



# Windows Virtual Desktop

November 2019

John is a GBB with WW Commercial Business, providing technical depth for cloud implementations across the US. Based in New York, his key areas of technical focus include Windows Virtual Desktop, Core Enablement, Cloud Strategy and Hybrid Cloud Infrastructure.



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# Windows Virtual Desktop

The best virtual desktop experience, delivered on Azure

Windows Virtual Desktop Preview is a comprehensive desktop and app virtualization service running in the cloud. It's the only virtual desktop infrastructure (VDI) that delivers simplified management, multi-session Windows 10, optimizations for Office 365 ProPlus, and support for Remote Desktop Services (RDS) environments. Deploy and scale your Windows desktops and apps on Azure in minutes and get built-in security and compliance features.



# Windows Virtual Desktop Benefits

Enables a multi-session Windows 10 experience, optimized for Office 365 ProPlus

Supports Windows Server (2012R2 +)

Most flexible service allowing you to virtualize both desktops and apps

Windows 7 virtual desktop with free Extended Security Updates

Integrated with the security and management of Microsoft 365





# Supported OS

Windows 10 Enterprise Multi-session

Windows 10 Enterprise Single-Session

Windows 7 Single-Session

Windows Server 2019

Windows Server 2016

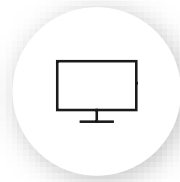
Windows Server 2012 R2

VMs in customer's Azure subscription



# Many customers are already eligible for WVD

## WVD Licensing Requirements



### Client

Customers are eligible to access Windows 10 single and multi session and Windows 7 with Windows Virtual Desktop (WVD) if they have one of the following licenses\*:

- Microsoft 365 E3/E5
- Microsoft 365 A3/A5/Student Use Benefits
- Microsoft 365 F1
- Microsoft 365 Business
- Windows 10 Enterprise E3/E5
- Windows 10 Education A3/A5
- Windows 10 VDA per user



### Server

Customers are eligible to access Server workloads with Windows Virtual Desktop (WVD) if they have one of the following licenses:

- RDS CAL license with active Software Assurance (SA)

Customers pay for the virtual machines (VMs), storage, and networking consumed when the users are using the service

\*Customers can access Windows Virtual Desktop from their non-Windows Pro endpoints if they have a Microsoft 365 E3/E5/F1, Microsoft 365 A3/A5 or Windows 10 VDA per user license.

# FSLogix entitlements

## Access to FSLogix technology\*

FSLogix technology, which improves the performance of Office 365 ProPlus in multi-user virtual environments, is now available at no additional cost for Microsoft 365 customers

Microsoft 365 E3/E5/F1/Business

Microsoft 365 A3/A5/Student Use Benefits

Windows 10 Enterprise E3/E5

Windows 10 Education A3/A5

Windows 10 VDA per user

Remote Desktop Services (RDS) CAL  **NEW**

Remote Desktop Services (RDS) SAL  **NEW**

\*Including Office 365 Container, Profile Container, App Masking and Java Redirection

# Virtualizing Windows Server



- Supports 2012 R2, 2016, and 2019
  - If an older version, upgrade to newer version or refactor app for Windows 10 multi-session
- Office 365 ProPlus support only in Windows Server 2016
  - 2012 R2 and 2019 only support Office perpetual
  - Use Windows 10 Enterprise multi-session for best experience
- Requires the use of Windows Server VMs on Azure but can leverage Azure Hybrid Benefit for cost savings



## Windows Server RD Session Host

Scalable multi-user legacy Windows environment.  
Windows Server

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Multiple users

Win32

Office 2019 Perpetual

Long-Term Servicing  
Channel

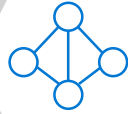


# Prerequisites

## Requirements



Azure subscription



Azure Active Directory



Determine your identity strategy (AD, ADDS)



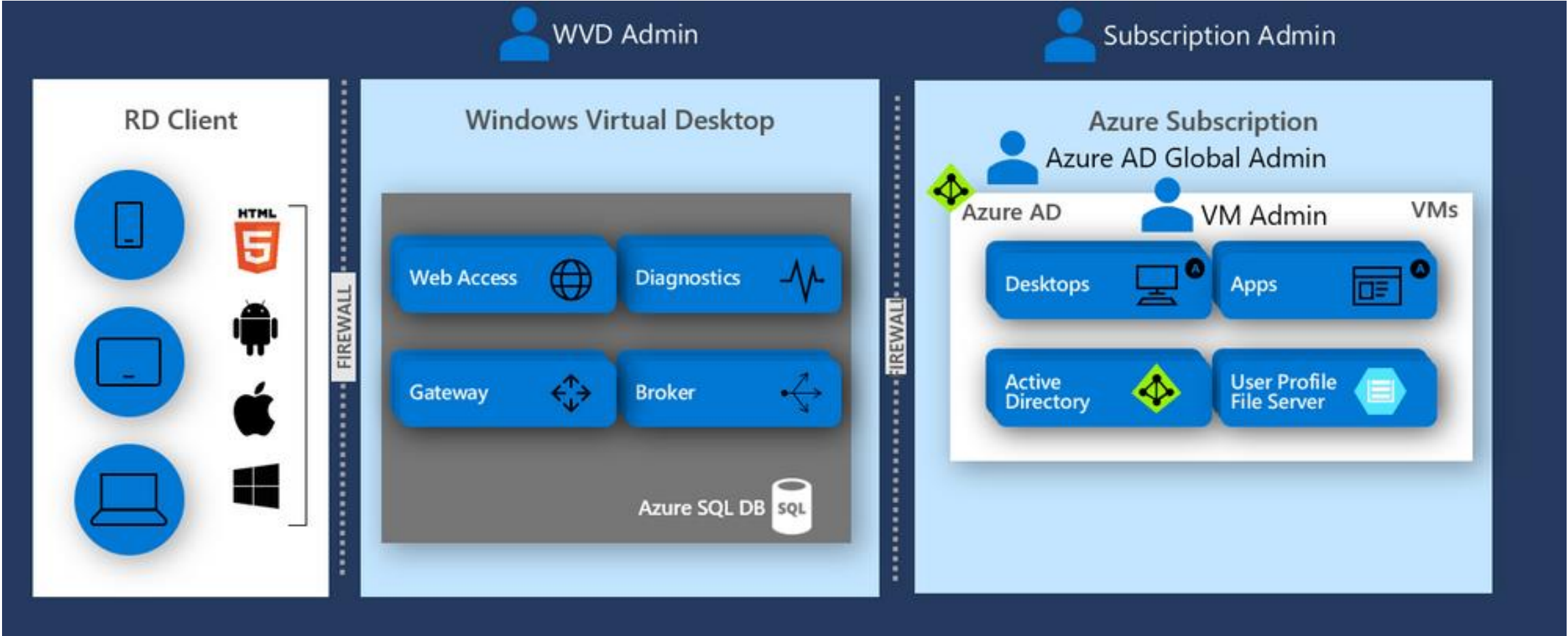
All associated Azure resources (image, virtual network, storage) in one region



Required credentials (Azure AD, WVD tenant, Service principle, etc.)

[Link to prepare Demo bench \(coming soon\)](#)

