




**Dealing with application landscapes on WVD,  
current and future!**

A group of approximately 20 people, mostly men, are posing for a group photo on a paved area with some landscaping. They are arranged in several rows, some standing and some kneeling. In the foreground, there are large, colorful blocks spelling out 'Microsoft'. The background shows a modern building with large windows and some trees.

Freek Berson   
Wortell / RDSGurus  
@fberson  
Microsoft MVP

Micha Wets   
ASPEX / Cloud.Architect  
@michawets  
Microsoft MVP

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current and future!**



SEPTEMBER 30, 2019

# Windows Virtual Desktop is now generally available worldwide

By Brad Anderson, Corporate Vice President for Microsoft 365, and Takeshi Numoto, Corporate Vice President for Microsoft Azure

Today, we're excited to announce that Windows Virtual Desktop is now generally available worldwide. Windows Virtual Desktop is the only service that delivers simplified management, a multi-session Windows 10 experience, optimizations for [Office 365 ProPlus](#), and support for Windows Server Remote Desktop Services (RDS) desktops and apps. With Windows Virtual Desktop, you can deploy and scale your Windows desktops and apps on Azure in minutes.

# End User Computing

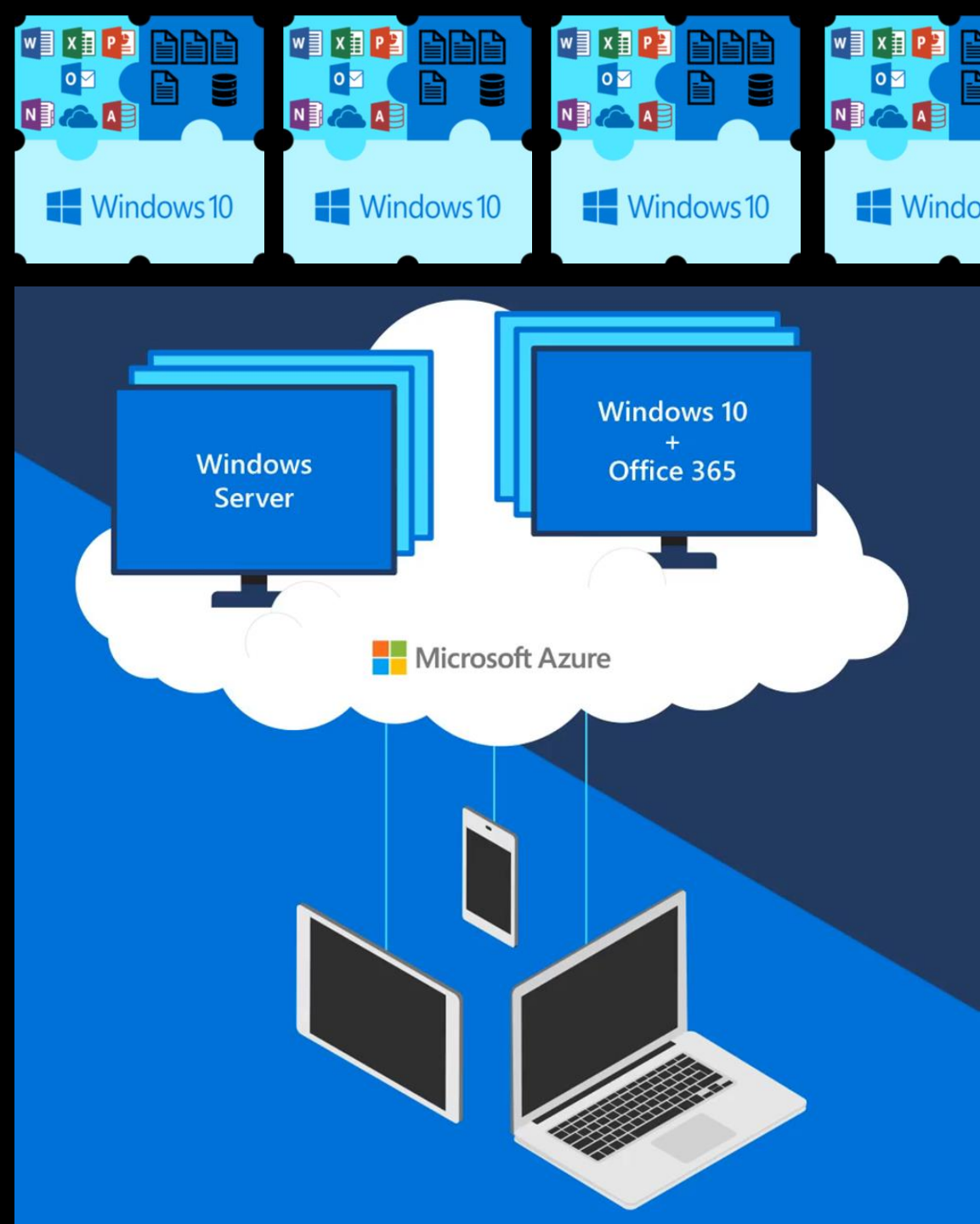
1. Applications
2. User Profile & data
3. Operating System

