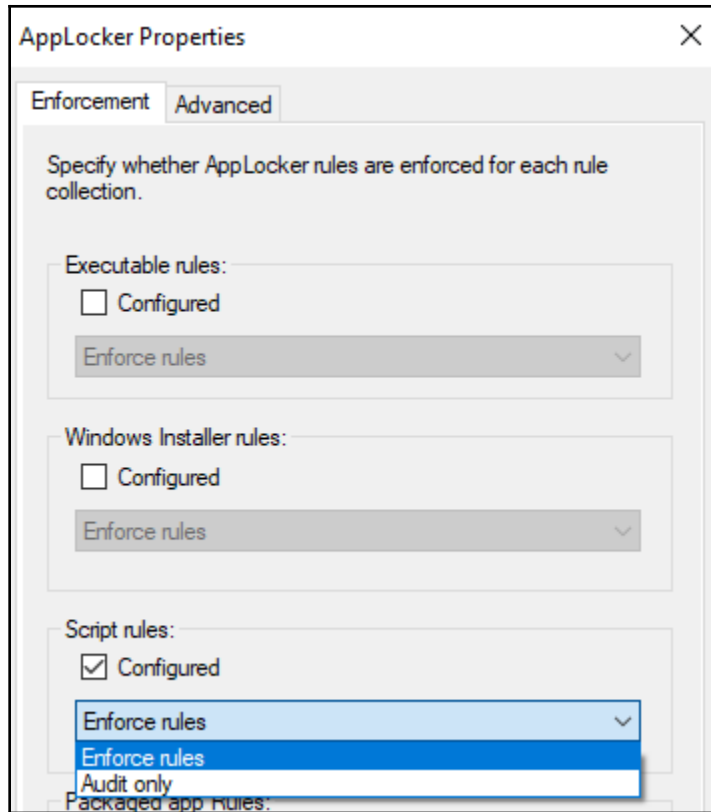
Exceptions

Name

Select the type of primary condition that you would like to create.

- Publisher**
Select this option if the application you want to create the rule for is signed by the software publisher.
- Path**
Create a rule for a specific file or folder path. If you select a folder, all files in the folder will be affected by the rule.
- File hash**
Select this option if you want to create a rule for an application that is not signed.

[More about rule conditions](#)



Event Viewer

File Action View Help

Windows PowerShell Number of events: 4,443

Level	Date and Time	Source	Event ID	Task Category
Information	21.06.2018 17:10:30	PowerShell (Po...	600	Provider Lifecycle
Information	21.06.2018 17:10:30	PowerShell (Po...	600	Provider Lifecycle
Information	21.06.2018 17:10:30	PowerShell (Po...	600	Provider Lifecycle
Information	21.06.2018 17:10:30	PowerShell (Po...	600	Provider Lifecycle
Information	21.06.2018 17:10:30	PowerShell (Po...	600	Provider Lifecycle
Information	21.06.2018 17:10:30	PowerShell (Po...	600	Provider Lifecycle
Information	21.06.2018 17:10:26	PowerShell (Po...	800	Pipeline Execution Details
Information	21.06.2018 17:10:25	PowerShell (Po...	800	Pipeline Execution Details
Information	21.06.2018 17:10:23	PowerShell (Po...	800	Pipeline Execution Details
Information	21.06.2018 17:10:22	PowerShell (Po...	800	Pipeline Execution Details
Information	21.06.2018 17:10:22	PowerShell (Po...	800	Pipeline Execution Details

Actions

- Windows PowerShell
- Open Saved Log...
- Create Custom View...
- Import Custom View...
- Clear Log...
- Filter Current Log...
- Properties
- Find...
- Save All Events As...
- Attach a Task To this Log...

Event Viewer

File Action View Help

Operational Number of events: 92

Level	Date and Time	Source	Event ID	Task Category
Error	08.06.2018 17:11:10	Windows R...	142	Response handling
Information	08.06.2018 17:11:10	Windows R...	161	User authentication
Information	08.06.2018 17:11:10	Windows R...	254	None
Information	08.06.2018 17:11:08	Windows R...	145	WSMan API call
Error	08.06.2018 17:11:50	Windows R...	142	Response handling
Error	08.06.2018 17:11:50	Windows R...	161	User authentication
Information	08.06.2018 17:11:50	Windows R...	254	None
Information	08.06.2018 17:11:48	Windows R...	145	WSMan API call
Error	08.06.2018 17:12:14	Windows R...	142	Response handling
Error	08.06.2018 17:12:14	Windows R...	161	User authentication
Information	08.06.2018 17:12:14	Windows R...	254	None
Information	08.06.2018 17:12:12	Windows R...	145	WSMan API call
Error	31.05.2018 15:24:42	Windows R...	142	Response handling

Actions

- Operational
- Open Saved Log...
- Create Custom View...
- Import Custom View...
- Clear Log...
- Filter Current Log...
- Properties
- Disable Log
- Find...
- Save All Events As...
- Attach a Task To this Log...
- View

PersistentMemory-Nvdimmn

PersistentMemory-PmemDisk

PersistentMemory-ScmBus

PersistentMemory-VirtualNvdir

PmemDisk

Policy-based QoS

PowerShell

Name	Type	Number of Events	Size
Admin	Administrative	0	68 KB
Operational	Operational	7,929	15,00 MB

Local Group Policy Editor

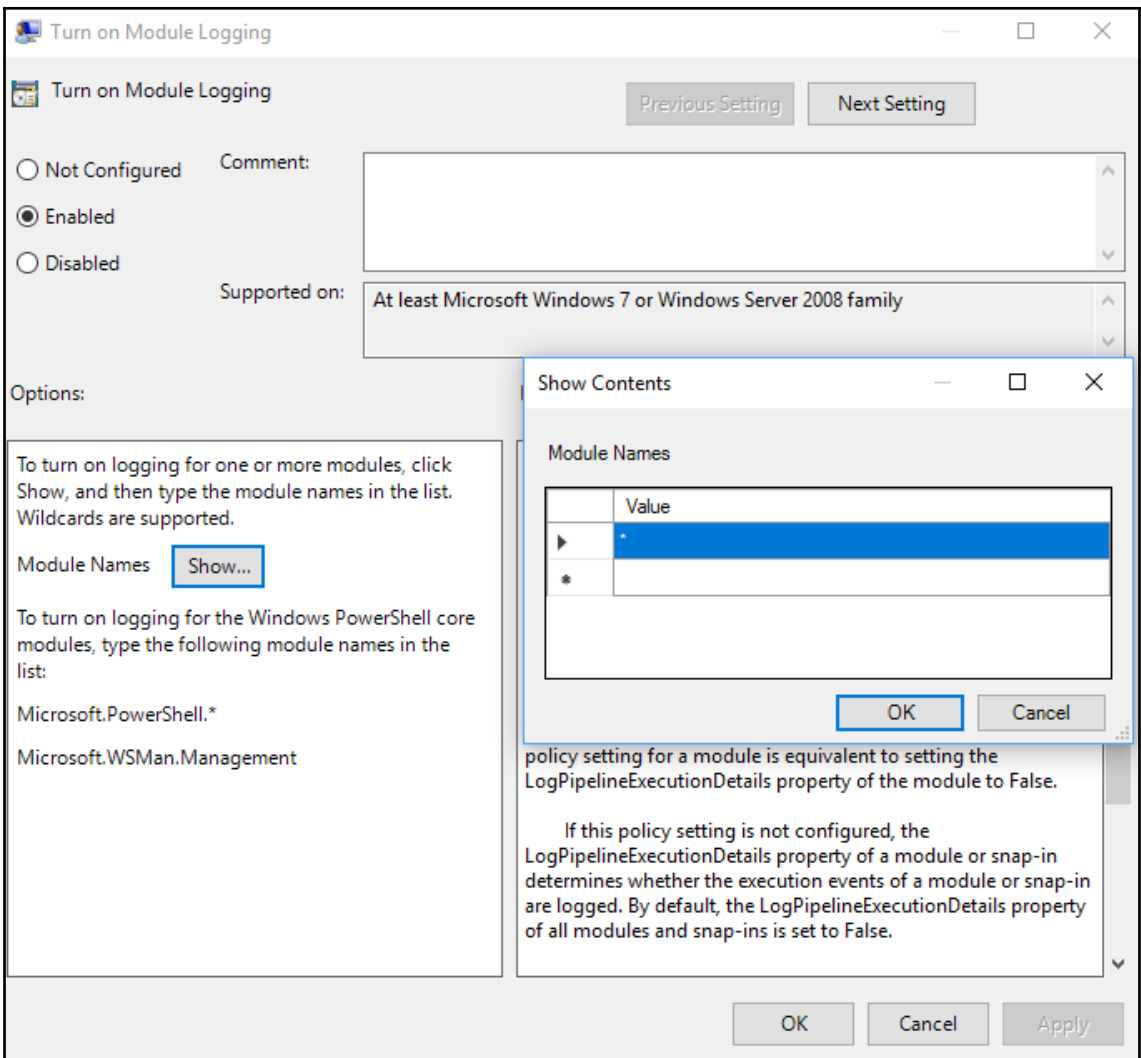
File Action View Help

Windows Calendar
Windows Color System
Windows Customer Ex
Windows Defender Ant
Windows Defender Ap
Windows Defender Exp
Windows Defender Sec
Windows Defender Sm
Windows Error Reporti
Windows Game Recorc
Windows Hello for Bus
Windows Ink Workspa
Windows Installer
Windows Logon Optio
Windows Media Digita
Windows Messenger
Windows Mobility Cen
Windows PowerShell
Windows Reliability An
Windows Remote Man
Windows Remote Shell
Windows Update

Setting	State	Comment
Turn on Module Logging	Enabled	No
Turn on PowerShell Script Block Logging	Enabled	No
Turn on PowerShell Script Block Execution	Not configured	No
Turn on PowerShell Transcription	Enabled	No
Set the default source path for Update-Help	Not configured	No

Extended Standard

5 setting(s)



Event Viewer

File Action View Help

PackageStateRoamin
 ParentalControls
 Partition
 PerceptionRuntime
 PerceptionSensorDat
 PersistentMemory-It
 PersistentMemory-N
 PersistentMemory-N
 PersistentMemory-Pi
 PersistentMemory-Sc
 PersistentMemory-Vi
 PmemDisk
 Policy-based QoS
 PowerShell
 Admin
 Operational
 PowerShell-DesiredSi
 PrimaryNetworkIcon
 PrintBRM
 PrintService
 PriResources-Deploy
 Program-Compatibil
 Provisioning-Diagno
 Proximity-Common
 PushNotifications-PI
 ReadyBoost
 ReadyBoostDriver
 ReFS
 RemoteApp and Desl
 RemoteAssistance
 RemoteDesktopServi

Operational Number of events: 7,948

Level	Date and Time	Source
Information	21.06.2018 19:02:50	PowerShell (Microsoft-Windows-PowerShell)
Verbose	21.06.2018 19:02:50	PowerShell (Microsoft-Windows-PowerShell)

Event 4103, PowerShell (Microsoft-Windows-PowerShell)