# Credentials required



# Recommended identity setup for hybrid organizations

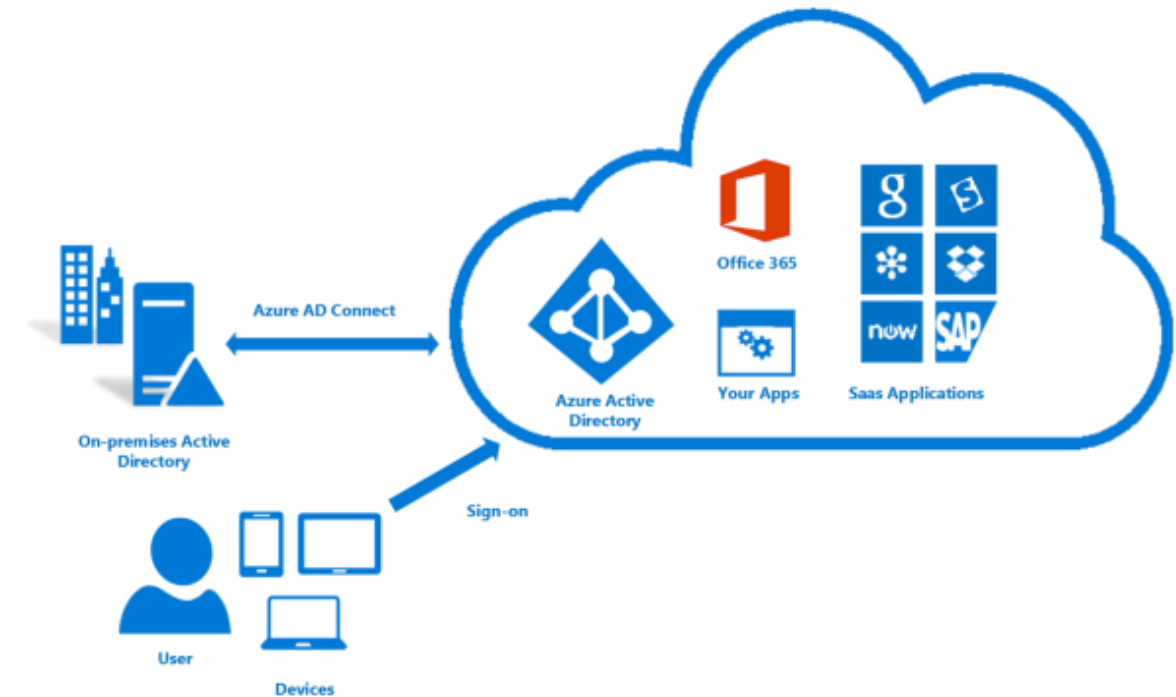


Azure AD



Windows Server AD on-prem connected to Azure

- ExpressRoute or site-to-site VPN to Azure
- Azure AD Connect to synchronize identities



# Network requirements and considerations

## Requirements

Network must route to a Windows Server Active Directory (AD)

This AD must be in sync with Azure AD so users can be associated between the two

VMs must domain-join this AD

URL's: 443 outbound

\*.wvd.microsoft.com

\*.blob.core.windows.net

\*.core.windows.net

\*.servicebus.windows.net

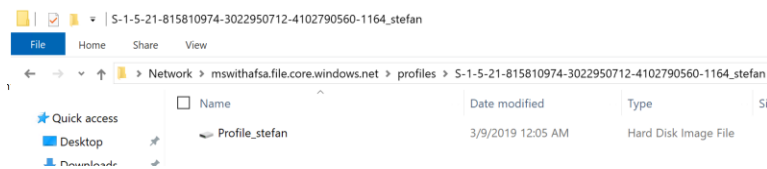
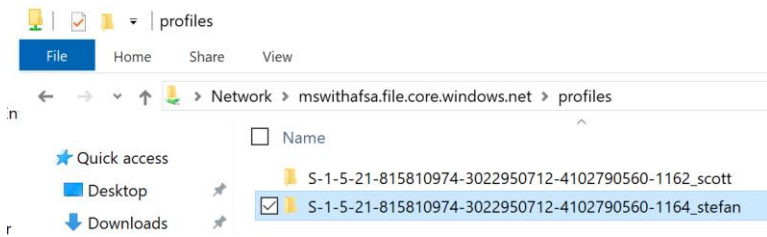
prod.warmpath.msftcloudes.com

catalogartifact.azureedge.net

## Considerations

	Connectivity Type	Special Considerations
ExpressRoute	Hybrid	Dedicated network through service provider
Site-to-Site VPN	Hybrid	Limited bandwidth compared to ExpressRoute
Azure AD Domain Services	Isolated	Must synchronize password hashes to Azure AD

# Windows Virtual Desktop with FSLogix



Admin assign users to session hosts



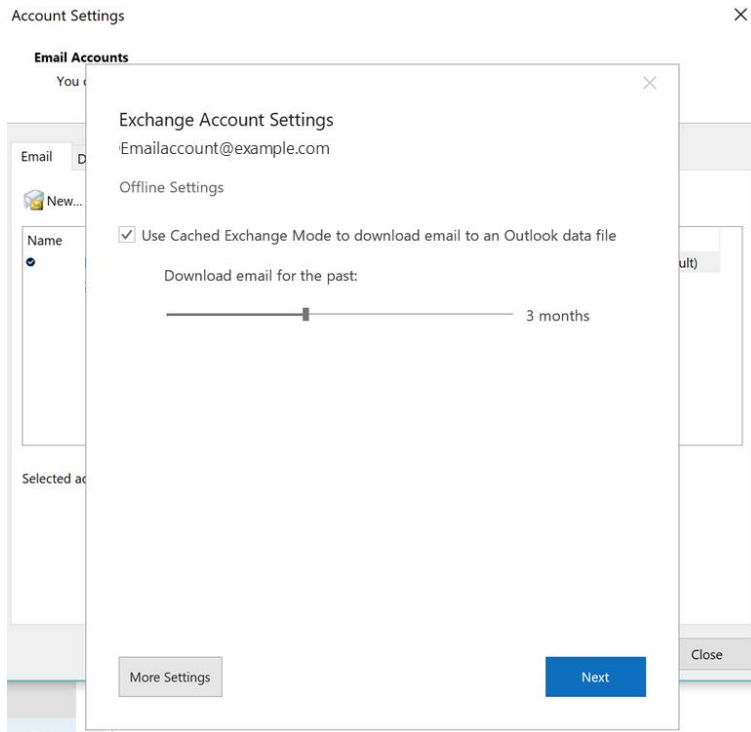
End user's login



Gets profile assigned



# Outlook



- Virtual environment friendly defaults settings
- Syncing of Inbox prior to Calendar for faster startup experience
- Admin option to reduce calendar sync window
- Reduce the number of folders that are synced by default
- Windows Desktop Search is now per-user