*On a **physical** workstation all components **closely coupled**.*



# Windows Virtual Desktop

WVD routes users to a VM from a host pool with resources available to run the user's app or desktop workloads.



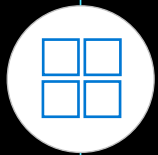
# FSLogix Technology



## Profile Container

Replacement for roaming profiles and folder redirection. Dramatically speeds up logon and application launch times.

- Includes Office 365 Container, which roams Office cache data (Outlook OST, OneDrive cache, Skype for Business GAL, etc.) and Windows Search DB with user in virtual desktop environments.



## App Masking

Minimize number of gold images by creating a single image with all applications. Excellent app compatibility with no packaging, sequencing, backend infrastructure, or virtualization.



## Java Redirection

Helps protect the enterprise from vulnerabilities of multiple installed versions of Java by mapping specific versions to individual apps or websites.

# FSLogix Profile Containers



# FSLogix Profile Containers



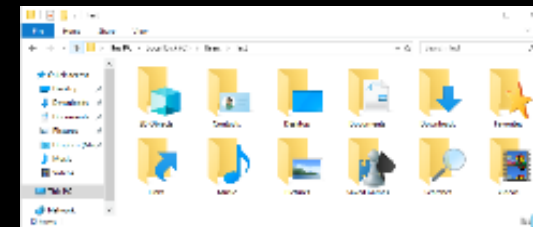
FSLogix separates the user profile layer from the virtual machine

To the user it feels like you're saving and accessing files from a local disk

This solves the 2<sup>nd</sup> piece of the puzzle, but what about the applications?



Profile Container per user 





# Current options

## OPTION 1

### Multiple images by role

- Manage numerous VM pools customized for different users' roles
- These images would all need to be individually maintained and patched
- Possibly High overhead

*DEMO: ARM Templates*

## OPTION 2

### Traditional App layering

- Image can get bloated
- Additional policies
- App licensing could be challenging

*DEMO: App Masking*

## OPTION 3

### App streaming

- Requires apps to get cached into OS during user session
- Need to manage app streaming infra
- Possible need to repackage/sequence the app

# What if...

We could attach and detach applications from the OS like attaching and detaching profiles?