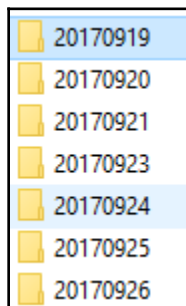
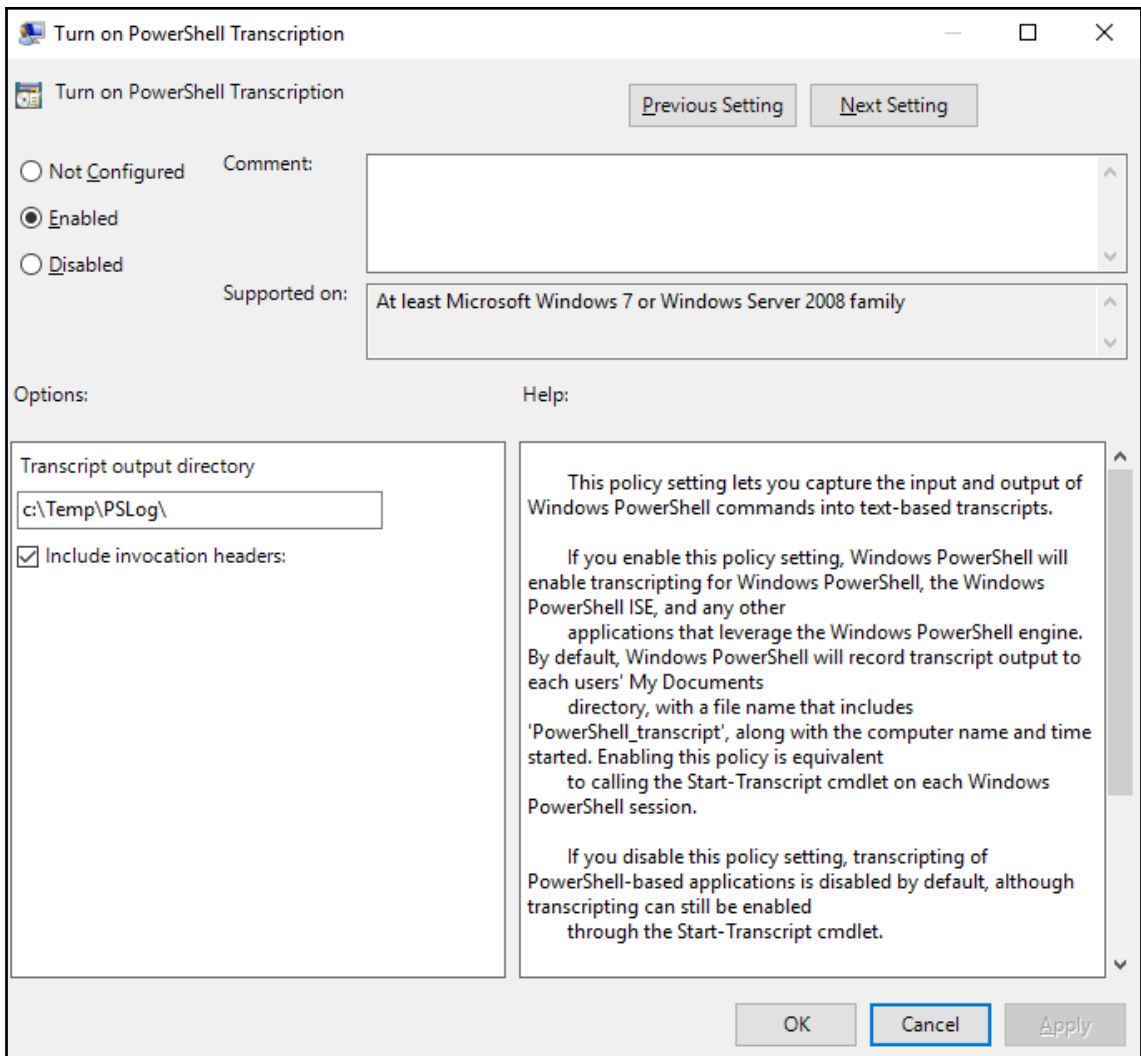
General Details

CommandInvocation(Invoke-Expression): "Invoke-Expression"
 ParameterBinding(Invoke-Expression): name="Command"; value="Write-Host 'Pwnd'"

Context:

Severity = Informational
 Host Name = Visual Studio Code Host
 Host Version = 1.7.0
 Host ID = 05d60e8-35af-4a8c-9ecb-dc9044d9e215
 Host Application = C:\WINDOWS\System32\WindowsPowerShell\v1.0\powershell.exe -NoProfile -NonInteractive -
 ExecutionPolicy Bypass -Command & 'C:\Users\david\.vscode\extensions\ms-vscode.powershell-1.7.0\modules
 \PowerShellEditorServices\Start-EditorServices.ps1' -HostName 'Visual Studio Code Host' -HostProfileId 'Microsoft.VSCode' -
 HostVersion '1.7.0' -AdditionalModules @('PowerShellEditorServices.VSCode') -BundledModulesPath 'C:\Users\david\.vscode
 \extensions\ms-vscode.powershell-1.7.0\modules' -EnableConsoleRepl -LogLevel 'Normal' -LogPath 'C:\Users\david\.vscode
 \extensions\ms-vscode.powershell-1.7.0\logs\1529477778-e0cb0e32-2b37-48e7-bcac-18552c918b051529477774927
 \EditorServices.log' -SessionDetailsPath 'C:\Users\david\.vscode\extensions\ms-vscode.powershell-1.7.0\sessions\PSes-VSCode-
 31476-904653' -FeatureFlags @()

Engine Version = 5.1.17134.81
 Runspace ID = 59c4db1d-b1f1-40de-8117-63c5b9c1898
 Pipeline ID = 671
 Command Name = Invoke-Expression
 Command Type = Cmdlet
 Script Name =
 Command Path =
 Sequence Number = 9631



PowerShell_transcript.	ED6nj7Z1.20170919105710.txt
PowerShell_transcript.	PMn4lkiT.20170919105836.txt
PowerShell_transcript.	J9ZDIhmN.20170919105911.txt
PowerShell_transcript.	1H+ NmBCG.20170919105926.txt
PowerShell_transcript.	5yl9PYHV.20170919105926.txt
PowerShell_transcript.	bYmOofPD.20170919105919.txt

Turn on PowerShell Script Block Logging

Turn on PowerShell Script Block Logging Previous Setting Next Setting

Not Configured Comment:

Enabled

Disabled

Supported on:

Options: Help:

Log script block invocation start / stop events:

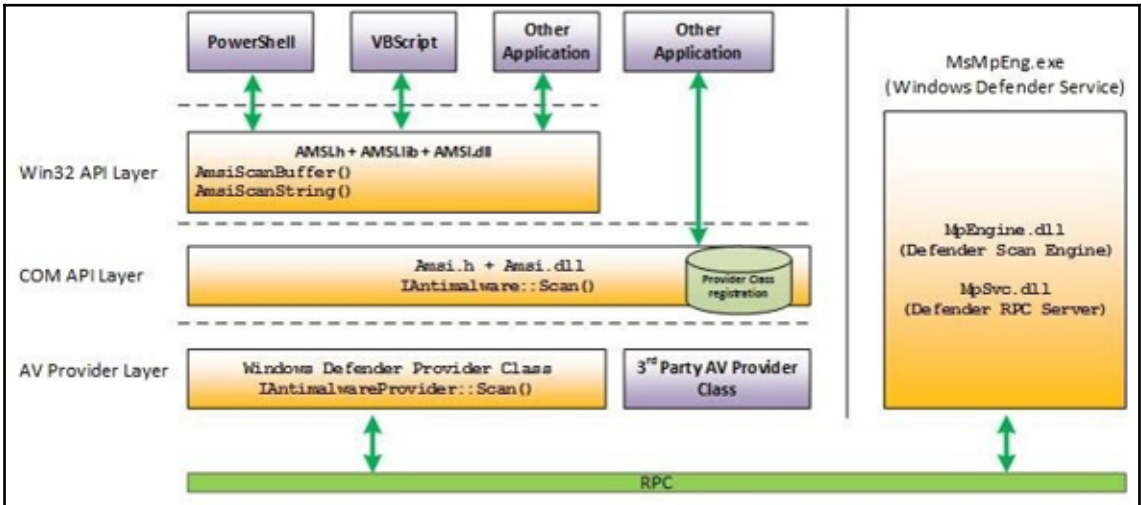
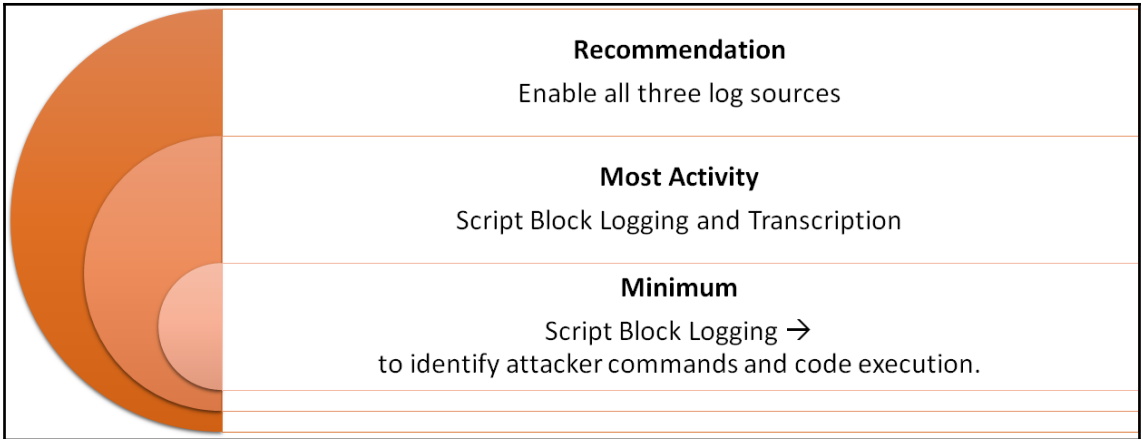
This policy setting enables logging of all PowerShell script input to the Microsoft-Windows-PowerShell/Operational event log. If you enable this policy setting, Windows PowerShell will log the processing of commands, script blocks, functions, and scripts - whether invoked interactively, or through automation.

If you disable this policy setting, logging of PowerShell script input is disabled.

If you enable the Script Block Invocation Logging, PowerShell additionally logs events when invocation of a command, script block, function, or script starts or stops. Enabling Invocation Logging generates a high volume of event logs.

Note: This policy setting exists under both Computer Configuration and User Configuration in the Group Policy Editor. The Computer Configuration policy setting takes precedence over the User Configuration policy setting.