## Requirements:

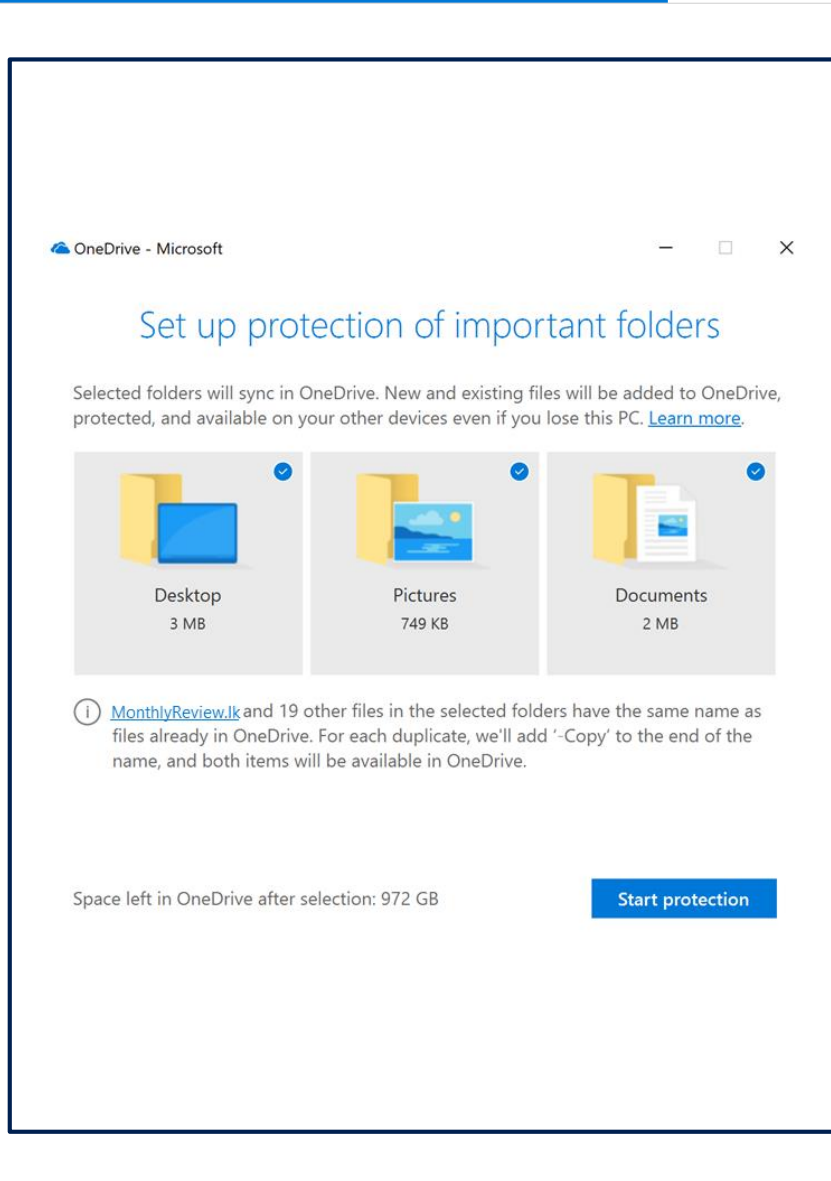
- FSLogix
- SCA activated for Office

# OneDrive

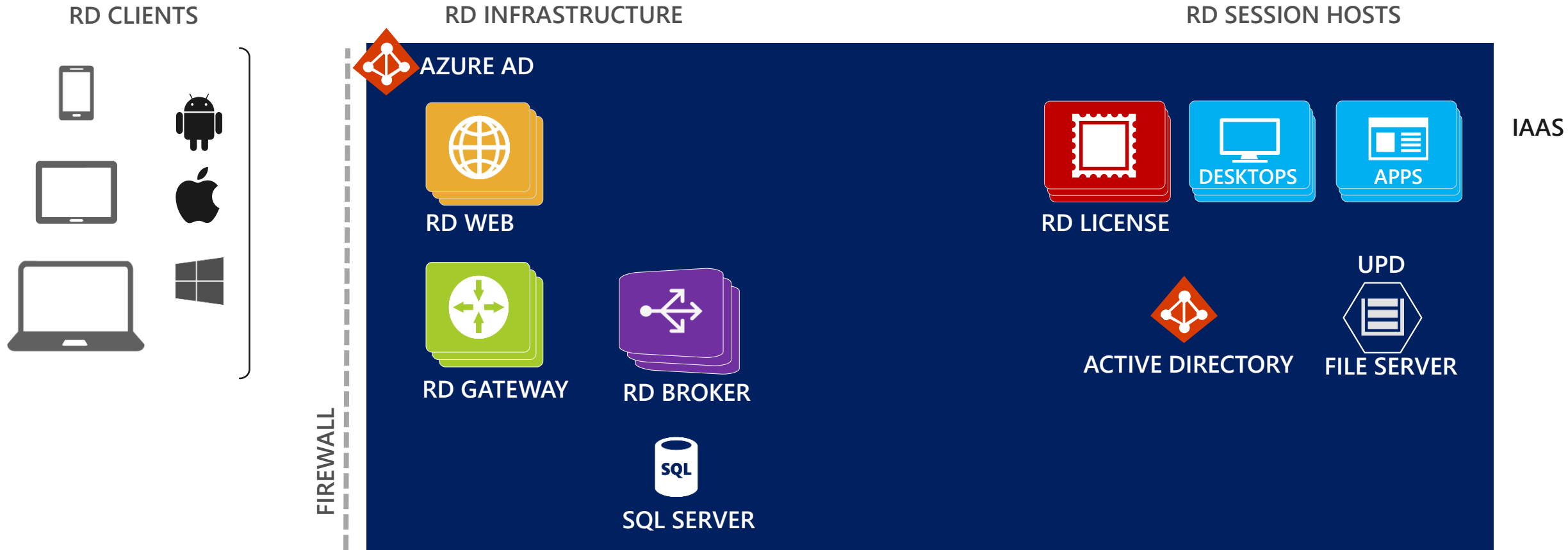
- Co-auth and collab capabilities in WXP, powered by OneDrive
- OneDrive sync will run in non-persistent environments
- Files on Demand capabilities
- Auto populate user profile folders

## Per-machine install steps:

- Download OneDriveSetup.exe
- Run "OneDriveSetup.exe /allusers" or by using SCCM
- Once setup is complete, OneDrive will start. Any accounts added on the computer will be migrated automatically



# RDS 2012 R2 & Azure IaaS



- All roles implemented in Azure virtual machines (IAAS BASED)

# Native Windows Virtual Desktop

## High Level Architecture

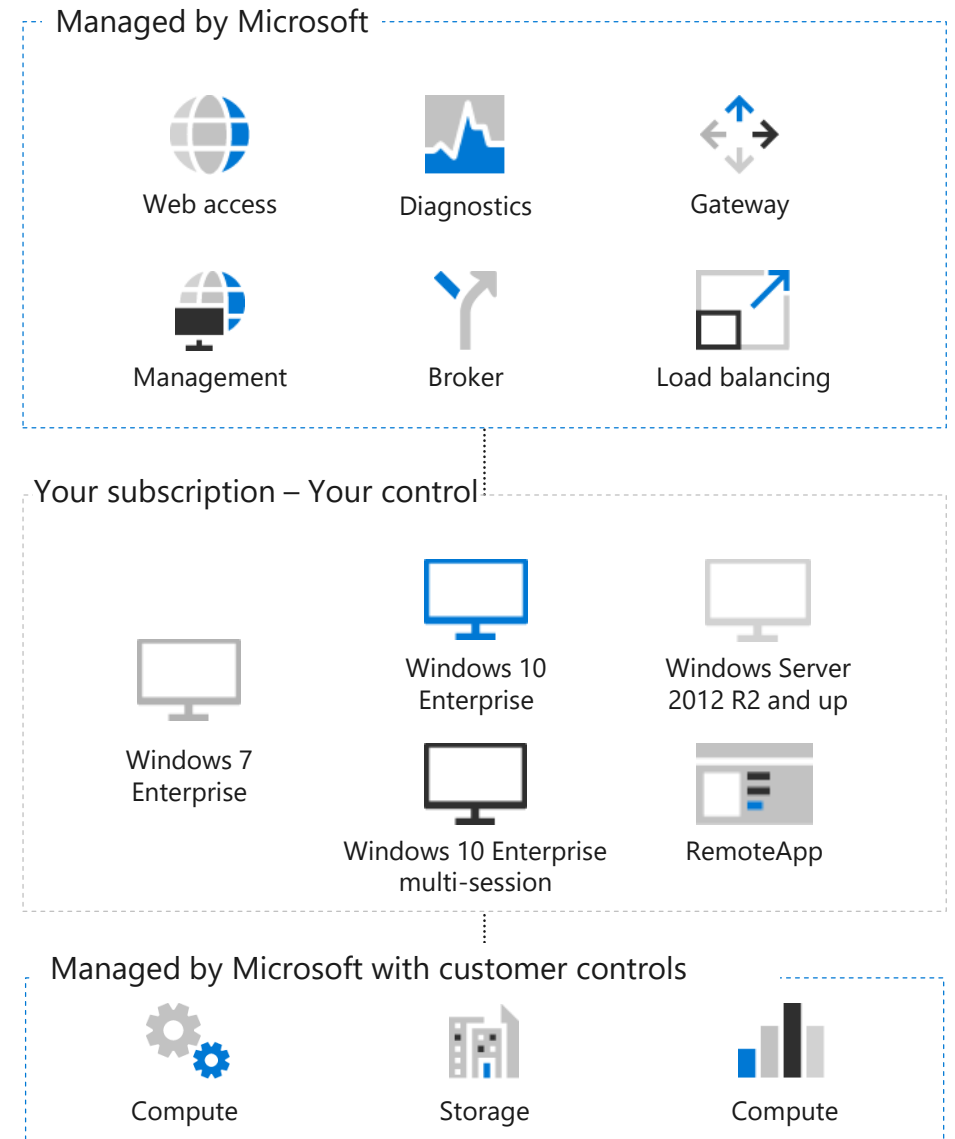
Use Azure Active Directory identity management service