*Drum rolls...*

# MSIX app attach

All **benefits of MSIX** (declarative install, simple deployment, per user, OS Managed)



Native format is MSIX (**no re-packaging**)

MSIX Apps can be **stored off the windows disk**

Remotely **mount the apps** to the VM on-demand

Apps groups are assigned to users, and **available instantly**

**Looks and feels local** to the user and to windows

# Terminology

Expanding MSIX

Taking an MSIX package (or output from conversion) and transforming it into an app attach package

Staging / Destaging

Making the app attach package available on the WVD Host

Registering / DeRegistering

Making the stages app attach package available for the user

Delayed registration

Delay the registering of the application until session is established

On Demand

Allow users to load application on the fly as needed

# Demo



# Microsoft's DevOps Tooling – enhanced by GitHub



Azure Boards



Azure Repos



Azure Pipelines



Azure Kubernetes Service



Azure Test Plans



Azure DevTest Labs



Azure Security Center



Azure Artifacts



Visual Studio App Center



Azure Policy



Azure Monitor



Azure Key Vault

## GitHub



Security

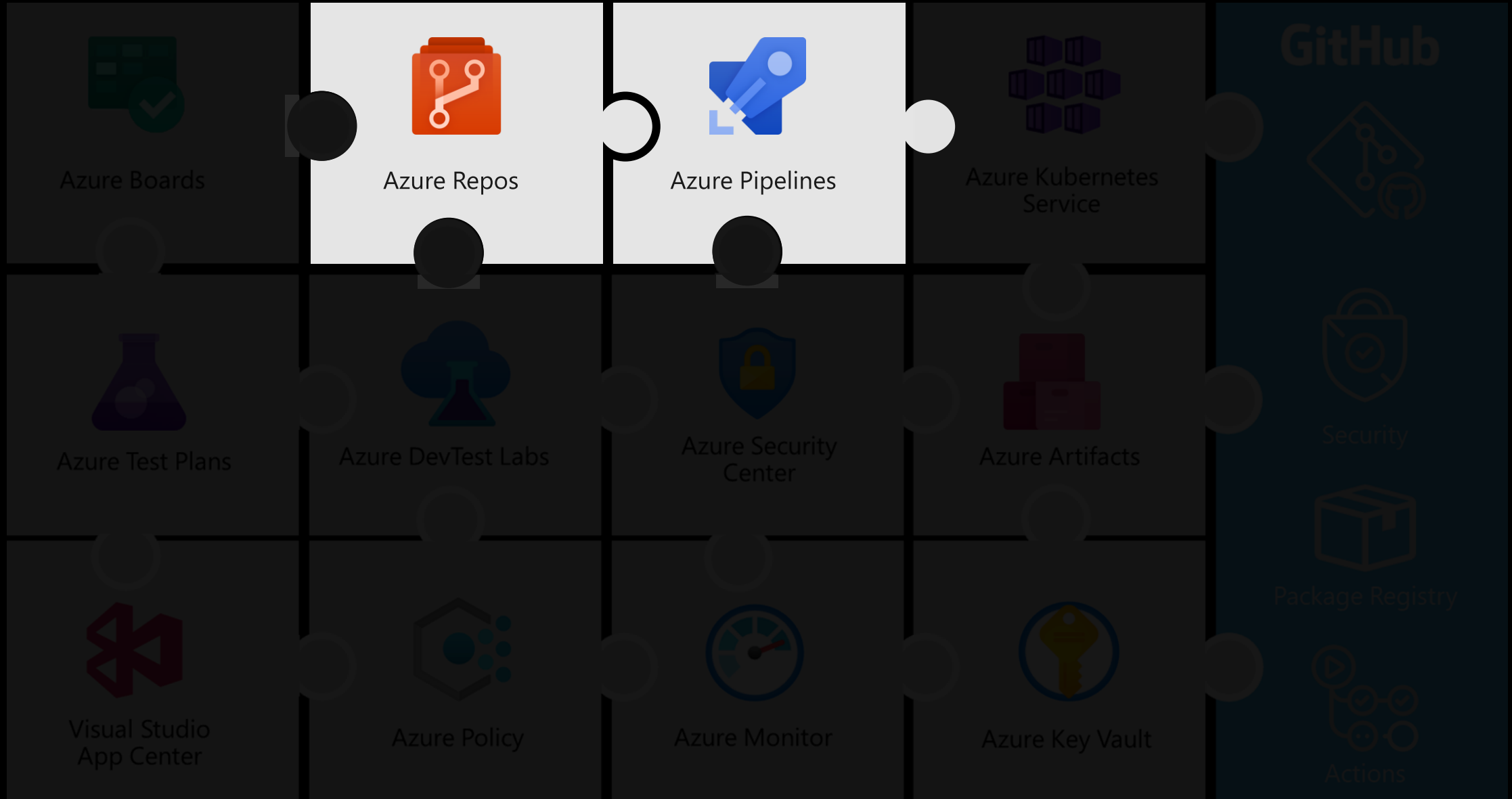


Package Registry

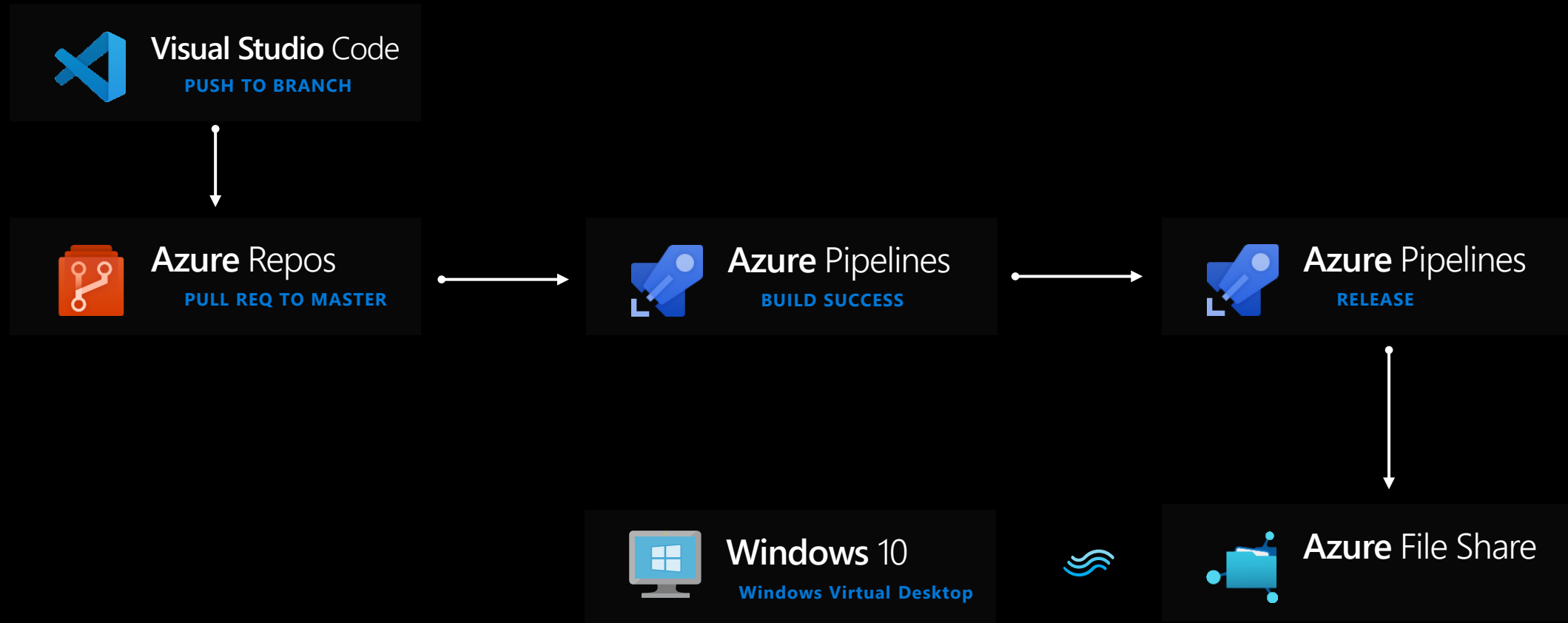


Actions

# Microsoft's DevOps Tooling – enhanced by GitHub



# Utilizing Azure DevOps CI/CD pipelines



# Automatic MSIX App Attach script for WVD

Marcel Meurer

ITProCloud.de

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Type and enter...