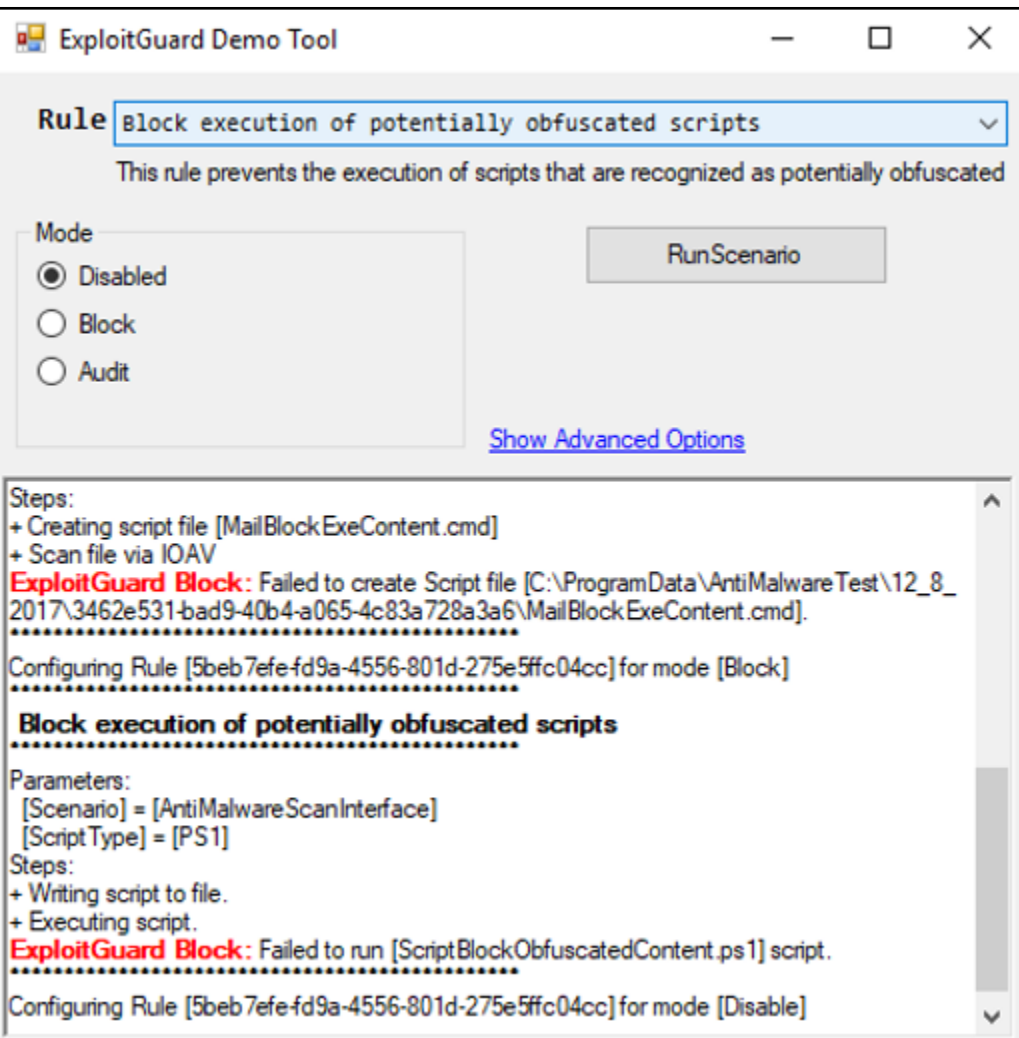
OK Cancel Apply



```

tex : At line:1 char:1
+ 'AMSI Test Sample: 7e72c3ce-861b-4339-8740-0ac1484c1386'
+ ~~~~~
This script contains malicious content and has been blocked by your antivirus software.
At line:4 char:1
+ iex $string
+ ~~~~~
+ CategoryInfo          : ParserError: (:) [Invoke-Expression], ParseException
+ FullyQualifiedErrorId : ScriptContainedMaliciousContent,Microsoft.PowerShell.Commands.InvokeExpressionCommand

```



Chapter 8: Just Enough Administration

This PC > Local Disk (C:) > Program Files > WindowsPowerShell > Modules > JeaRoleCapabilities > RoleCapabilities

Name	Date modified	Type	Size
FirstLevelUserAdmin.psrc	05/03/2018 13:58	PSRC File	

This PC > System (C:) > Windows > System32 > Microsoft > Windows > PowerShell > DriveRoots > NESTED01_Administrator

Name	Date modified	Type	Size
JeaTest	21/05/2018 21:19	FILE File	1 KB

JeaTest - Notepad

File Edit Format View Help

```
it just works
```

Chapter 9: DevOps with PowerShell

About WinOps

The world's only dedicated conference to 'DevOps in a Windows World'.

The conference was about discovering and sharing experiences of using products and tools within the Microsoft DevOps world such as: PowerShell, TeamCity, Octopus Deploy, Azure, Vagrant, Chocolatey, AppDynamics, ScriptRock, Chef, Puppet, Ansible, Docker etc...

WinOps Founders

WinOps Conf was founded in 2015 as a collaboration between the [DevOpsGroup](#) and [Prism Digital](#). Its aim is to create a community for Microsoft professionals to discuss and collaborate on all things DevOps.

[DevOpsGroup](#) are experts in delivering practical engineering & consultancy solutions to transform and accelerate the way that organisations deliver software.

[Prism Digital](#) are a recruitment consultancy with a core focus around WinOps and DevOps. Their mission is to connect smart people with outstanding clients.



> jhpbeerbot-CI

Variables Triggers Options Retention History Save & queue Discard Summary Queue

variables	Name ↑	Value
groups	system.collectionId	8dc484d5-b914-44c0-a7cb-ee9d8c7faa68
variables	system.debug	false
	system.definitionId	2
	system.teamProject	jhpbeerbot
	SecurableInformation	*****

```

DEBUG: ===== HTTP REQUEST =====
HTTP Method:
GET
Absolute Uri:
https://management.azure.com/subscriptions, /providers/Mic
rosoft.Storage/storageAccounts?api-version=2017-10-01

```

SqlServerDsc DSCRESOURCE

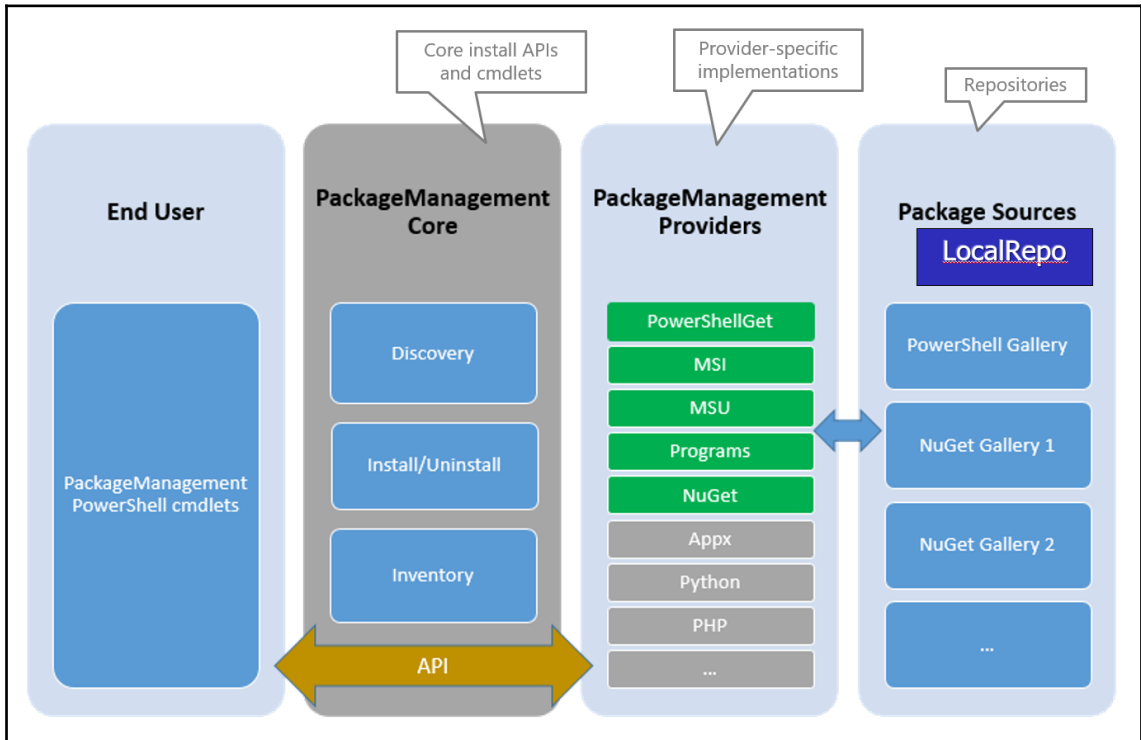
LATEST BUILD HISTORY

Merge pull request #1149 from PowerShell/dev

Release of version 11.3.0.0 of SqlServerDsc

11 days ago by Katie Keim (committed by GitHub) master 11.3.0.0-PSGallery 42d46500

Chapter 10: Creating Your Own PowerShell Repository



Deploying a lab with Linux VMs

Jan-Hendrik Peters [MSFT] edited this page on Mar 17 · 1 revision

Deploying a lab with Linux VMs

With AutomatedLab Linux VMs can be deployed just as easily as Windows VMs. The current implementation should take care of the following distributions:

- RHEL 7
- CentOS 7
- Fedora 27
- SLES 12.3
- OpenSuSE

At the moment the machines do not support any of AutomatedLab's roles since our roles are Windows-based. However, your VMs should come up domain-joined and capable of receiving WinRM requests. AutomatedLab uses kickstart (RHEL-based) or AutoYAST (SLES-based) to configure everything that would be configured in the unattend file of a Windows machine.

WinRM support is spotty with distributions like OpenSuSE and Fedora. Fedora being too cutting-edge does not allow PowerShell and omi-psrp-server to be installed, while OpenSuSE currently has the wrong package dependencies and fails installing PowerShell as well.

Simple Linux lab

You can find the Linux lab here: [AL Loves Linux](#) As you can see, integrating Linux clients is very simple in general:

```
Add-LabMachineDefinition -Name LINC2 -OperatingSystem 'CentOS 7.4'
```

1. Installation

2. Getting Started

3. Defining your lab

- Creating a new lab
 - Using the REST API
- Networks and IP Addresses
 - Fully automated
 - Simple network definitions
 - Simple Internet Connected
 - Complex Internet Connected
- Adding machines
 - Linux VMs
- Roles
 - Active Directory
 - Office 2013
 - Office 2016
 - SQL Server
 - Failover clustering
 - Release Pipeline with TFS
- Custom Roles

4. Customizing your lab

- Installing Windows Features

Editing Deploying a lab with Linux VMs

Deploying a lab with Linux VMs

Write

Preview

h1

h2

h3





B

i

`<>`











Edit mode:

Markdown

Deploying a lab with Linux VMs

With AutomatedLab Linux VMs can be deployed just as easily as Windows VMs. The current the following distributions:

- RHEL 7
- CentOS 7
- Fedora 27
- SLES 12.3
- OpenSUSE

PowerShellBook

Modules DSC Resources JEA Roles +

Search (Ctrl+E)

Out-Voice

31 May 2018 15:29

Syntax
Out-Voice [-Text] <string> [-Gender] {Male | Female} [-VoiceCulture] <cultureinfo> [-CommonParameters]

Description
Outputs text to the standard speaker with the chosen voice culture and gender.

Example
'Packt Publishing is awesome!' | Out-Voice

+ Add Page

VoiceCommands

Out-Voice

PSLog

HostFile

VstsConnector

```
1 ---
2 external help file: VoiceCommands-help.xml
3 Module Name: VoiceCommands
4 online version:
5 schema: 2.0.0
6 ---
7
8 # Out-Voice
9
10 ## SYNOPSIS
11 Outputs any given string to the default audio device
12
13 ## SYNTAX
14
15 ---
16 Out-Voice [-Text] <String> [[-Gender] <String>] [[-VoiceCulture] <CultureInfo>]
17 [<<CommonParameters>>]
18
19 ---
20
21 ## DESCRIPTION
22 Outputs any string to the default audio device. The voice gender and culture can be
23 selected. The cmdlet defaults to the installed voice if the selected voice is not
24 installed.
25
26 ## EXAMPLES
27
28 ### Example 1
29 powershell
30 PS C:\> 'Packt Publishing is awesome!' | Out-Voice -Gender Male -VoiceCulture de-DE
31
32 ---
```

Out-Voice

SYNOPSIS

Outputs any given string to the default audio device

SYNTAX

```
Out-Voice [-Text] <String> [[-Gender] <String>] [[-VoiceCulture] <CultureInfo>]
[<<CommonParameters>>]
```

DESCRIPTION

Outputs any string to the default audio device. The voice gender and culture can be selected. The cmdlet defaults to the installed voice if the selected voice is not installed.