Provide virtualization infrastructure as a managed service

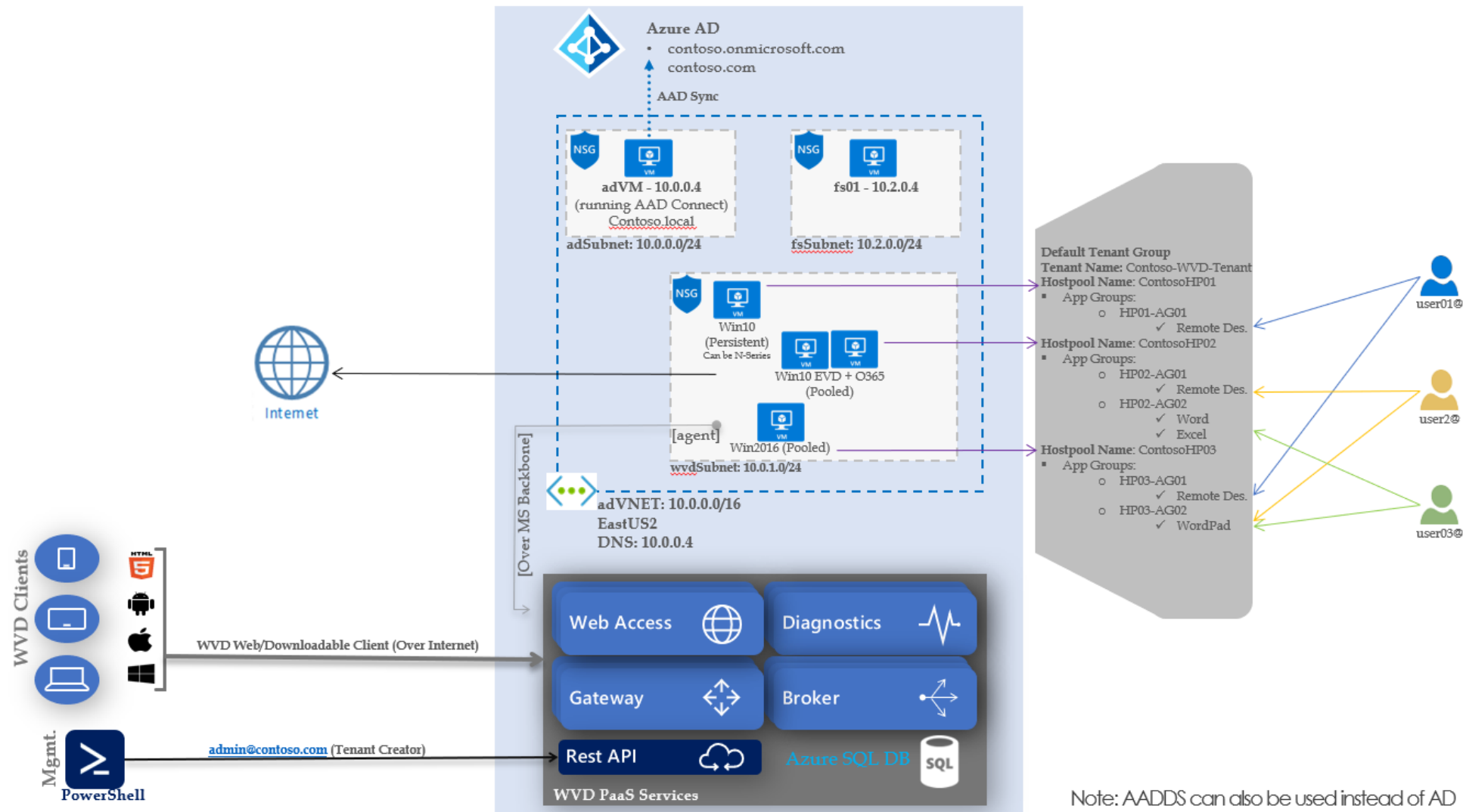
Deploy and manage virtual machines in Azure subscription

Manage using existing tools like Configuration Manager or Microsoft Intune

Connect easily to on-premises resources



# Sample WVD Architecture





# Improved Isolation: Reverse Connect

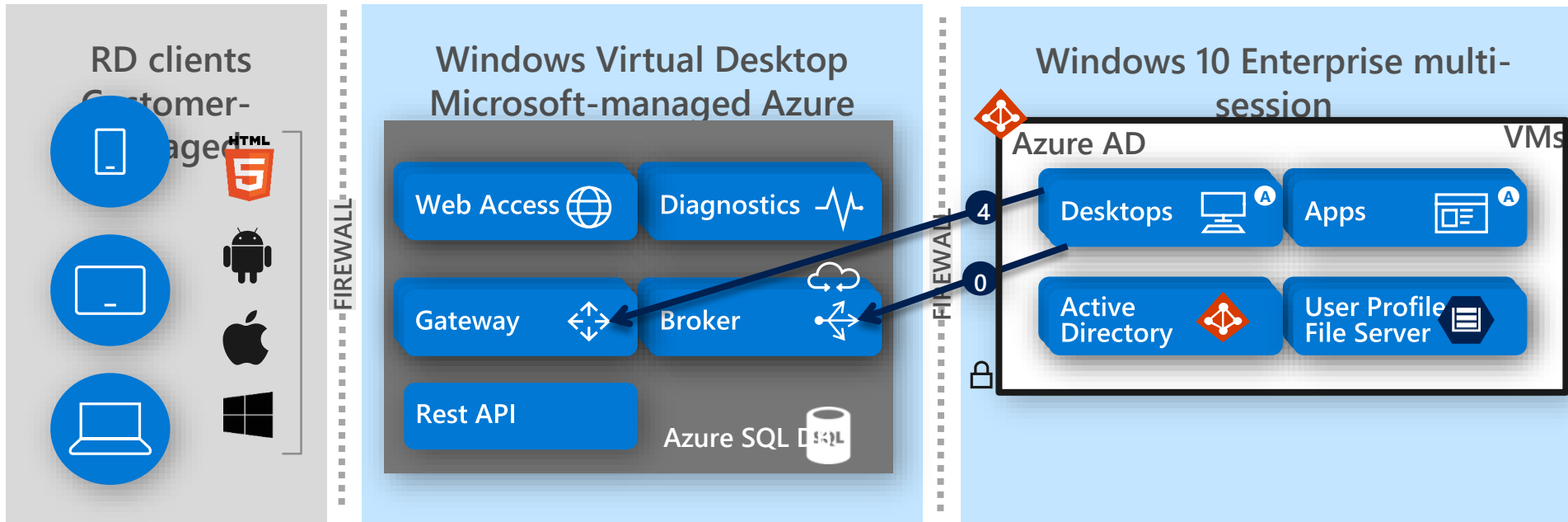
## How Reverse Connect works:

A user launches the RD Client, they enter in their credentials and authenticate with Azure AD. on successful sign in, Azure AD returns a token to the RD Client. The RD Client then presents a token to the Web Access component, the Broker service then query's the SQL Database to determine the available and authorized resources for that user.

The user selects and clicks on the chosen resource and connects to the Gateway.

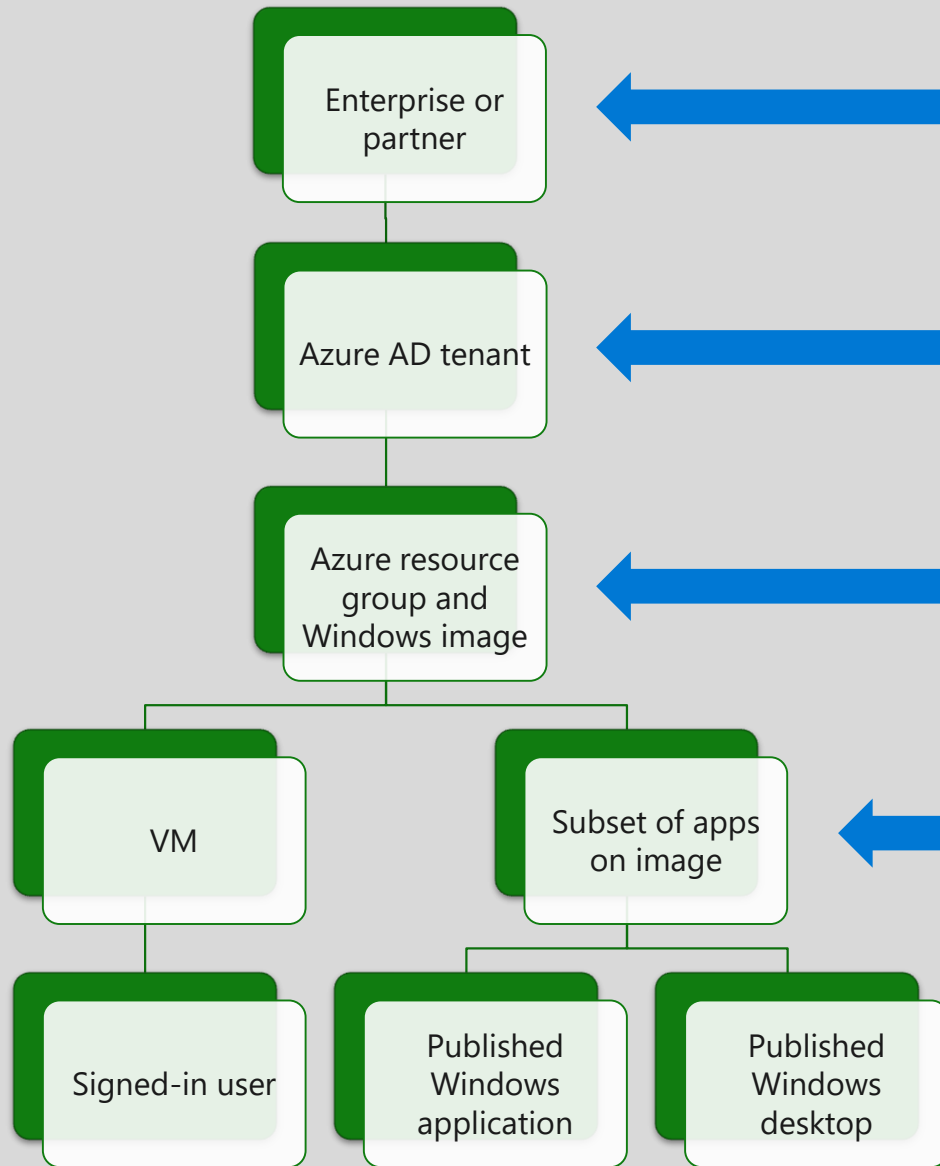
The broker service then orchestrates the connection from the host agent to the Gateway.