## ITProCloud Blog

This is my personal website, which I maintain to support the cloud community. ITProCloud.de is the label I use for tests and demonstrations. ITProCloud.de is not a company in the business sense.

### Automatic MSIX App Attach script for Windows Virtual Desktop

## Automatic MSIX App Attach script for WVD

Microsoft provides a preview of MSIX app attach for Windows Virtual desktop. MSIX app attach gives you the possibility to only have a few amounts of images and connect your application to them - without installing. That sounds a little bit like App-V, and from a user perspective, this is slightly comparable:

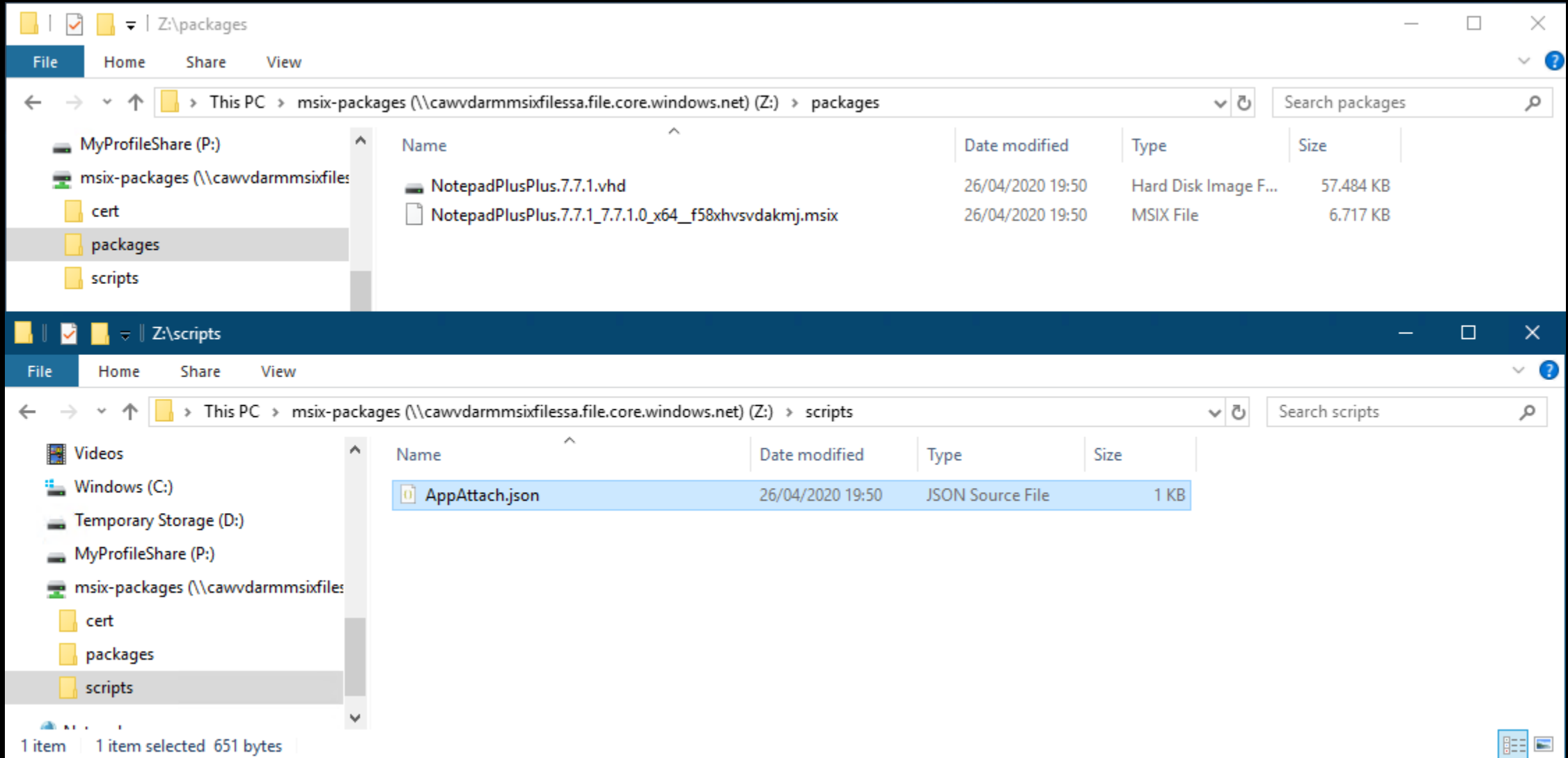
You cannot see the application in the file system from outside the app. If you open the app and if you browse to the application folder, you can see this folder. The attaching and links in the start menu "feels" like the use of modern apps from the marketplace. And indeed: The application links in the start menu didn't refer to the exe-files in the program folder.