EXAMPLES

Example 1

```
PS C:\> 'Packt Publishing is awesome!' | Out-Voice -Gender Male -VoiceCulture de-DE
```

NUGSV01 on BORBARAD - Virtual Machine Connection

File Action Media View Help

https://localhost: | NuGet Gallery | Home

otto

Create .NET apps faster with N

Search for packages...

1 package versions

0 package downloads

unique

- View Profile
- Account Settings
- API Keys
- Manage Organizations
- Manage Packages
- Upload Package
- Sign Out

[🔍](#) > API keys

An API key is a token that can identify you to NuGet Gallery. The [NuGet command-line utility](#) allows you to submit a NuGet package to the gallery using your API key to authenticate.

Always keep your API keys a secret! If one of your keys is accidentally revealed, you can always generate a new one at any time. You can also remove existing API keys if necessary.

Note: To push packages to nuget.org you must use [nuget.exe v4.1.0 or above](#), which implements the required [NuGet protocols](#).

+ Create

> Manage

Key Name

Expires In

 ▼

Select Scopes

- Push
 - Push new packages and package versions
 - Push only new package versions
- Unlist package

Select Packages

To select which pages to associate with a key, use a glob pattern, select individual packages, or both.

Glob Pattern

 ✕

A glob pattern allows you to replace any sequence of characters with '*'.

Example glob patterns:

Available Packages

 PSReadline



My account

Publish an Item

Publish your item for other users to download and enjoy. You can publish multiple revisions of the same item, as long as the version is different.

Manage my Items

Edit item details or Remove items that you have previously published.

Subscribed to Email Notifications

[More Info](#)

[Unsubscribe](#)

Credentials

Personal account: Jan-Hendrik Peters

API Key:

[Show Key](#)

[More Info](#)

[Reset Key](#)



Encrypt configuration data

This form allows you to encrypt sensitive data before saving it into `appveyor.yml` file. Secure strings are currently supported in `environment`, `deploy` and `notifications` sections.

Value to encrypt

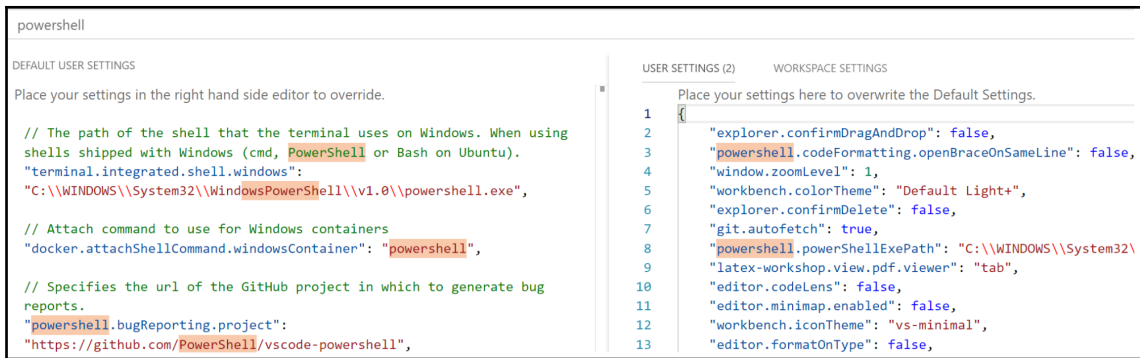
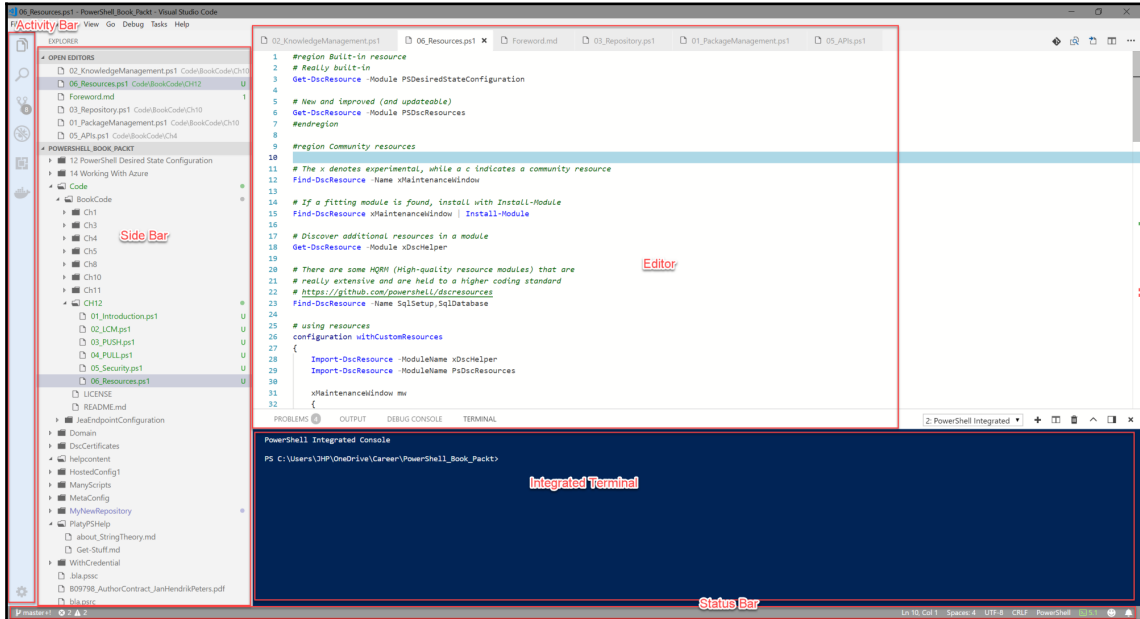
[Encrypt](#)

Encrypted value

Example usage in appveyor.yml


```
environment:
  my_variable:
    secure: xmA7W8ptSRkn9+6Pbk3giLBIQLQj8WCH2jpxESmTtuI=
```


Chapter 11: VSCode and PowerShell Release Pipelines



EXTENSIONS: MARKETPLACE

python



Python 2018.6.0 🔄 12.3M ★ 4.5

Linting, Debugging (multi-threaded, ...)

Microsoft Install

```

Get-TfsBuildDefinition.ps1 x
    2 references
    1 function Get-TfsBuildDefinition
New-TfsBuildDefinition.ps1 ALCommonFork/AutomatedLab.Common/TeamFoundation/Public/Build - 2 references
61 }
62
63 $exBuildParam = Sync-Parameter -Command (Get-Command Get-TfsBuildDefinition) -Parameters $PSBoundParameters
64 $exBuildParam.Remove('Version')
65 $existingBuild = Get-TfsBuildDefinition @exBuildParam
66 if ($existingBuild)
67 {
68     Write-Verbose -Message ('Build definition {0} in {1} already exists.' -f $DefinitionName, $ProjectName);

```

GitHub, Inc. (US) https://github.com

Built for developers

GitHub is a development platform inspired by the way you work. From open source to business, you can host and review code, manage projects, and build software alongside millions of other developers.

Create a password

Use at least one letter, one numeral, and seven characters.

Sign up for GitHub

By clicking "Sign up for GitHub", you agree to our terms of service and privacy statement. We'll occasionally send you account related emails.

PowerShell Gallery

Home Items Publish Statistics Documentation Status Register Sign In

Welcome to the PowerShell Gallery

The PowerShell Gallery is the central repository for PowerShell content. You can find new PowerShell commands or Desired State Configuration (DSC) resources in the Gallery.

Getting Started with the Gallery

Appveyor Systems Inc. (CA) https://www.appveyor.com

Appveyor

Continuous Integration solution for Windows and Linux

Build, test, deploy your apps faster, on any platform.

CREATE YOUR FREE ACCOUNT NOW

Token description

VS Settings Sync

What's this token for?

Select scopes

Scopes define the access for personal tokens. [Read more about OAuth scopes.](#)

- | | | |
|-------------------------------------|-------------------------|--|
| <input type="checkbox"/> | repo | Full control of private repositories |
| <input type="checkbox"/> | repo:status | Access commit status |
| <input type="checkbox"/> | repo_deployment | Access deployment status |
| <input type="checkbox"/> | public_repo | Access public repositories |
| <input type="checkbox"/> | repo:invite | Access repository invitations |
| <input type="checkbox"/> | admin:org | Full control of orgs and teams |
| <input type="checkbox"/> | write:org | Read and write org and team membership |
| <input type="checkbox"/> | read:org | Read org and team membership |
| <input type="checkbox"/> | admin:public_key | Full control of user public keys |
| <input type="checkbox"/> | write:public_key | Write user public keys |
| <input type="checkbox"/> | read:public_key | Read user public keys |
| <input type="checkbox"/> | admin:repo_hook | Full control of repository hooks |
| <input type="checkbox"/> | write:repo_hook | Write repository hooks |
| <input type="checkbox"/> | read:repo_hook | Read repository hooks |
| <input type="checkbox"/> | admin:org_hook | Full control of organization hooks |
| <input checked="" type="checkbox"/> | gist | Create gists |

CODE SETTINGS SYNC UPLOAD SUMMARY

Version: 2.9.2

GitHub Token: [REDACTED]

GitHub Gist: [REDACTED]

GitHub Gist Type: Secret

Restarting Visual Studio Code may be required to apply color and file icon theme.

Files Uploaded:

Extensions Removed:

Extensions Added:

azure-account v0.4.0

```
>plaster
```

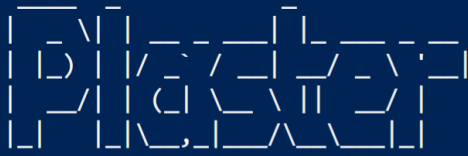
PowerShell: Create New Project from **Plaster** Template

Choose a template to create a new project

 Load additional templates from installed modules

AddPSScriptAnalyzerSettings v1.0.0 by Plaster project, tags: PSScriptAnalyzer, settings
Add a PowerShell Script Analyzer settings file to the root of your workspace.

New PowerShell Manifest Module v1.1.0 by Plaster, tags: Module, ScriptModule, ModuleManifest
Creates files for a simple, non-shared PowerShell script module.



v1.1.3

=====

Enter the name of the module: MyAwesomeModule

Enter the version number of the module (0.0.1): 1.0.0

Select an editor for editor integration (or None):

[N] None [C] Visual Studio Code [?] Help (default is "Visual Studio Code"): C

Scaffolding your PowerShell Module...

Create MyAwesomeModule.psd1

Create MyAwesomeModule.psm1

Create test\MyAwesomeModule.Tests.ps1

Create .vscode\settings.json

Create .vscode\tasks.json

Verify The required module Pester (minimum version: 4.0.3) is already installed.

Your new PowerShell module project 'MyAwesomeModule' has been created.

A Pester test has been created to validate the module's manifest file. Add additional tests to the test directory. You can run the Pester tests in your project by executing the 'test' task. Press Ctrl+P, then type 'task test'.