The User is then able to access and use resources requested (Desktops/Apps).

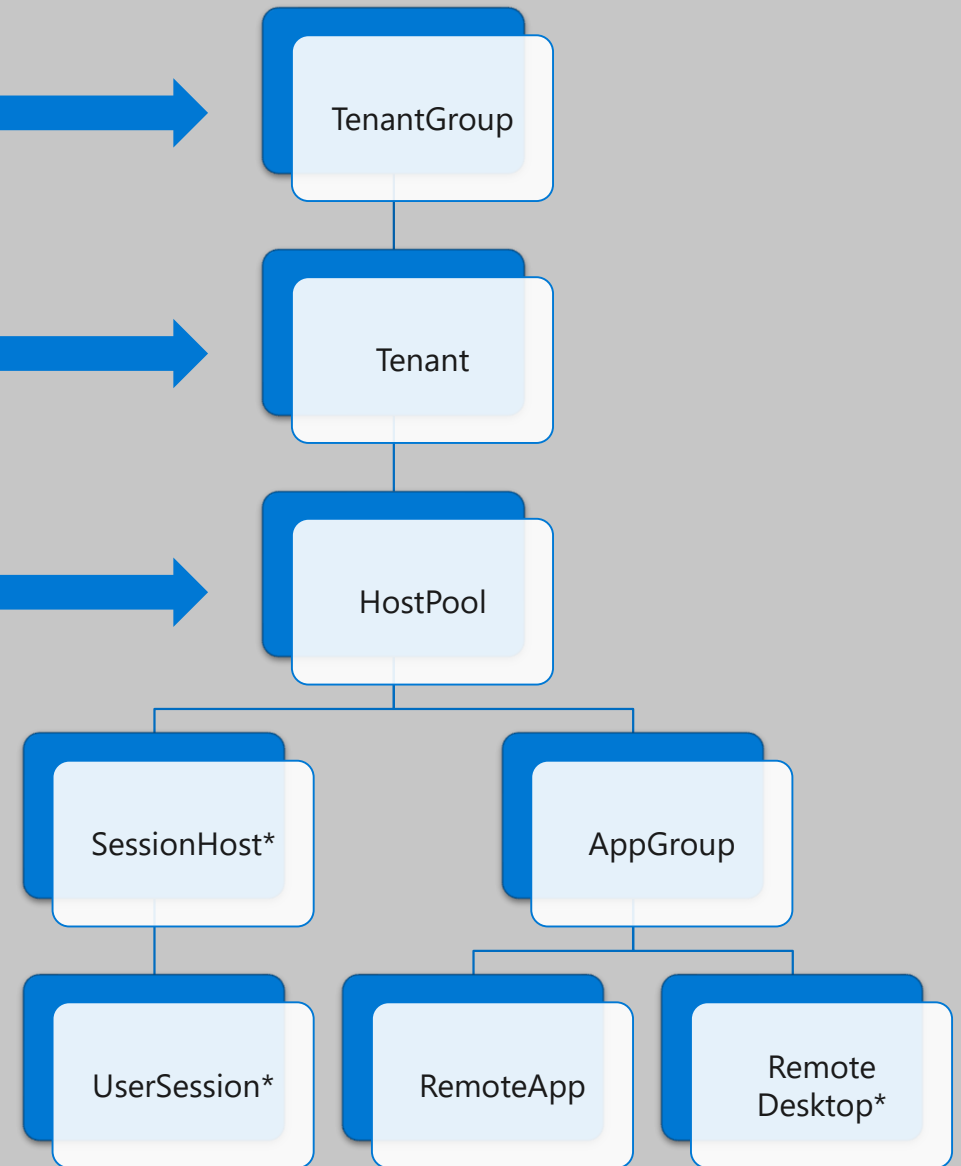


As you can see from the diagram above, resources connect from the inside of Azure to the gateway. meaning that Desktops and Apps will only ever connect to the Microsoft managed Azure services and will not connect directly out to the public network/s. The RD client authenticates and connects to the RD gateway component, and the desktop/apps (Azure VM's) connect to the gateway. All communication and session connectivity is managed at the gateway.

## External Azure World



## WVD Object Model



\* Implicitly created object

# Windows Virtual Desktop - Account Guidance

	Create (New-Rds*)	Read (Get-Rds*)	Update (Set-Rds*)	Delete (Remove-Rds*)	Authorize (*RdsRoleAssignment)
RDS Owner	✓	✓	✓	✓	✓
RDS Contributor	✓	✓	✓	✓	
RDS Reader		✓			
RDS Operator		✓ (Diagnostic activity)			

- Global Admin account for your Azure Active Directory – No MFA
  - This account is used to provide consent to the WVD service. The consent allows the WVD service to read all user profiles in AAD.
  - This account is used to create the WVD UX Portal. This account should be part of the WVD Owners group in order to create the UX Portal.
- Local Active Directory account that has permissions to add session hosts (servers) into the domain in a particular OU.
  - This account can be added to the RDS Contributors group and used to as dual purpose for both adding servers to the domain and creating session hosts in WVD.
- RDS Owner account to administer the WVD environment – No MFA
- AAD Enterprise Application needs to have the Global Admin account as TenantCreator role



Infrastructure

Tenants

to Expand/Collapse

Tenants

(>) icon to Expand/Collapse

+ Create Tenant

Edit

Delete

Manage Tenant Groups

Refresh

	Tenant Name	Friendly Name
<input type="checkbox"/>	adamwhitlat	
<input type="checkbox"/>	adamwhitlat	
<input type="checkbox"/>	jojenner-nonsso	
<input type="checkbox"/>	sreedr	

adamwhitlat

jojenner-nonsso

win10persistent

win10pooled

sreedr

Hostpool "win10pooled"

General

Hosts

App Groups

+ Add Host

Edit

Delete

Refresh

	Host Name	Allow New Sessions	Sessions	Max Session Limit
<input type="checkbox"/>	win10-pool-0.jjazurecloud.com	Yes	0	N/A
<input type="checkbox"/>	win10-pool-1.jjazurecloud.com	Yes	0	N/A
<input type="checkbox"/>	win10-pool-2.jjazurecloud.com	Yes	0	N/A

# RDMI UX-Dashboard

RDS Tenants

Click on arrow(>) icon to Expand/Collapse menus.

Tenants

> adamwhitlat

> jojenner-nonsso

win10persistent

win10pooled

> sreedr

Tenant "jojenner-nonsso"

General

Hostpools

+ Create Hostpool

Edit

Delete

Refresh

	Hostpool Name	Friendly Name	Hosts	Session
<input type="checkbox"/>	win10persistent	win10persistent	3	
<input type="checkbox"/>	win10pooled	win10pooled	3	



# Patch Management



Use one host pool as a pilot group before updating all host pools.