<https://blog.itprocloud.de/Automatic-MSIX-app-attach-scripts/>

@MarcelMeurer

# Automatic MSIX App Attach script for WVD

Marcel Meurer





# Demo

# Road Map



## **MSIX tooling preview**

APIs & tools



## **Integration with Windows Virtual Desktop**

CimFS, ARM portal,  
Windows Virtual  
Desktop Agent



## **Private Preview of MSIX app attach in Windows Virtual Desktop**

Selected tech partners  
& customers



## **Public Preview of MSIX app attach**

Publicly available  
management via ARM  
portal

Ongoing

Coming soon

Looking ahead

# CALL TO ACTION: Public preview available

Overview:

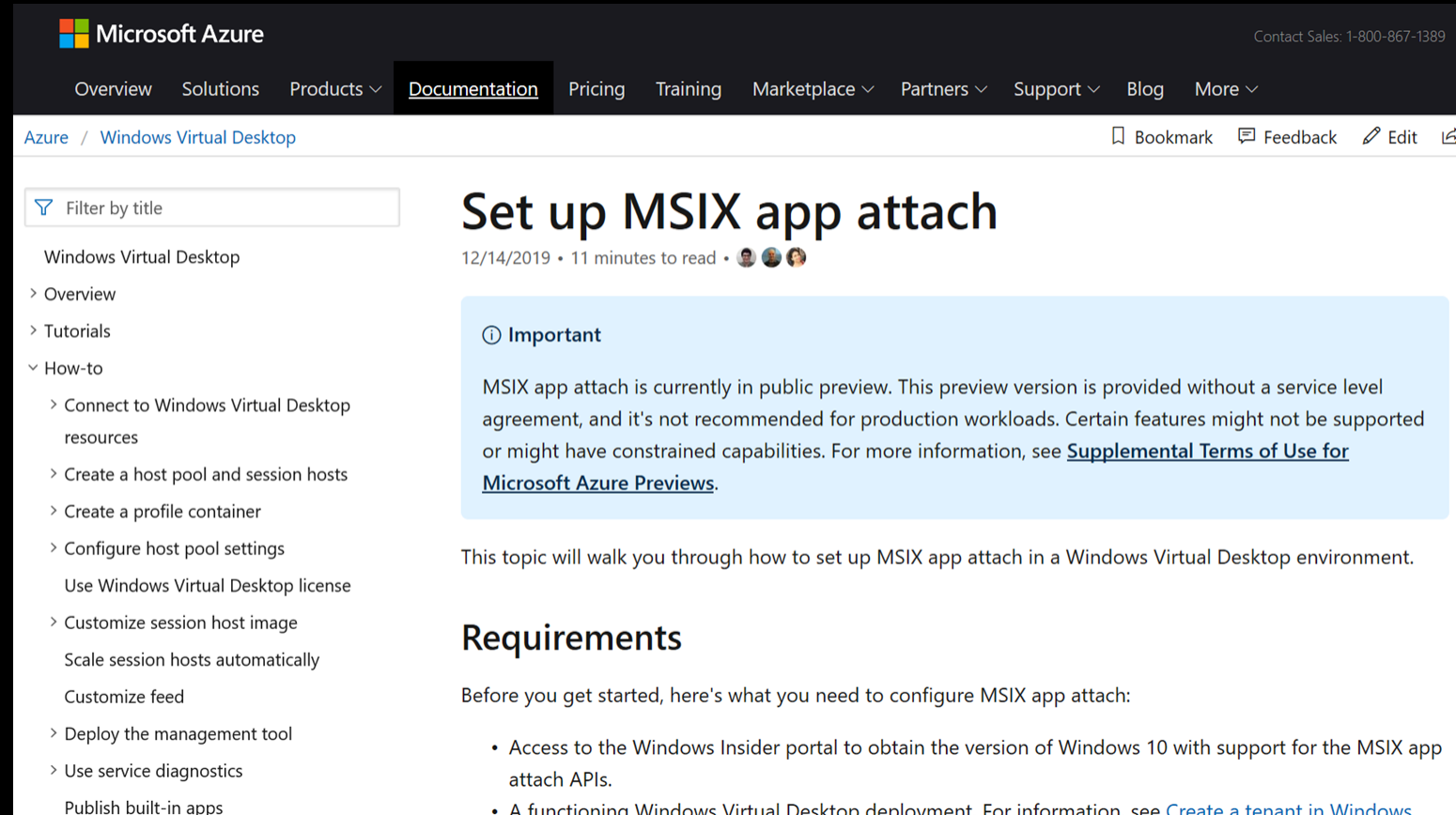
[aka.ms/msixandwvd](https://aka.ms/msixandwvd)

