

Open-Source PowerShell!



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Overview

Microsoft on open source tech

PowerShell and DSC on Linux

Linux on Azure (Automation DSC)

Microsoft on Open Source Tech

Large GitHub Presence

The screenshot shows the GitHub organization page for the PowerShell Team. The header includes the GitHub logo, a search bar, and navigation links for 'Pull requests', 'Issues', and 'Git'. The organization's name 'PowerShell Team' is displayed with its URL 'https://microsoft.com/powershell' and a list of members including 'Redmond'. A prominent orange button shows 'github.com/powershell'. Below this, tabs for 'Repositories' and 'People' are visible. The 'Pinned repositories' section features three repositories: 'PowerShell' (PowerShell for every system!, C#, 6.2k stars, 759 forks), 'Win32-OpenSSH' (Win32 port of OpenSSH, C, 2.6k stars, 224 forks), and 'DscResources' (Central repository for PowerShell Desired State Configuration (DSC) resources, PowerShell, 357 stars, 97 forks). These three repositories are highlighted with a red border. Below the pinned repositories is a search bar and filters for 'Type' and 'Language'. The main content area displays 'DscResource.Tests' (Common meta tests for PowerShell DSC resources repositories, PowerShell, 21 stars, 26 forks, updated 30 minutes ago) and 'xSQLServer' (PowerShell, 81 stars, 81 forks, updated an hour ago). On the right, 'Top languages' lists PowerShell, C#, C, and JavaScript, while 'Most used topics' lists powershell and windows.

PowerShell Team
https://microsoft.com/powershell
Redmond
github.com/powershell

Repositories People 21

Pinned repositories

Repository	Description	Language	Stars	Forks
PowerShell	PowerShell for every system!	C#	6.2k	759
Win32-OpenSSH	Win32 port of OpenSSH	C	2.6k	224
DscResources	Central repository for PowerShell Desired State Configuration (DSC) resources.	PowerShell	357	97

Search repositories... Type: All Language: All

DscResource.Tests
Common meta tests for PowerShell DSC resources repositories.
PowerShell 21 26 Updated 30 minutes ago

xSQLServer
PowerShell 81 81 Updated an hour ago

Top languages
PowerShell C# C JavaScript
TypeScript

Most used topics
powershell windows

Bash on Ubuntu on Windows

**Available on all Windows
Desktop SKUs (!)**

Enable developer mode

Add the feature

Run 'bash' at a prompt



```
tim@BDDLAPTOP: /mnt/c
PS C:\> bash
-- Beta feature --
This will install Ubuntu on Windows, distributed by Canonical
and licensed under its terms available here:
https://aka.ms/uowterms

Type "y" to continue: y
Downloading from the Windows Store... 100%
Extracting filesystem, this will take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: tim
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Installation successful!
The environment will start momentarily...
Documentation is available at: https://aka.ms/wsldocs
tim@BDDLAPTOP:/mnt/c$
```