Update VMs with existing Azure management solutions and all VMs in a host pool



Updates can be staged in a maintenance window to keep systems available after logon

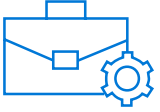


All VMs must be at the same update-level after maintenance window is completed



Use SCCM to manage your images

# Master Image Management



Master image can be managed by any already existing process and technologies including

- Azure Update Management
- System Center Configuration Manager
- 3<sup>rd</sup> party

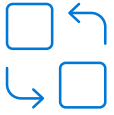


Best practices document will be provided to assist in configuration of a golden image for WVD



Application masking technology to minimize the number of golden images and simplify app image management

# Profile Management



## Profile Container

- User profile is placed into a VHD container that is stored in a central location on the network or in the cloud
- This VHD is dynamically attached at user logon
- Content appear to be in its native location

### Benefits

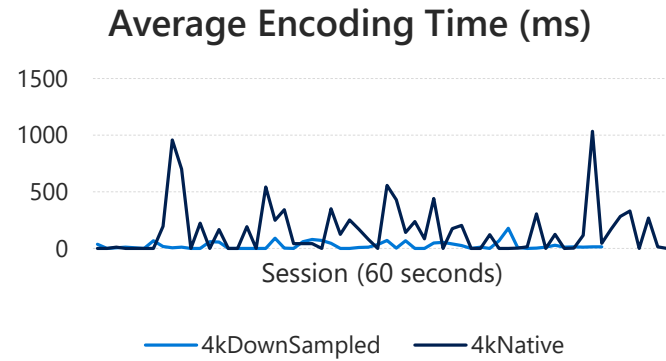
- Extremely fast logon times
- Virtually eliminates profile corruption
- Uses native Windows VHD capabilities—no hypervisor
- Very easy to deploy and manage
- Completely seamless end user experience



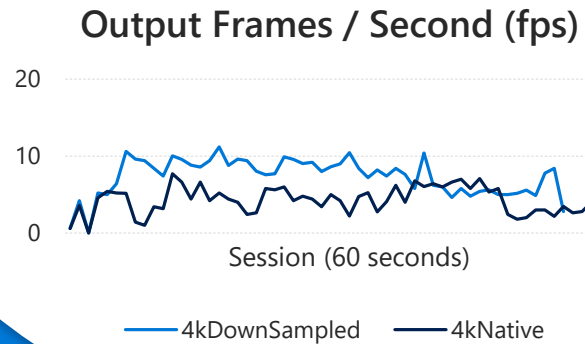
## Cloud Cache

- Cloud Cache will absorb reads and optimize writes into cost effective payloads
- Adding a local cache component
- Applications talk to the local cache, and the cache talks to the remote container
- If the connection to the remote container is interrupted, the apps still work because they're talking to the cache
- If the interruption is short, or no data that isn't in the cache is requested during the outage, everything behaves normally
- When connection comes back online, we reconnect and re-sync if necessary

# Video and graphics improvements



Video playback always uses hardware acceleration



Smooth playback when moving the video window

4K downsampling

# Device redirection

## High-level redirection of built-in or attached video camera

Less network bandwidth compared to USB camera redirection

Increased video framerate, up to 30 fps

Redirect multiple cameras

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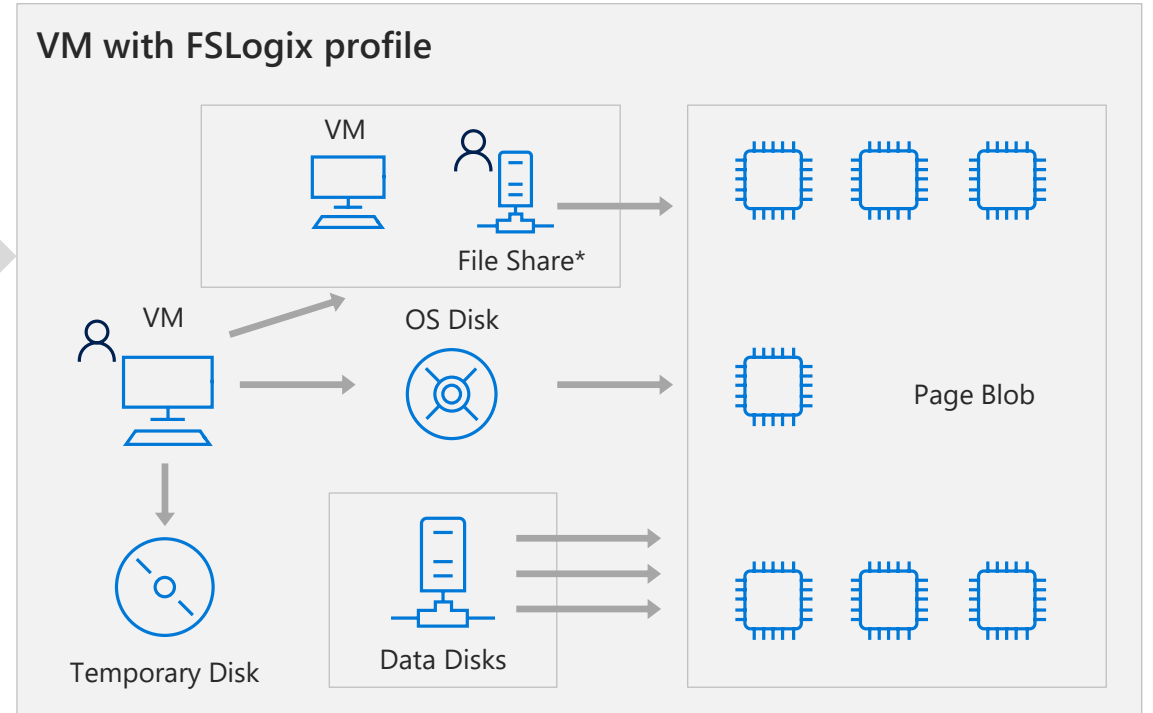
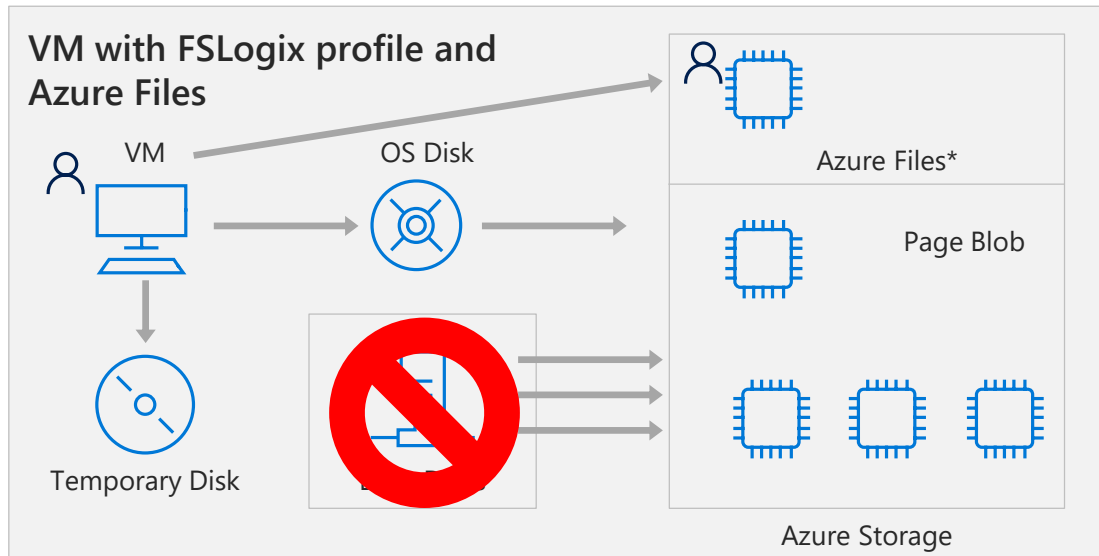
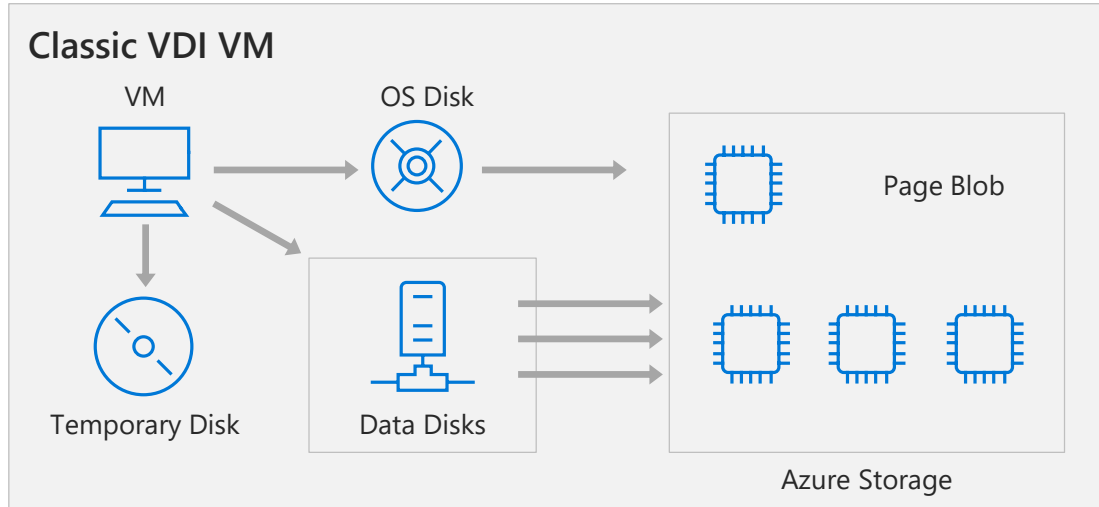
## Improved printing messages