Creating folders

```
Create Public\
```

```
Create Private\
```

```
Create Types\
```

```
Create Test\
```

```
Create Test\Unit\
```


```
Create Test\Integration\
```

Creating files

```
Create SomeName.psm1
```

```
Create SomeName.psd1
```

Choose a template to create a new project

 Refresh template list

AddPSScriptAnalyzerSettings v1.0.0 by Plaster project, tags: PSSc

Add a PowerShell Script Analyzer settings file to the root of yo

New PowerShell Manifest Module v1.1.0 by Plaster, tags: Module

Creates files for a simple, non-shared PowerShell script modu

DSC Configuration Data Template v1.0.0 by Jan-Hendrik Peters, t

Plaster template that makes use of the module DSCConfigura

DSC Composite Resource Template v1.0.0 by Jan-Hendrik Peters

Select 'Confirm' to confirm or press 'Esc' key to cancel

Confirm

- PSAlignAssignmentStatement
- PSAvoidUsingCmdletAliases
- PSAvoidDefaultValueSwitchParameter
- PSAvoidDefaultValueForMandatoryParameter
- PSAvoidUsingEmptyCatchBlock
- PSAvoidGlobalAliases
- PSAvoidGlobalFunctions
- PSAvoidGlobalVars
- PSAvoidInvokingEmptyMembers
- PSAvoidNullOrEmptyHelpMessageAttribute
- PSAvoidUsingPositionalParameters
- PSReservedCmdletChar
- PSReservedParams
- PSAvoidShouldContinueWithoutForce
- PSAvoidUsingUserNameAndPasswordParams
- PSAvoidUsingComputerNameHardcoded
- PSAvoidUsingConvertToSecureStringWithPlainText
- PSAvoidUsingDeprecatedManifestFields
- PSAvoidUsingInvokeExpression

>select pssc

PowerShell: **Select PSS**

02_PSScriptAnalyzer.ps1 Code\BookCode\Ch11 5

- ✘ [PSScriptAnalyzer] Script definition uses ConvertTo-SecureString with plaintext. This will expose secure information. Encrypted standard strings sh
- ⚠ [PSScriptAnalyzer] Script definition uses WMI cmdlet. For PowerShell 3.0 and above, use CIM cmdlet which perform the same tasks as the WMI cn
- ⚠ [PSScriptAnalyzer] The variable 'Credential' is assigned but never used. (PSUseDeclaredVarsMoreThanAssignments) (9, 1)
- ⚠ [PSScriptAnalyzer] The cmdlet 'Get-SomeObjects' uses a plural noun. A singular noun should be used instead. (PSUseSingularNouns) (13, 10)
- ⚠ [PSScriptAnalyzer] Empty catch block is used. Please use Write-Error or throw statements in catch blocks. (PSAvoidUsingEmptyCatchBlock) (24, 1)

// Specifies the path to a PowerShell Script Analyzer settings file. To override the default settings for all projects, enter an absolute path, or enter a path relative to your workspace.

```
"powershell.scriptAnalysis.settingsPath": ""
```

```
83 Describe OneLastTest {  
84     It 'Should do things' {  
85         1 | Should -Be 0 -Because 'the world would spin madly out of control'  
86     }  
87 }
```

PROBLEMS 7

OUTPUT

DEBUG CONSOLE

TERMINAL

2: PowerShell Integrate

Describing OneLastTest

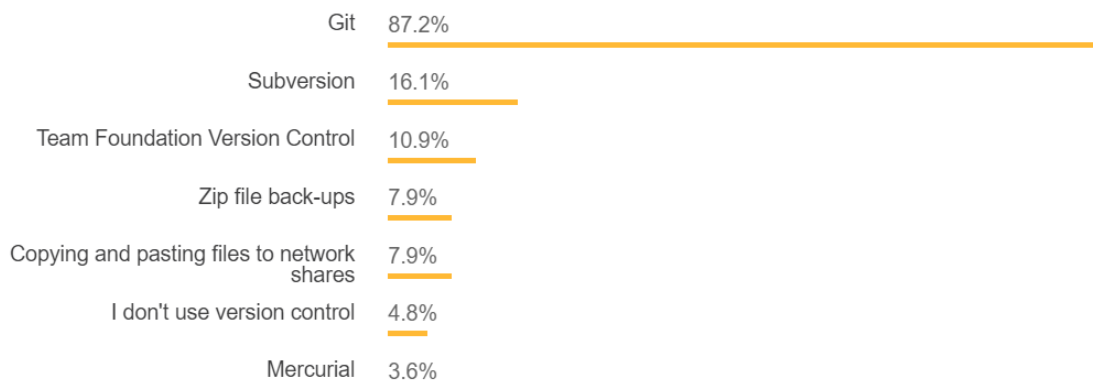
[-] Should do things 62ms

Expected 0, because the world would spin madly out of control otherwise, but got 1.

Version Control

All Respondents

Professional Developers



Chapter 12: PowerShell Desired State Configuration

```
configuration Domain
{
    param
    (
        [pscredential] $Credential
    )
    Import-DscResource -ModuleName PSDesiredStateConfiguration, xActiveDirectory

    node $AllNodes.NodeName
    {
        foreach ($feature in @('AD-Domain-Services', 'RSAT-AD-Tools'))
        {
            WindowsFeature $feature
            {
                Name = $feature
                Ensure = 'Present'
            }
        }

        xADDomain contoso
        {
            DomainName = 'contoso.com'
            DomainAdministratorCredential = $Credential
            SafemodeAdministratorPassword = $Credential
            ForestMode = 'WinThreshold'
            DependsOn = '[WindowsFeature]AD-Domain-Services', '[WindowsFeature]RSAT-AD-Tools'
        }
    }
}
```

Configuration

Node

Resource

Resource

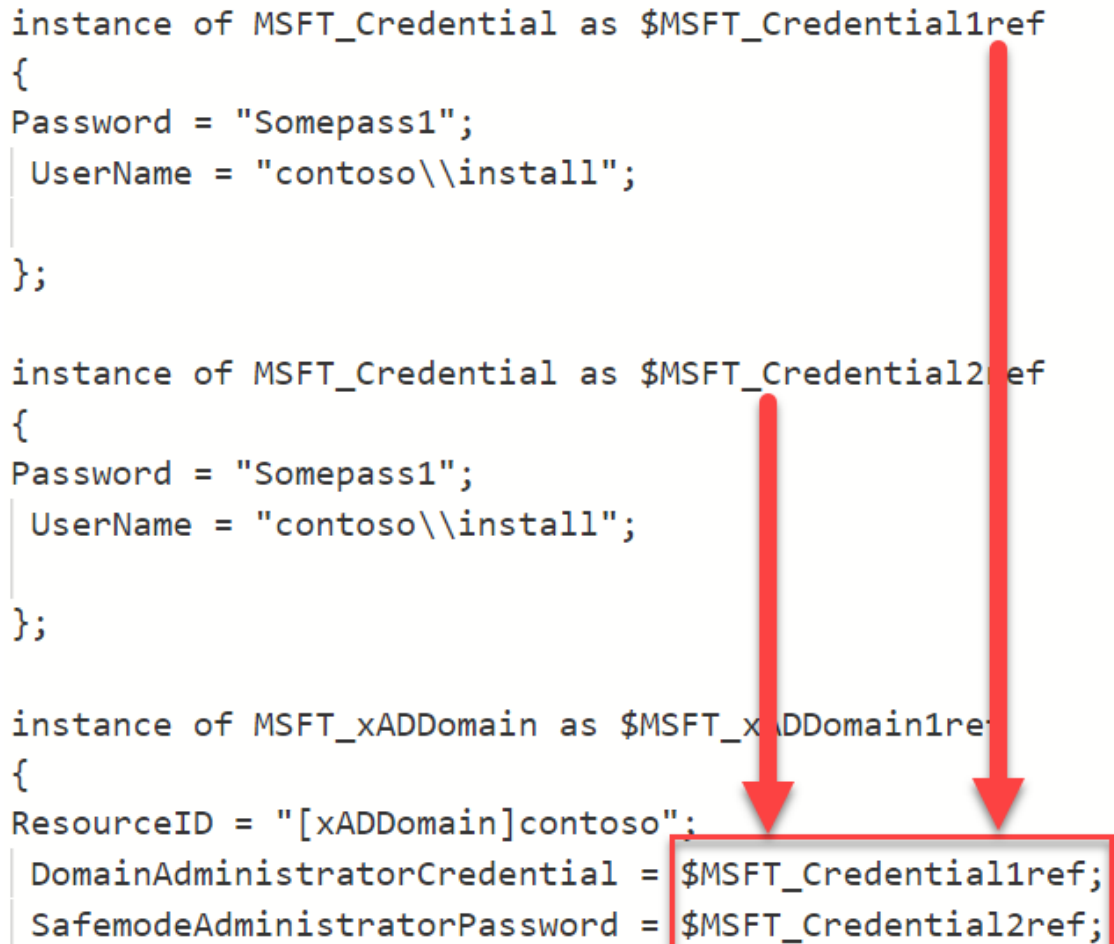
```
VERBOSE: Perform operation 'Invoke CimMethod' with following parameters, 'methodName' =
SendConfigurationApply,'className' = MSFT_DSCLocalConfigurationManager,'namespaceName' =
root/Microsoft/Windows/DesiredStateConfiguration'.
VERBOSE: An LCM method call arrived from computer BORBARAD with user sid
S-1-5-21-411528071-819182688-1339608774-1001.
VERBOSE: [BORBARAD]: LCM: [ Start Set      ]
VERBOSE: [BORBARAD]: LCM: [ Start Resource ] [[File]testfile]
VERBOSE: [BORBARAD]: LCM: [ Start Test    ] [[File]testfile]
VERBOSE: [BORBARAD]: LCM: [ End Test      ] [[File]testfile] in 0.0180 seconds.
VERBOSE: [BORBARAD]: LCM: [ Start Set      ] [[File]testfile]
VERBOSE: [BORBARAD]: LCM: [ End Set        ] [[File]testfile] in 0.0130 seconds.
VERBOSE: [BORBARAD]: LCM: [ End Resource ] [[File]testfile]
VERBOSE: [BORBARAD]: LCM: [ End Set        ]
VERBOSE: [BORBARAD]: LCM: [ End Set        ] in 0.2140 seconds.
VERBOSE: Operation 'Invoke CimMethod' complete.
VERBOSE: Time taken for configuration job to complete is 0.432 seconds
```

```
VERBOSE: [BORBARAD]: LCM: [ Start Test    ] [[File]testfile]
VERBOSE: [BORBARAD]: [[File]testfile] The destination object was
found and no action is required.
VERBOSE: [BORBARAD]: LCM: [ End Test      ] [[File]testfile] in 0.0040 seconds.
VERBOSE: [BORBARAD]: LCM: [ Skip Set      ] [[File]testfile]
```

```
instance of MSFT_Credential as $MSFT_Credential1ref
{
  Password = "Somepass1";
  Username = "contoso\\install";
};

instance of MSFT_Credential as $MSFT_Credential2ref
{
  Password = "Somepass1";
  Username = "contoso\\install";
};

instance of MSFT_xADDomain as $MSFT_xADDomain1ref
{
  ResourceID = "[xADDomain]contoso";
  DomainAdministratorCredential = $MSFT_Credential1ref;
  SafemodeAdministratorPassword = $MSFT_Credential2ref;
};
```



PowerShell Team Blog

Automating the world one-liner at a time...