Demo



1

Enable developer mode

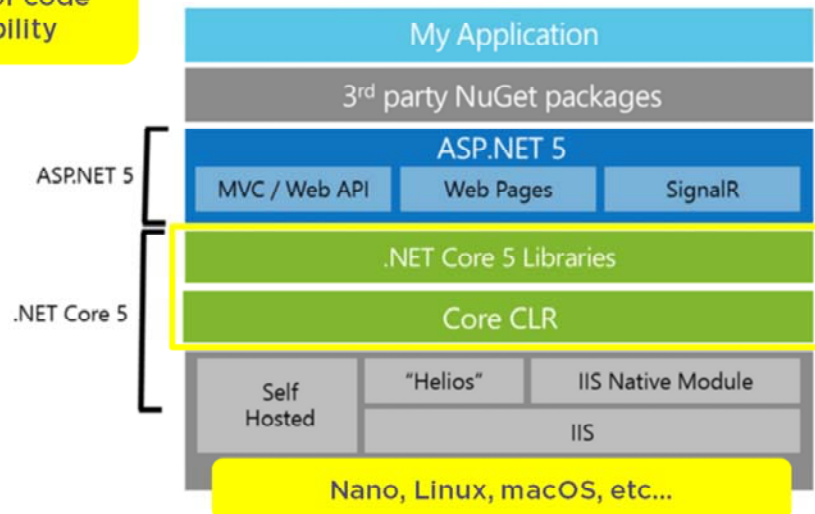
Install the optional feature

Run bash

PowerShell (and DSC) on Linux

.NET Core

Allows for code portability

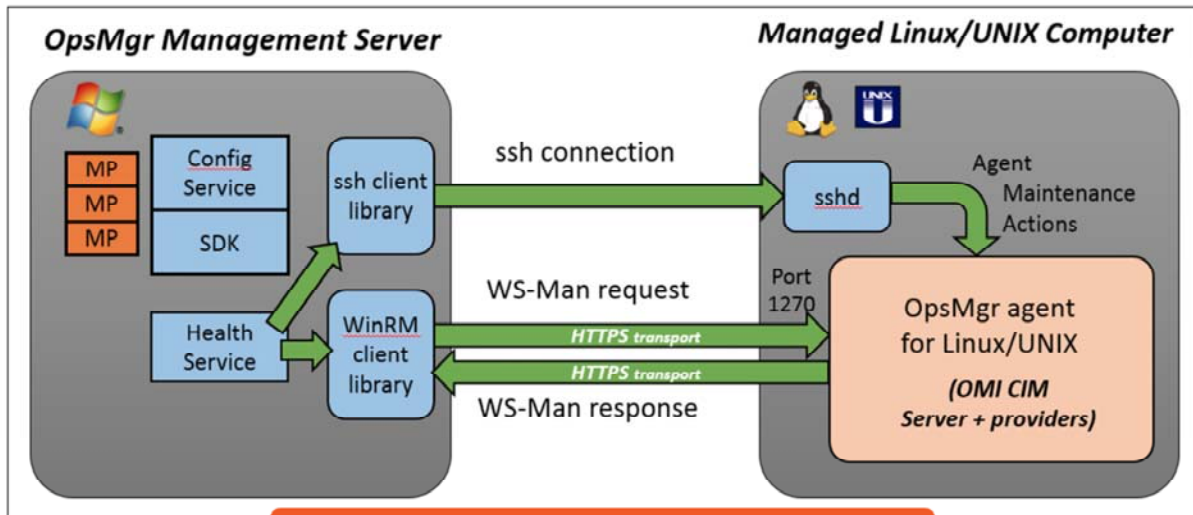


timw.info/core5

Relevant Orgs



Open Management Infrastructure (OMI)



timw.info/omi3

CIM = Common Information Model

PowerShell on Linux Use Cases



Consistent management experience
SSH-based, bi-directional remoting



Operations Management Suite
(OMS)
Desired State Configuration (DSC)

Installation

```
# Enter superuser mode
sudo su

# Register the Microsoft RedHat repository
curl https://packages.microsoft.com/config/rhel/7/prod.repo > /etc/yum.repos.d/microsoft.repo

# Exit superuser mode
exit

# Install PowerShell
sudo yum install -y powershell

# Start PowerShell
powershell
```

```
File Edit View Search Terminal Help
PS /home/tim> Get-Module -ListAvailable

Directory: /opt/microsoft/powershell/6.0.0-alpha.15/Modules

ModuleType Version      Name                               ExportedCommands
-----
Manifest 1.0.1.0    Microsoft.PowerShell.Archive      {Compress-Archive,...
Manifest 3.0.0.0    Microsoft.PowerShell.Host         {Start-Transcript,...
Manifest 3.1.0.0    Microsoft.PowerShell.Management   {Add-Content, Clea...
Manifest 3.0.0.0    Microsoft.PowerShell.Security     {Get-Credential, G...
Manifest 3.1.0.0    Microsoft.PowerShell.Utility      {Format-List, Form...
Script 1.1.2.0    PackageManagement                 {Find-Package, Get...
Script 3.3.9      Pester                            {Describe, Context...
Script 1.1.2.0    PowerShellGet                     {Install-Module, F...
Script 0.0        PSDesiredStateConfiguration       {IsHiddenResource,...
Script 1.2        PSReadLine                        {Get-PSReadlineKey...

PS /home/tim>
```

Desired State Configuration (DSC) in Action



Demo



2

Examine the docs

Review installation workflow

Play with the shell

Consider DSC

Linux on Azure/ Azure on Azure Automation DSC

Demo



3

VM creation workflow

VM agent / OMS agent / extensions

VM connection

OMS & Azure Automation DSC

Summary



Thank you!

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