Built-in Windows client first to adopt





# Storage in WVD



## Dependencies

- On prem AD integration (Coming soon)
- ✓ Premium Files rollout (overlap in hero regions)
- ✓ AADS integration / AD integration

# Virtualizing Windows Server



- Supports 2012 R2, 2016, and 2019
  - If an older version, suggest upgrade to newer version or refactor app for Windows 10 multi-session
- Office 365 ProPlus support only in Windows Server 2016
  - 2012 R2 and 2019 only support Office perpetual
  - Use Windows 10 Enterprise multi-session for best experience
- Requires the use of Windows Server VMs on Azure but can leverage Azure Hybrid Benefit for cost savings



## Windows Server RD Session Host

Scalable multi-user legacy Windows environment.  
Windows Server

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Multiple users

Win32

Office 2019 Perpetual

Long-Term Servicing  
Channel

# Virtualizing Windows 7



- 3 years ESU
- Requires full Windows 7 desktop
- Use App Assure or something else first
- Last Resort



## Windows 7

Scalable multi-user legacy Windows environment.

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Windows 7

Single user

Legacy Win32

Office 2019 Perpetual

Full Desktop only

# Full desktop vs. RemoteApp

Based on what your users need to do.

## Full desktop

Power Users / Developers that need to install their own apps or admin privileges

Clients lack computing power / outdated

## Use RemoteApp

Clients vary widely and application consistency is impacted

Different version of the same app from different OS

# WVD Deployment and management options



## Deployment

Onboarding will be through Azure Marketplace or through Github using ARM templates to deploy new or update existing host pool



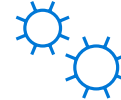
## Management

Azure Portal will enable native integration post GA for deployment and management alongside other Azure services

Use REST API's to set and manage WVD directly, build complex workflows – sample UI and outlines for customers will be provided

PowerShell is the best option for repeatable deployment, Azure integration, and DSC

Other options include Terraform or partner management solutions



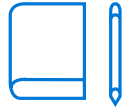
## Hosting partners

Leverage multitenancy support to scale the number of customers

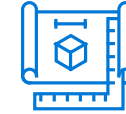
# Performance guidance



VM should be deployed to Azure regions with WVD clusters



Active Directory datacenters should be in each region where session host pools are located



Recommend a mix of breadth and depth scaling to accommodate peak and nonpeak timing



Leverage multisession user density for the most cost-effective option



VM configurations should match use case and host pool needs

# FSLogix profiles



- Profile is stored in VHD/VHD(X)
- Same approach used by UPD
- Mounted at Login – faster login and no target storage requirement
- Size of Profile doesn't impact logon time
- VHD(X) = Block Transfer decreases network utilization
- Caching from Windows Cache Manager
- Profile Container redirects everything from the user profile.
- Filter driver causes profile to appear local – broader application support

# FSLogix Technologies

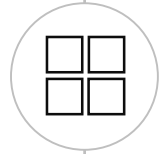
With the acquisition of FSLogix, eligible customers will get access to three core pieces of technology



## Profile Container

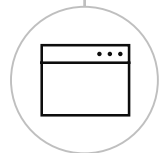
Replacement for roaming profiles and folder redirection. Dramatically speeds up logon and application launch times.

- 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.



# Benefits



Container



Profile Container



Office 365 Container



App Masking



Java Redirection



SMB Storage



Uses native Windows VHD capabilities—no hypervisor.

Very easy to deploy and manage.

Completely seamless end-user experience.

Works with other application management platforms.

Easy to test, implement, and manage.

Reduces network and filesystem load.

# Benefits



Container



Profile Container



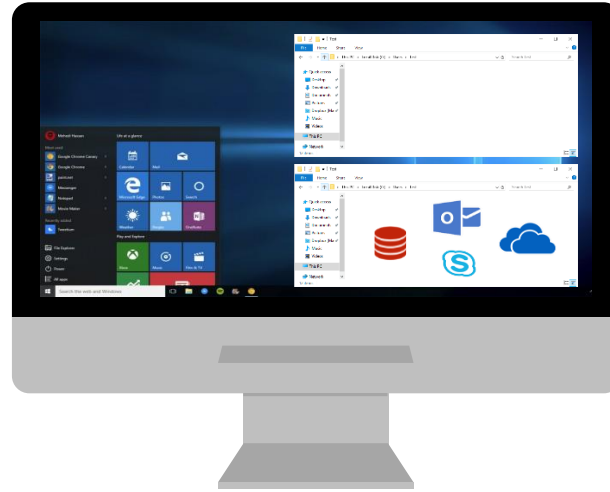
Office 365 Container



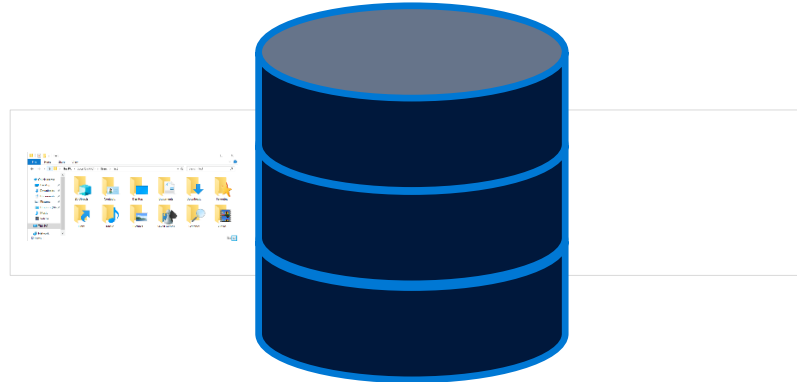
App Masking



Java Redirection



SMB Storage



Places entire user profile in network-based container.

Extremely fast logon times.

Virtually eliminates profile corruption.

Works alongside existing User Environment Management platforms.

# Benefits



Container



Profile Container



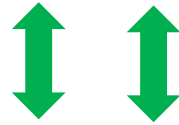
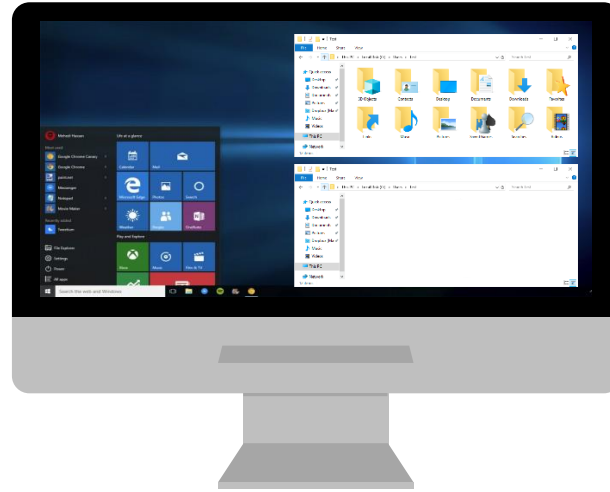
Office 365 Container



App Masking



Java Redirection



SMB Storage



Places Office 365 cache data in network-based container.

Enables roaming of Outlook OST, OneDrive cache, Windows Search, and more...

Office apps have native performance and behavior.

Works alongside other profile management platforms.

# Benefits



Container



Profile Container



Office 365 Container



App Masking



Java Redirection



Application Management without sequencing, snapshotting, packaging, or virtualization.

All apps installed in base image.