DSC Resource Kit Release May 2018

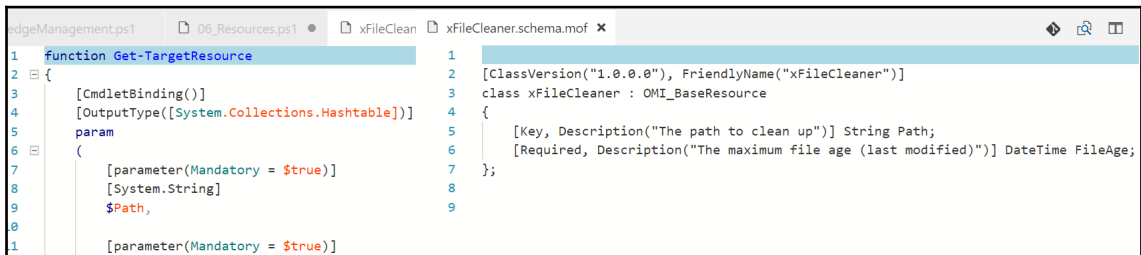
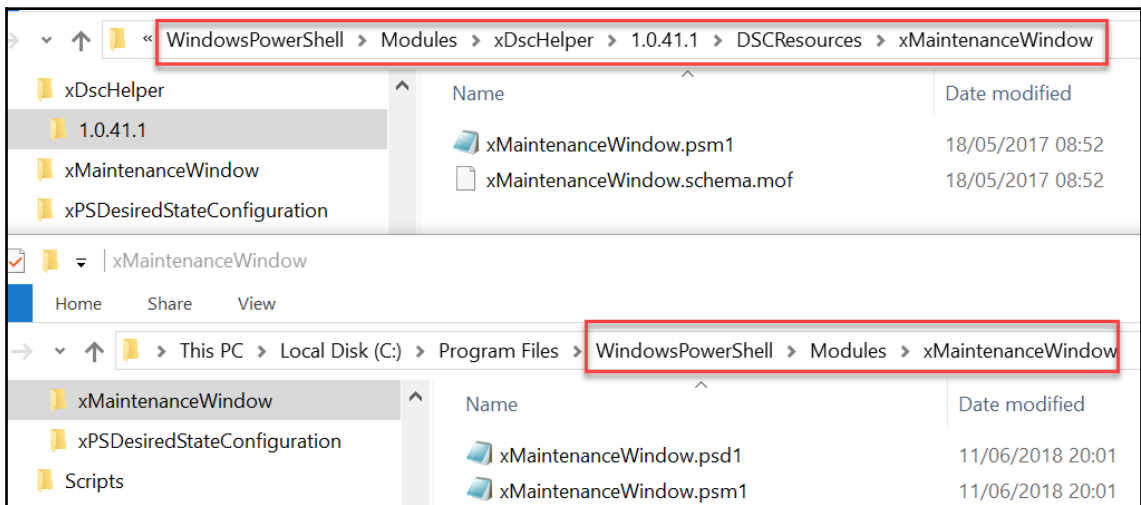
May 2, 2018 by [Katie Keim \[MSFT\]](#) // 0 Comments

★★★★★

Share 11 0 0

We just released the DSC Resource Kit!

This release includes updates to **12 DSC resource modules**. In these past 6 weeks, **52 pull requests** have been merged and **63 issues** have been closed, all thanks to our amazing community!



Chapter 13: Working with Windows



🏠 Advanced options

By default, we're dynamically optimizing the amount of bandwidth your device uses to both download and upload Windows and app updates, and other Microsoft products. But you can set a specific limit if you're worried about data usage.

Download settings

- Limit how much bandwidth is used for downloading updates in the background



- Limit how much bandwidth is used for downloading updates in the foreground



Upload settings

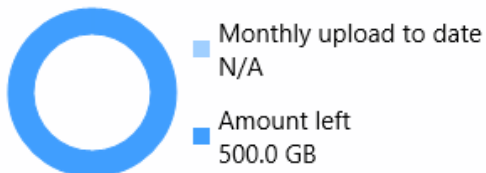
- Limit how much bandwidth is used for uploading updates to other PCs on the Internet



- Monthly upload limit



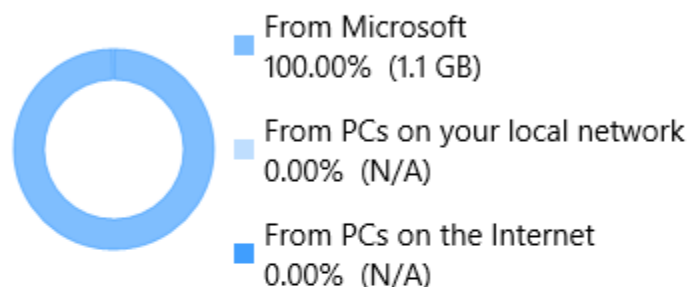
Note: when this limit is reached, your device will stop uploading to other PCs on the Internet.



Activity monitor

Download Statistics

Since 01.06.2018

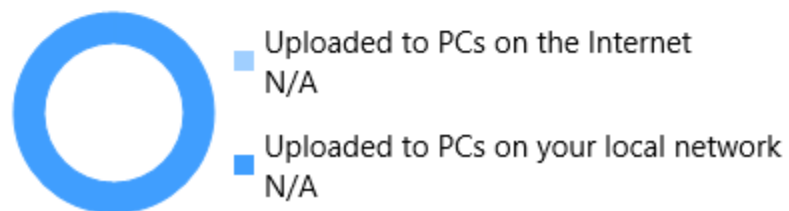


Average download speed (user initiated): 44.4 Mbps

Average download speed (background): 20.3 Mbps

Upload Statistics

Since 01.06.2018



SUpdates.Where{ \$_.Title -like "KB2267602" } | Sort-Object -Descending Date | Out-GridView

Filter

+ Add criteria

Date	Operation	Status	Title	PC
14.06.2018 09:01:28	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.1231.0)	
14.06.2018 07:58:54	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.1229.0)	
13.06.2018 19:25:16	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.1192.0)	
13.06.2018 07:15:33	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.1157.0)	
12.06.2018 15:01:20	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.1126.0)	
12.06.2018 06:44:51	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.1099.0)	
10.06.2018 16:01:37	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.1000.0)	
09.06.2018 09:24:15	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.945.0)	
08.06.2018 15:21:12	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.909.0)	
08.06.2018 06:13:43	Installation	Succeeded	Definition Update for Windows Defender Antivirus - KB2267602 (Definition 1.269.888.0)	
















Chapter 14: Working with Azure

Subscription (change) Subscription ID [REDACTED] Deployments
10 Succeeded

Tags (change)
Purpose : Cloud Gaming CoOwners : Miriam, Tim CostCenter : 4711

Filter by name... All types

15 items Show hidden types ⓘ

<input type="checkbox"/>	NAME ↑↓	TYPE ↑↓
<input type="checkbox"/>	 arkAv	Availability set
<input type="checkbox"/>	 Client01_OsDisk_1_89810e03175c402a8f1bd921e923caf2	Disk
<input type="checkbox"/>	 TheArk_OsDisk_1_8006f61657494c05a9c457baac31f11f	Disk
<input type="checkbox"/>	 client01404	Network interface
<input type="checkbox"/>	 theark161	Network interface
<input type="checkbox"/>	 Client01-nsg	Network security group
<input type="checkbox"/>	 TheArk-nsg	Network security group
<input type="checkbox"/>	 Client01-ip	Public IP address
<input type="checkbox"/>	 TheArk-ip	Public IP address
<input type="checkbox"/>	 vault367	Recovery Services vault
<input type="checkbox"/>	 arkdiag603	Storage account
<input type="checkbox"/>	 nyanhparkstarteb640	Storage account
<input type="checkbox"/>	 Client01	Virtual machine
<input type="checkbox"/>	 TheArk	Virtual machine
<input type="checkbox"/>	 ark-vnet	Virtual network

```
PowerShell PREVIEW | [power icon] [help icon] [gear icon] [up icon] [copy icon]
Requesting a Cloud Shell. Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell (Preview)

Type "dir" to see your Azure resources
Type "help" to learn about Cloud Shell

Changes coming to PowerShell: https://azure.microsoft.com/en-us/blog/pscloudshellrefresh/

VERBOSE: Authenticating to Azure ...
VERBOSE: Building your Azure drive ...
Azure:\
PS Azure:\> $PSVersionTable

Name                               Value
----                               -
PSVersion                          5.1.14393.2312
PSEdition                           Desktop
PSCCompatibleVersions               {1.0, 2.0, 3.0, 4.0...}
BuildVersion                        10.0.14393.2312
CLRVersion                          4.0.30319.42000
WSManStackVersion                   3.0
PSRemotingProtocolVersion           2.3
SerializationVersion                1.1.0.1
```

Still Server Core

```
PS Azure:\> cd $home\clouddrive
PS C:\Users\ContainerAdministrator\clouddrive> git clone https://github.com/nyanhp/xDscHelper
Cloning into 'xDscHelper'...
remote: Counting objects: 210, done.
remote: Total 210 (delta 0), reused 0 (delta 0), pack-reused 210
Receiving objects: 100% (210/210), 36.99 KiB | 54.00 KiB/s, done.
Resolving deltas: 100% (92/92), done.
PS C:\Users\ContainerAdministrator\clouddrive>
```

```
PS Azure:\> ls .\JHPaaS\ResourceGroups\

Directory: Azure:\JHPaaS\ResourceGroups

Mode ResourceGroupName Location ProvisioningState Tags
-----
+ AutomatedLabSources westeurope Succeeded
+ PwshFundamentals westeurope Succeeded
+ WorkshopShared westeurope Succeeded

Azure:\
PS Azure:\> ls .\JHPaaS\ResourceGroups\WorkshopShared\Microsoft.Storage\storageAccounts

Directory: Azure:\JHPaaS\ResourceGroups\WorkshopShared\Microsoft.Storage\storageAccounts

StorageAccountName Location ProvisioningState CreationTime Tags Endpoints
-----
westeurope Succeeded 2018-05-23T08:35:12.8436131Z {} https:// blob.core.windows.net/
https:// file.core.windows.net/
https:// queue.core.windows.net/
https:// table.core.windows.net/
```

```
PS Azure:\> ls '.\Visual Studio Enterprise\VirtualMachines\' | Start-AzureRmVm -WhatIf
What if: Performing the operation "Start" on target "Client01".
What if: Performing the operation "Start" on target "TheArk".
```

ark - Automation script
Resource group - PREVIEW

Download Add to library Deploy

4 resource types cannot be exported yet and are not included in the template. See error details ->

Automate deploying resources with Azure Resource Manager templates in a single, coordinated operation. Define resources and configurable input parameters and deploy with script or code. [Learn more about template deployment.](#)

Template Parameters CLI PowerShell .NET Ruby

Parameters (32)

- [parameters('availabilitySets_arkAv_name')] (Microsoft.Co...
- [parameters('virtualMachines_Client01_name')] (Microsoft...
- [parameters('virtualMachines_TheArk_name')] (Microsoft...
- [parameters('networkInterfaces_client01404_name')] (Micro...
- [parameters('networkInterfaces_theArk161_name')] (Micro...
- [parameters('networkSecurityGroups_Client01_nsg_name')] (Micro...
- [parameters('networkSecurityGroups_TheArk_nsg_name')] (Micro...
- [parameters('publicIPAddresses_Client01_ip_name')] (Micro...
- [parameters('publicIPAddresses_TheArk_ip_name')] (Micro...
- [parameters('virtualNetworks_ark_vnet_name')] (Microsoft...
- [parameters('vaults_vault367_name')] (Microsoft.Recovery...
- [parameters('storageAccounts_arkdiag603_name')] (Micro...
- [parameters('storageAccounts_nyanparkstarteb640_name')] (Micro...
- [concat(parameters('virtualMachines_TheArk_name'), '/', p...
- [concat(parameters('virtualMachines_TheArk_name'), '/', p...
- [concat(parameters('networkSecurityGroups_Client01_nsg_...
- [concat(parameters('networkSecurityGroups_TheArk_nsg_...
- [concat(parameters('networkSecurityGroups_TheArk_nsg_...
- [concat(parameters('networkSecurityGroups_TheArk_nsg_...
- [concat(parameters('virtualNetworks_ark_vnet_name'), '/', ...
- [concat(parameters('vaults_vault367_name'), '/', paramete...
- [concat(parameters('vaults_vault367_name'), '/', paramete...

```
1 {
2   "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "extensions_iaaDiagnostics_xmlCfg": {
6       "defaultValue": null,
7       "type": "SecureString"
8     },
9     "extensions_iaaDiagnostics_storageAccountName": {
10      "defaultValue": null,
11      "type": "SecureString"
12    },
13    "extensions_iaaDiagnostics_storageAccountKey": {
14      "defaultValue": null,
15      "type": "SecureString"
16    },
17    "extensions_iaaDiagnostics_storageAccountEndPoint": {
18      "defaultValue": null,
19      "type": "SecureString"
20    },
21    "availabilitySets_arkAv_name": {
22      "defaultValue": "arkAv",
23      "type": "string"
24    },
25    "virtualMachines_TheArk_name": {
26      "defaultValue": "TheArk",
27      "type": "string"
28    },
29    "virtualMachines_Client01_name": {
30      "defaultValue": "Client01",
31      "type": "string"
32    },
33    "virtualNetworks_ark_vnet_name": {
```

JSON Outline | Add Resource

- parameters (9)
- variables (22)
- resources (6)
 - jhplabpoc
 - labpocvnet
 - labdc01Nic
 - labdc01
 - labca01Nic
 - labca01
- outputs (0)

Search

- Microsoft Azure Diagnostics Extension for Linux
- Microsoft Azure Diagnostics for Linux VMSS Extension
- Microsoft Azure Diagnostics for Windows VMSS Extension
- Microsoft Monitoring Agent Extension
- MySQL Database
- Nested Deployment

Network Interface

Creates a network interface virtual machine).

