

# Graph and PowerShell with Windows 365

- Donna Ryan
- Senior PM - Microsoft
- Windows 365 CxE - CAT
- Former MVP
- @TheNotoriousDRR



Official sponsors



RECAST SOFTWARE

# NORDIC

— VIRTUAL SUMMIT —

# Graph API Basics

- Graph Connection
  - Connects to Azure
  - Works over HTTP
  - Needs Tenant ID/App ID/Auth(Cred, cert, secret) to get Auth Token
  - Request sent as URL
- Two Versions (Profiles)
  - V1.0
  - Beta
- Windows 365 feature parity

# Access and Scopes

- Graph Connection Type
  - Delegated Access
    - User Auth
    - Credential Prompt
  - App-Only Access
    - Secrets/Certs
- Scopes for Windows 365
  - CloudPC.Read.All
  - CloudPC.ReadWrite.All

# Public Apps

Home > Enterprise applications

## Enterprise applications | All applications

TheNotoriousDRR - Azure Active Directory

+ New application Refresh Download (Preview) Preview info Columns Preview features Got feedback?

Want to switch back to the legacy Enterprise Apps search experience? Click to leave the preview. →

SV	svc_WVDAdmin		2/27/2021
	Microsoft Graph PowerShell	7cbd3260-0c9a-464a-9add-cffe1e... 14d82eec-204b-4c2f-b7e8-296a7...	https://docs.microsoft.com/en-us... 1/20/2022
DE	DesktopAnalytics		https://ConfigMgrServiceDA 5/22/2020
CO	ConfigMgrSvc_a3a0159f-b		https://ConfigMgrService 5/20/2021
CA	ConfigMgr Azure Services		https://ConfigMgrService 2/18/2020
MI	Microsoft Intune PowerShell		https://www.microsoft.com/en-us... 4/11/2019
GA	Graph and PowerShell Scri		2/16/2022
WC	Windows Configuration De		10/21/2020
WV	Windows Virtual Desktop		https://mrs-Prod.ame.gbl/mrs-RD... 9/21/2019
CM	Configuration Manager Mi		3/20/2019
IA	Intune Automation		4/25/2019
	Graph explorer	e7897f01-b26c-46c4-8383-63d1b... de8bc8b5-d9f9-48b1-a8ad-b748d...	https://developer.microsoft.com/... 11/11/2019
CO	ConfigMgrSvc_19ac147d-3		https://ConfigMgrService 5/25/2021

### Overview

- Overview
- Diagnose and solve problems

### Manage

- All applications
- Application proxy
- User settings
- Collections

### Security

- Conditional Access
- Consent and permissions

### Activity

- Sign-in logs
- Usage & insights
- Audit logs

# Demo

- Graph Explorer Demo
  - Beta vs v1.0
  - Get Cloud PC
- API Docs vs PowerShell Docs

# PowerShell Graph SDK

- PowerShell Graph SDK
  - Microsoft.Graph Module
  - Default uses Public Enterprise App
    - No need for App or Tenant ID – uses user auth
    - Delegated
- Automation
  - Custom App Registration
  - Certificate Auth
  - Self Signed or PKI

# PowerShell Modules

- Native Graph API Calls via PowerShell
  - Msal.ps
- PowerShell Commandlets for Windows 365
  - Microsoft.Graph
    - Microsoft.Graph.DeviceManagement.Functions
    - Microsoft.Graph.DeviceManagement.Administration
    - Microsoft.Graph.DeviceManagement.Enrolment
    - Microsoft.Graph.Users.Functions
    - Microsoft.Graph.DeviceManagement.Actions
    - Microsoft.Graph.Users.Actions



# Getting Commandlets

- `get-command -module microsoft.graph* *cloudpc*`

```
PS C:\Windows\system32> get-command -module microsoft.graph* *cloudpc*
```