MSIX ToolKit:

[aka.ms/msixtoolkit](https://aka.ms/msixtoolkit)

Tech Community:

[aka.ms/msixcommunity](https://aka.ms/msixcommunity)



The screenshot shows the Microsoft Azure documentation website. The top navigation bar includes the Microsoft Azure logo, a search bar, and links for Overview, Solutions, Products, Documentation (highlighted), Pricing, Training, Marketplace, Partners, Support, Blog, and More. The breadcrumb trail indicates the path: Azure / Windows Virtual Desktop. On the left, a sidebar shows a tree view of the Windows Virtual Desktop documentation, with 'How-to' expanded to show 'Connect to Windows Virtual Desktop resources'. The main content area is titled 'Set up MSIX app attach' with a date of 12/14/2019 and a reading time of 11 minutes. A blue 'Important' callout box states that MSIX app attach is in public preview and not recommended for production. The text below explains that the topic will guide the user through setting up MSIX app attach in a Windows Virtual Desktop environment. A 'Requirements' section follows, listing the need for access to the Windows Insider portal and a functioning Windows Virtual Desktop deployment.

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  - > Create a profile container
  - > Configure host pool settings
    - Use Windows Virtual Desktop license
  - > Customize session host image
    - Scale session hosts automatically
    - Customize feed
  - > Deploy the management tool
  - > Use service diagnostics
    - Publish built-in apps

## Set up MSIX app attach

12/14/2019 • 11 minutes to read • 

**Important**

MSIX app attach is currently in public preview. This preview version is provided without a service level agreement, and it's not recommended for production workloads. Certain features might not be supported or might have constrained capabilities. For more information, see [Supplemental Terms of Use for Microsoft Azure Previews](#).

This topic will walk you through how to set up MSIX app attach in a Windows Virtual Desktop environment.

## Requirements

Before you get started, here's what you need to configure MSIX app attach:

- Access to the Windows Insider portal to obtain the version of Windows 10 with support for the MSIX app attach APIs.
- A functioning Windows Virtual Desktop deployment. For information, see [Create a tenant in Windows](#)

# Summary

Eventually, MSIX app attach fulfils the promise to have **full isolation** between the WVD Host and any application, user profile or user data!





Freek Berson   
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# Questions?

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