Name:

Virtual network/subnet:

<Create New...>
 <Select from subscription...>
 <Select from another template...>

Azure / azure-quickstart-templates | Watch 509 | Star 3,817 | Fork 5,456

Code | Issues 418 | Pull requests 34 | Projects 0 | Wiki | Insights

Azure Quickstart Templates <https://azure.microsoft.com/en-us/doc...>

azure | templates | arm

18,803 commits | 3 branches | 0 releases | 664 contributors | MIT

Branch: master | New pull request | Create new file | Upload files | Find file | Clone or download

bmoore-msft Merge pull request #4847 from jovanpop-msft/master | Latest commit 940c1f8 20 hours ago

File	Commit Message	Time
.github	Update stale.yml	a month ago
1-CONTRIBUTION-GUIDE	text tweak	5 days ago
100-blank-template	added schema propety to metadata.json	20 days ago
100-marketplace-sample	added schema propety to metadata.json	20 days ago
101-1vm-2nics-2subnets-1vnet	added schema propety to metadata.json	20 days ago
101-Telegraf-InfluxDB-Grafana	added schema propety to metadata.json	20 days ago
101-aci-dynamicsnav	added schema propety to metadata.json	20 days ago
101-aci-linuxcontainer-public-ip	added schema propety to metadata.json	20 days ago
101-aci-storage-file-share	added schema propety to metadata.json	20 days ago
101-acs-dcos	added schema propety to metadata.json	20 days ago

Branch: master


azure-quickstart-templates / 101-1vm-2nics-2subnets-1vnet /

Create new file

Upload files





Find file

History

 **bmoore-msft** added schema property to metadata.json

Latest commit e5913ce 20 days ago

..

 README.md	simplified overall template	a year ago
 azuredeploy.json	added location parameters	2 months ago
 azuredeploy.parameters.json	update from CI failures	a year ago
 metadata.json	added schema property to metadata.json	20 days ago

Chapter 15: Connecting to Microsoft Online Services

Get the latest advanced features with Office 365

Looking for more?
See options for:

- [Small Business](#)
- [Education](#)
- [Government](#)
- [Nonprofit](#)
- [Home](#)
- [Freelance Workers](#)

Individual services:

- [Business class email](#)
- [File storage & sharing](#)
- [Online meetings](#)

[Download the full comparison table](#)

☰ Contact us

\$12.00
user/month
(annual commitment)

Office 365 ProPlus

[Buy now](#)

Learn more

Price does not include tax.

Office applications plus cloud file-storage and sharing. Business email not included.

Office applications included

Outlook

Word

Excel

PowerPoint

OneNote

Access (PC only)

Publisher (PC only)

Services included

- Business email hosting not included
- Desktop versions of Office 2016 applications: Outlook, Word, Excel, PowerPoint, and OneNote, plus Access and Publisher (see 30-day trial)

\$8.00
user/month
(annual commitment)

Office 365 Enterprise E1

[Buy now](#)

Learn more

Price does not include tax.

Business services—email, file storage and sharing, Office Online, meetings and IM, and more. Office applications not included.

Office applications (Not included)

Services included

- Email hosting with 50 GB mailbox and custom email domain address
- Web versions of Outlook, Word, Excel, and PowerPoint (desktop versions of applications not included)

\$20.00
user/month
(annual commitment)

Office 365 Enterprise E3

[Buy now](#)

Learn more

Price does not include tax.

All the features of Office 365 ProPlus and Office 365 Enterprise E1 plus security and compliance tools, such as legal hold, data loss prevention, and more.

Office applications included

Outlook

Word

Excel

PowerPoint

OneNote

Access (PC only)

Publisher (PC only)

Services included

- Email hosting with 100 GB mailbox and custom email domain address
- Desktop versions of Office 2016 applications: Outlook, Word, Excel, PowerPoint, and OneNote, plus Access and Publisher (see 30-day trial)

\$35.00
user/month
(annual commitment)

Office 365 Enterprise E5

[Contact sales](#)

Learn more

Price does not include tax.

All the features of Office 365 Enterprise E3 plus advanced security, analytics, and voice capabilities.

Office applications included

Outlook

Word

Excel

PowerPoint

OneNote

Access (PC only)

Publisher (PC only)

Services included

Phone SR (PC)

- Email hosting with 100 GB mailbox and custom email domain address
- Desktop versions of Office 2016 applications: Outlook, Word, Excel, PowerPoint, and OneNote, plus Access and Publisher (see 30-day trial)

[More details](#)

MSONline

Note: this is the older MSONline V1 PowerShell module for Azure Active Directory. Customers are encouraged to use the newer Azure Active Directory V2 PowerShell module instead of this module. For more information about the V2 module please see [Azure Active Directory V2 PowerShell](#).

For more detail info on installation of the AzureAD cmdlets please see: [Azure ActiveDirectory \(MSONline\)](#).

This topic displays help topics for the Azure Active Directory MSONline module.

Compare Exchange Online plans

Get business-class email as either a standalone Exchange Online plan, or as part of an Office 365 Business plan that includes Office and more.

[See more Office 365 plans](#)

Looking for more?

[Exchange Server 2016](#)

\$4.00 user/month
(annual commitment)

Exchange Online Plan 1

Buy now

Secure and reliable business-class email with a 50 GB mailbox per user.

Office applications

(Not included)

Services

(Not included)

- Each user gets 50 GB of mailbox storage and can send messages up to 150 MB in size
- Users can connect supported versions of Outlook to Exchange Online, so they can use the rich client application they already know

\$8.00 user/month
(annual commitment)

Exchange Online Plan 2

Buy now

Includes all the features of Exchange Online Plan 1, plus unlimited storage, hosted voicemail, and data loss prevention.

Office applications

(Not included)

Services

(Not included)

- Each user gets 100 GB of mailbox storage and can send messages up to 150 MB in size
- Take advantage of unlimited storage (100 GB of storage in the user's primary mailbox, plus unlimited storage in the user's In-Place Archive)

Special offer: 1 year free custom email domain

\$12.50 user/month
(annual commitment)

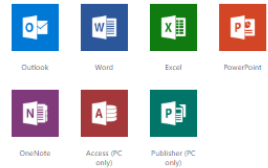
Office 365 Business Premium

1 year \$12.50 user/month

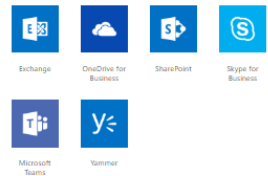
Buy now

Includes all the features of Exchange Online Plan 1, plus fully installed Office, 1 TB file storage and sharing, video conferencing, and more.

Office applications included



Services included



- Email hosting with 50 GB mailbox and custom email domain address
- Desktop versions of Office 2016 applications: Outlook, Word, Excel, PowerPoint, OneNote, plus Access and Publisher for PC only

Office 365 Administrator

Exchange Admin Center

Dashboard | **Postfächer** | Gruppen | Ressourcen | Kontakte | Freigaben | Migration

Empfänger

Berechtigungen

Verwaltung der Compliance

Organisation

Schutz





Nachrichtenfluss

Mobil

Öffentliche Ordner

Unified Messaging

Hybrid

DISPLAY NAME	MAILBOX TYPE	EMAIL ADDRESS
David das Neves	User	[REDACTED]
[REDACTED]	User	[REDACTED]

```

ModuleType Version Name ExportedCommands
-----
Script 1.0 tmp_hg0ifr10.250 {Add-AvailabilityAddressSpace, Add-DistributionGroupMember, Add-MailboxFolderPermission, Add-MailboxLocation...}
  
```

Compare SharePoint Online options

Looking for more?
See options for
small business

\$5.00 user/month

SharePoint Online Plan 1

Buy now

The features that small and mid-sized businesses need to succeed.

Office applications

(Not included)

Services



SharePoint



OneDrive

- 1 TB of OneDrive storage per user
- Share files securely inside or outside your organization

\$10.00 user/month

SharePoint Online Plan 2

Buy now

Full-featured SharePoint Online with capabilities for the enterprise.

Includes all SharePoint Online Plan 1 benefits and more.

Office applications

(Not included)

Services



SharePoint



OneDrive

- Unlimited personal cloud storage
- Customize your enterprise search and results with enhanced features to surface resources across O365

\$20.00 user/month
(annual commitment)

Office 365 Enterprise E3

Buy now

Businesses that need the power of Office with advanced services for messaging, document sharing, compliance and management features for IT.

Includes all SharePoint Online Plan 2 benefits and more.

Office applications



Outlook

Word

Excel

PowerPoint



OneNote

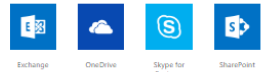


Publisher



Access

Services



Exchange

OneDrive

Skype for Business

SharePoint



Microsoft Teams



Yammer



Drive

- Business-class email hosting with unlimited mailbox
- Custom email domain addresses (name@yourcompany.com)

Office 365 licensing for Microsoft Teams

04/16/2018 • 2 minutes to read • Contributors  all • Applies to: Microsoft Teams

Important

The new Microsoft Teams & Skype for Business Admin Center is coming soon! Starting in March 2018, we're gradually migrating settings to it from both the current Skype for Business admin center and the Microsoft Teams experience in the Office 365 admin center. If a setting has been migrated, you'll see a notification and then be directed to the setting's location in the new Microsoft Teams & Skype for Business Admin Center. For more information, see [Manage Teams during the transition to the new Microsoft Teams and Skype for Business Admin Center](#).

The following Office 365 subscriptions enable users for Teams.