CommandType	Name	Version	Source
Function	Get-MgDeviceManagementComanagedDeviceCloudPcRem...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementDeviceComplianceScriptDev...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementDeviceCustomAttributeShel...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementDeviceCustomAttributeShel...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementDeviceHealthScriptDeviceR...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementDeviceShellScriptDeviceRu...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementDeviceShellScriptUserRunS...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementManagedDeviceCloudPcRemot...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementScriptDeviceRunStateManag...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementScriptUserRunStateDeviceR...	1.9.3	Microsoft.Graph.DeviceManagement.Functions
Function	Get-MgDeviceManagementVirtualEndpointCloudPC	1.9.3	Microsoft.Graph.DeviceManagement.Administration
Function	Get-MgRoleManagementCloudPc	1.9.3	Microsoft.Graph.DeviceManagement.Enrolment
Function	Get-MgRoleManagementCloudPcResourceNamespace	1.9.3	Microsoft.Graph.DeviceManagement.Enrolment
Function	Get-MgRoleManagementCloudPcResourceNamespaceRes...	1.9.3	Microsoft.Graph.DeviceManagement.Enrolment
Function	Get-MgRoleManagementCloudPcResourceNamespaceRes...	1.9.3	Microsoft.Graph.DeviceManagement.Enrolment
Function	Get-MgRoleManagementCloudPcRoleAssignment	1.9.3	Microsoft.Graph.DeviceManagement.Enrolment
Function	Get-MgRoleManagementCloudPcRoleAssignmentAppScope	1.9.3	Microsoft.Graph.DeviceManagement.Enrolment



# Commandlet Naming

```
Get-MgDeviceManagementComanagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementDeviceComplianceScriptDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementDeviceCustomAttributeShellScriptDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementDeviceCustomAttributeShellScriptUserRunStateDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementDeviceHealthScriptDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementDeviceShellScriptDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementDeviceShellScriptUserRunStateDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementScriptDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementScriptUserRunStateDeviceRunStateManagedDeviceCloudPcRemoteActionResult  
Get-MgDeviceManagementVirtualEndpointCloudPC | fl
```

[API/Verb]-Mg[API Path]

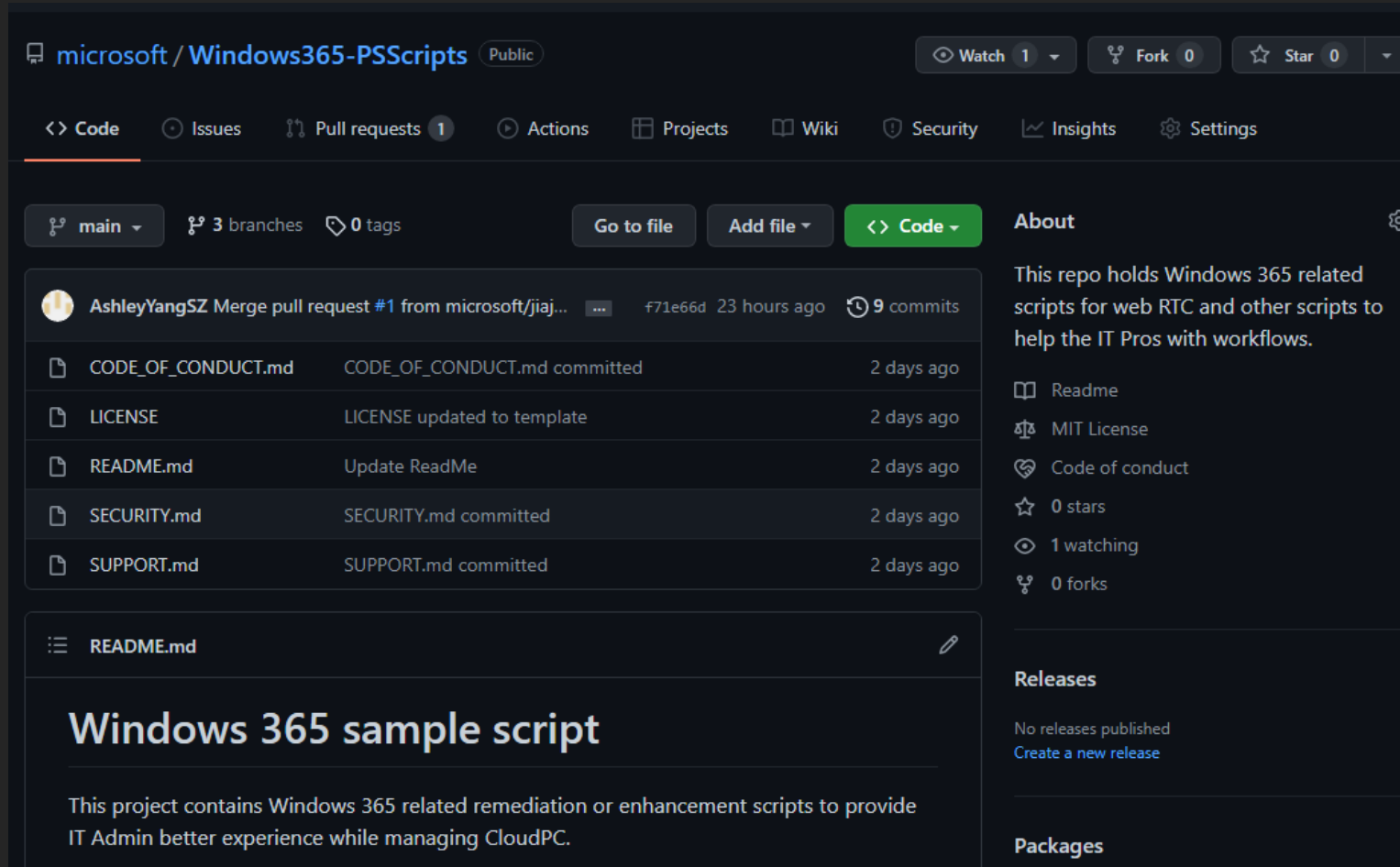
-Example:

GET <https://graph.microsoft.com/beta/deviceManagement/virtualEndpoint/deviceImages>

Get-MgDeviceManagementVirtualEndpointDeviceImage

# GitHub Repo

- <https://github.com/microsoft/Windows365-PSScripts/tree/main>



The screenshot shows the GitHub repository page for `microsoft/Windows365-PSScripts`. The repository is public and has 1 watch, 0 forks, and 0 stars. The main branch is `main`, with 3 branches and 0 tags. The repository contains several files: `CODE_OF_CONDUCT.md`, `LICENSE`, `README.md`, `SECURITY.md`, and `SUPPORT.md`. The `README.md` file is selected, showing the title "Windows 365 sample script" and a description: "This project contains Windows 365 related remediation or enhancement scripts to provide IT Admin better experience while managing CloudPC." The repository also has a pull request #1 from `microsoft/jiaj...` merged 23 hours ago. The repository is described as holding Windows 365 related scripts for web RTC and other scripts to help the IT Pros with workflows. There are no releases published and no packages.

microsoft / **Windows365-PSScripts** Public

Watch 1 Fork 0 Star 0

Code Issues Pull requests 1 Actions Projects Wiki Security Insights Settings

main 3 branches 0 tags Go to file Add file Code

AshleyYangSZ Merge pull request #1 from microsoft/jiaj... f71e66d 23 hours ago 9 commits

CODE_OF_CONDUCT.md	CODE_OF_CONDUCT.md committed	2 days ago
LICENSE	LICENSE updated to template	2 days ago
README.md	Update ReadMe	2 days ago
SECURITY.md	SECURITY.md committed	2 days ago
SUPPORT.md	SUPPORT.md committed	2 days ago

README.md

## Windows 365 sample script

This project contains Windows 365 related remediation or enhancement scripts to provide IT Admin better experience while managing CloudPC.

About

This repo holds Windows 365 related scripts for web RTC and other scripts to help the IT Pros with workflows.

- Readme
- MIT License
- Code of conduct

0 stars

1 watching

0 forks

Releases

No releases published  
[Create a new release](#)

Packages

# Feedback

- We love it
- Used to justify new feature requests
- Give early, give often

# Supporting Documentation

- Graph and PowerShell commands
  - [cloudPC resource type - Microsoft Graph beta | Microsoft Docs](#)
- Setup and High Level
  - [Install the Microsoft Graph PowerShell SDK - Microsoft Graph | Microsoft Docs](#)
- [Graph Explorer - Microsoft Graph](#)

# Demo