Small Business Plans	Enterprise Plans	Education Plans	Developer Plans
Office 365 Business Essentials	Office 365 Enterprise E1	Office 365 Education	Office 365 Developer
Office 365 Business Premium	Office 365 Enterprise E3	Office 365 Education Plus	
Office 365 Enterprise F1	Office 365 Enterprise E4 (retired)	Office 365 Education E3 (retired)	
	Office 365 Enterprise E5	Office 365 Education E5	

CommandType	Name	Version	Source
Cmdlet	Add-TeamUser	0.9.3	MicrosoftTeams
Cmdlet	Connect-MicrosoftTeams	0.9.3	MicrosoftTeams
Cmdlet	Disconnect-MicrosoftTeams	0.9.3	MicrosoftTeams
Cmdlet	Get-Team	0.9.3	MicrosoftTeams
Cmdlet	Get-TeamChannel	0.9.3	MicrosoftTeams
Cmdlet	Get-TeamFunSettings	0.9.3	MicrosoftTeams
Cmdlet	Get-TeamGuestSettings	0.9.3	MicrosoftTeams
Cmdlet	Get-TeamHelp	0.9.3	MicrosoftTeams
Cmdlet	Get-TeamMemberSettings	0.9.3	MicrosoftTeams
Cmdlet	Get-TeamMessagingSettings	0.9.3	MicrosoftTeams
Cmdlet	Get-TeamUser	0.9.3	MicrosoftTeams
Cmdlet	New-Team	0.9.3	MicrosoftTeams
Cmdlet	New-TeamChannel	0.9.3	MicrosoftTeams
Cmdlet	Remove-Team	0.9.3	MicrosoftTeams
Cmdlet	Remove-TeamChannel	0.9.3	MicrosoftTeams
Cmdlet	Remove-TeamUser	0.9.3	MicrosoftTeams
Cmdlet	Set-Team	0.9.3	MicrosoftTeams
Cmdlet	Set-TeamChannel	0.9.3	MicrosoftTeams
Cmdlet	Set-TeamFunSettings	0.9.3	MicrosoftTeams
Cmdlet	Set-TeamGuestSettings	0.9.3	MicrosoftTeams
Cmdlet	Set-TeamMemberSettings	0.9.3	MicrosoftTeams
Cmdlet	Set-TeamMessagingSettings	0.9.3	MicrosoftTeams
Cmdlet	Set-TeamPicture	0.9.3	MicrosoftTeams

Chapter 16: Working with SCCM and SQL Server

The screenshot shows the 'Create Script' dialog box in SCCM. The window title is 'Create Script'. On the left, there is a sidebar with a 'Script' icon and a list of tabs: 'Script', 'Summary', 'Progress', and 'Completion'. The 'Script' tab is selected, and the main area is titled 'Script details'. Below the title, it says 'Specify the script to be executed on client devices.' There are three input fields: 'Script Name' with the value 'Shutdown Computer', 'Script language' with a dropdown menu set to 'PowerShell', and 'Script' with the value 'shutdown /r /t 60 /f'. To the right of the 'Script' field are 'Import' and 'Clear' buttons. At the bottom of the dialog are four buttons: '< Previous', 'Next >', 'Summary', and 'Cancel'.

Script

Script details

Specify the script to be executed on client devices.

Script Name:

Script language:

Script:

Import Clear

< Previous Next > Summary Cancel

Configuration Manager Trace Log Tool - [C:\temp\LogIt.log]

File Tools Window Help

Log Text

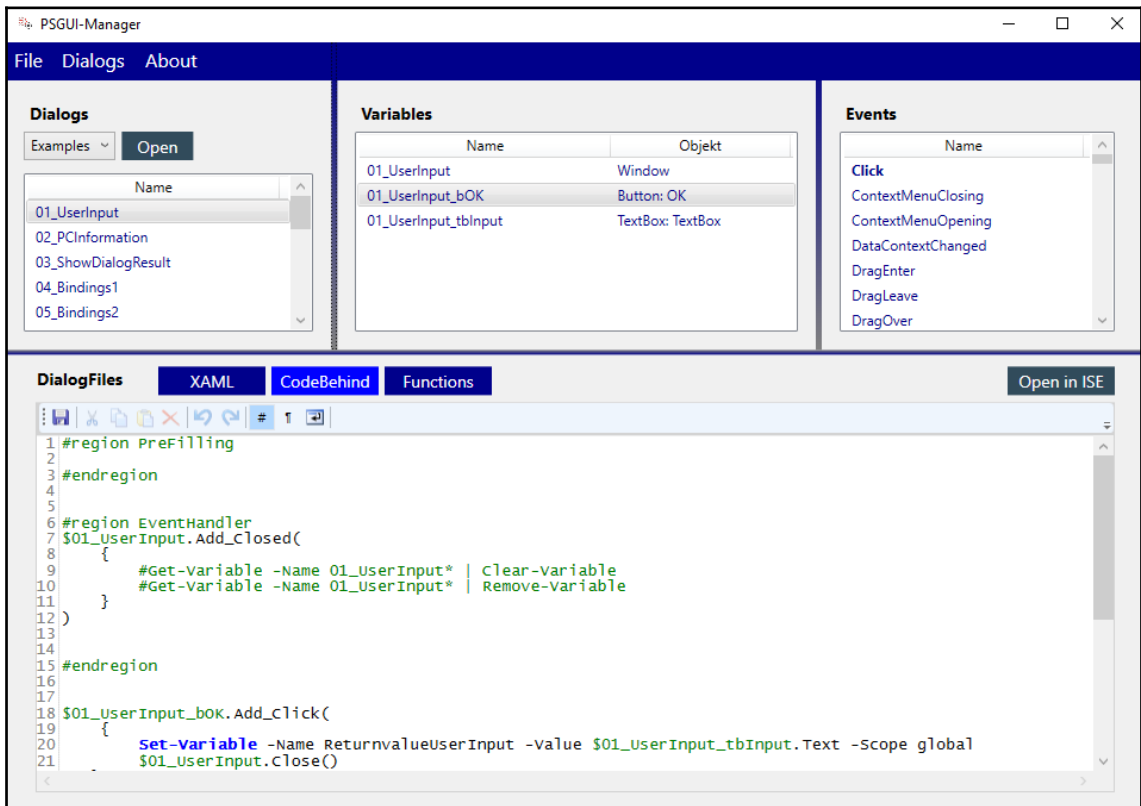
Log Text	Component	Date/Time	Thread
Info:Starting Logging Example Script	LogIt.ps1:Main()	7/24/2014 9:38:43 AM	7564 (0x1D8C)
Warning:Log Warning	LogIt.ps1:Main()	7/24/2014 9:38:43 AM	7564 (0x1D8C)
Error:Log Error	LogIt.ps1:Main()	7/24/2014 9:38:43 AM	7564 (0x1D8C)
Verbose:Log Verbose	LogIt.ps1:Main()	7/24/2014 9:38:43 AM	7564 (0x1D8C)
Info:Stop Log Warning Error	LogIt.ps1:Main()	7/24/2014 9:38:43 AM	7564 (0x1D8C)
Info:Stopping Logging Example Script	LogIt.ps1:Main()	7/24/2014 9:38:43 AM	7564 (0x1D8C)

Date/Time: 7/24/2014 9:38:43 AM Component: LogIt.ps1:Main()
Thread: 7564 (0x1D8C) Source:

Info:Stopping Logging Example Script

Elapsed time is 0h 0m 0s 35ms (0.035 seconds)

Chapter 17: PowerShell Deep Dives

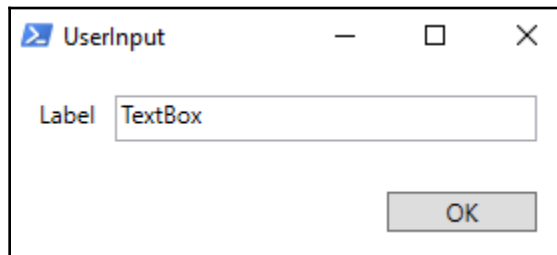


The screenshot shows the PSGUI-Manager application interface. It features a menu bar with 'File', 'Dialogs', and 'About'. The main area is divided into three panels: 'Dialogs', 'Variables', and 'Events'. The 'Dialogs' panel shows a list of dialog names, with '01_UserInput' selected. The 'Variables' panel displays a table of variables:

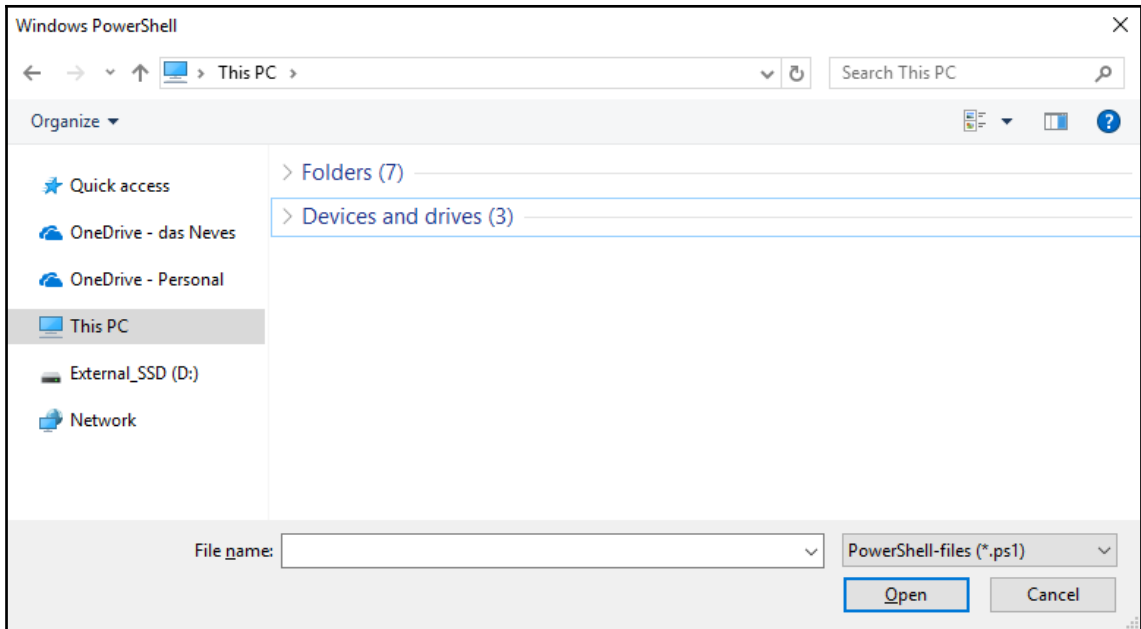
Name	Objekt
01_UserInput	Window
01_UserInput_bOK	Button: OK
01_UserInput_tbInput	TextBox: TextBox

The 'Events' panel lists various events, with 'Click' selected. Below these panels is the 'DialogFiles' section, which includes tabs for 'XAML', 'CodeBehind', and 'Functions'. The 'CodeBehind' tab is active, showing PowerShell code for the dialog's logic:

```
1 #region PreFilling
2
3 #endregion
4
5
6 #region EventHandler
7 $01_UserInput.Add_Closed(
8     {
9         #Get-variable -Name 01_UserInput* | Clear-variable
10        #Get-variable -Name 01_UserInput* | Remove-variable
11    }
12 )
13
14 #endregion
15
16
17
18 $01_UserInput_bOK.Add_Click(
19     {
20         Set-variable -Name ReturnValueUserInput -value $01_UserInput_tbInput.Text -scope global
21         $01_UserInput.Close()
22     }
23 )
```



The screenshot shows a dialog box titled 'UserInput'. It contains a 'Label' with the text 'TextBox' next to a text input field. Below the input field is an 'OK' button.



```
[00:00:00]PS C:\WINDOWS\system32> cd D:
[00:00:00]PS D:\> Import-Module SHiPS
[00:00:00]PS D:\> Import-Module .\05_DeepDiveShips.psm1
[00:00:00]PS D:\> New-PSDrive -Name myCloud -PSProvider SHiPS -Root 05_DeepDiveShips#Cloud

Name                Used (GB)    Free (GB) Provider      Root
-----                -
myCloud              0.00         0.00      SHiPS         05_DeepDiveShips#Cloud

[00:00:00]PS D:\> dir myCloud:\localhost\

    Directory: myCloud:\localhost

Mode                Name
----                -
+   Machines
+   Disks
+   Switches
```