- Only apps a user is entitled to are revealed.
- App entitlements can be changed in real time.
- Works with fonts, plugins, and more...
- Excellent app compatibility

Massively reduce the number of gold images that must be maintained

# Benefits



Container



Profile Container



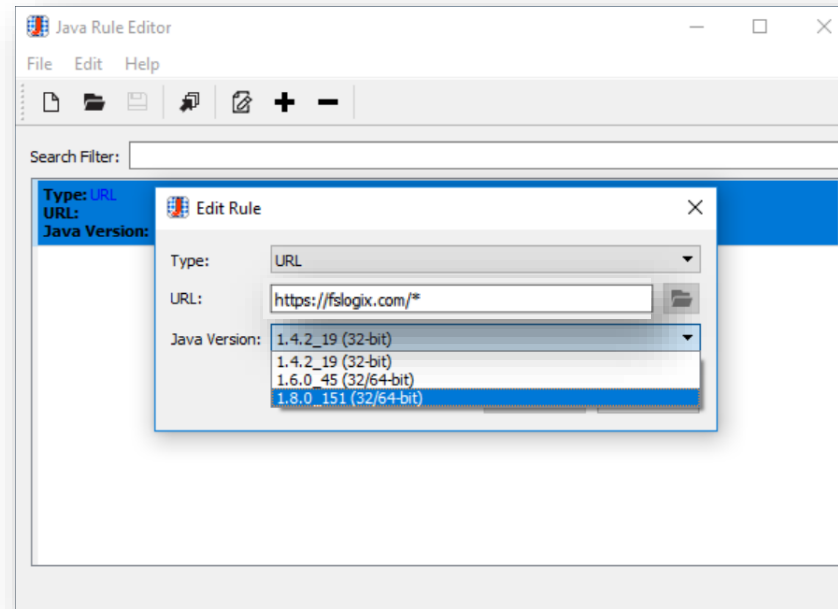
Office 365 Container



App Masking



Java Redirection



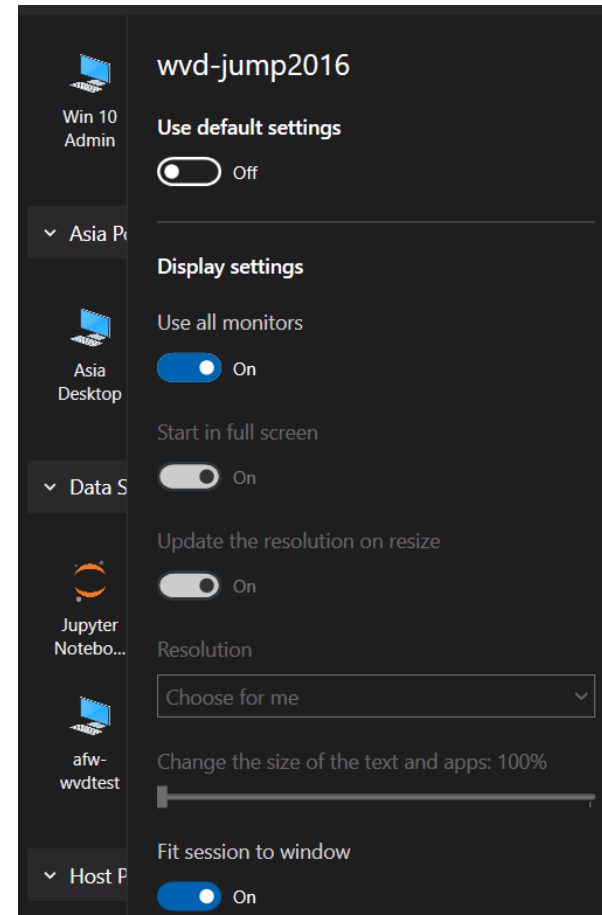
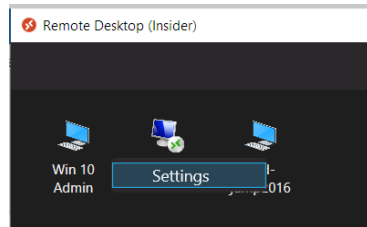
Securely collocate multiple version of Java on same base image

Run each app or website with specific version of Java required for full functionality

Uses FSLogix App Masking to hide unused versions of Java when not needed

# Multiple Monitor Support

If you downloaded the insider version of RDClient, if you have not done so, you can configure a session for multiple monitor support by following the below.



Right click on the session host  
The toggle button will be on as a default, turn it off  
and then you will see the options open to set.

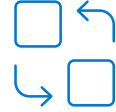
# Migration



Migration will be allowed for Azure VMs that are part of other virtualization environments (including RDS on Azure)



Full migration guidance will be published closer to General Availability



Migration recommendations from AWS to WVD will also be published as part of the guidance



We will have CSP partners that will also work with their customers in automating migration from other clouds and technologies to WVD

# Windows Virtual Desktop partnership with Citrix



With the partnership, Citrix is authorized by Microsoft to provide the benefits of Windows Virtual Desktop in their value-added cloud services hosted on Azure.



## Why Windows Virtual Desktop and Citrix makes sense together

Microsoft Azure is Citrix's strategic and preferred public cloud

- Drive incremental M365 E3/5 : Land the value and innovation of the M365 suite with WVD in Citrix offerings
- Drive incremental Azure Consumed Revenue: Help accelerate customers' cloud initiatives and enable enterprise IT to effectively streamline the migration from on-premises infrastructure to Azure



# Windows Virtual Desktop partnership with Citrix continued



## Windows Virtual Desktop in Citrix Offerings



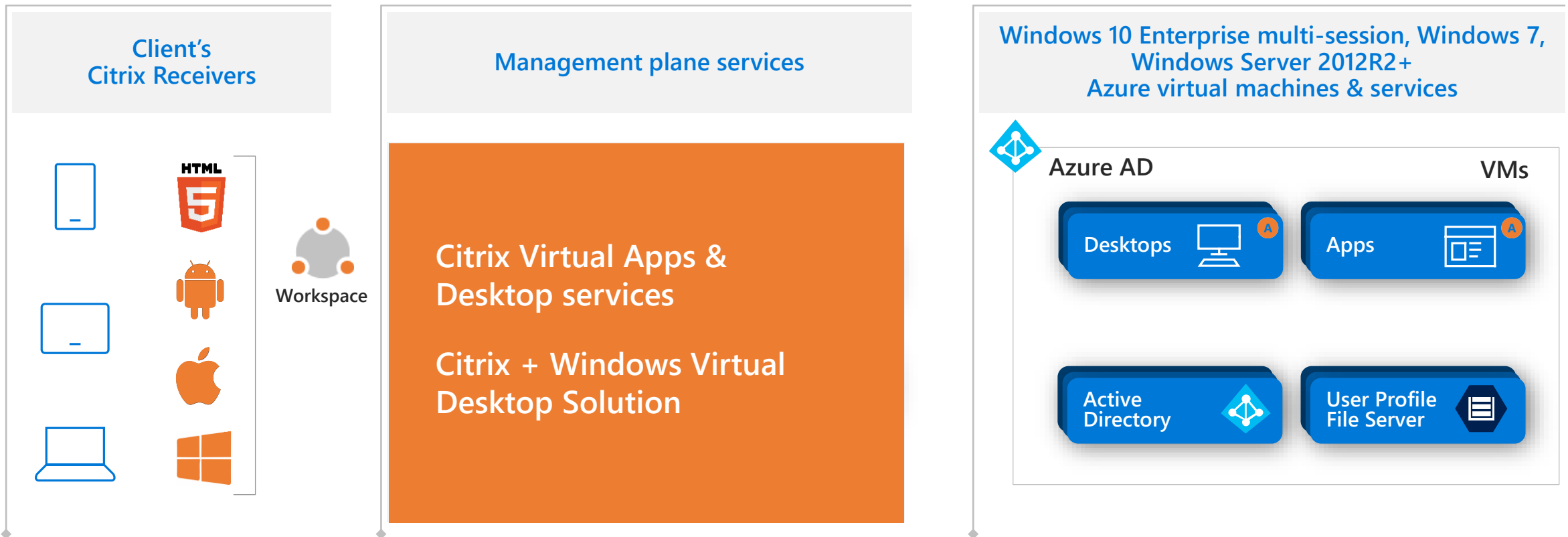
## Windows Virtual Desktop seamlessly integrate\* into Citrix Workspace and Citrix Virtual Apps on Desktops service offerings

- Provide users with the benefits of Windows Virtual Desktop such as multi-session Windows 10 experience on Azure, Office optimization with Office 365 Containers, Profile Containers, App masking and free Extended Security Updates, with Windows 7
- Centrally manage Hybrid deployments with WVD on Azure and manage existing Citrix Virtual App and Desktop service on-premises
- Rapidly provision Windows Virtual Desktop resources at scale

\*Citrix Workspace and the Citrix Virtual Apps and Desktop service will include Windows Virtual Desktop on the first day of Windows Virtual Desktop General Availability.

# Windows Virtual Desktop and Citrix: Architectural Guidance

- **Option 1:** Use full Windows Virtual Desktop with Citrix Workspace to aggregate resource feeds from Windows Virtual Desktop and Citrix on-premises and cloud deployments
- **Option 2:** Use Windows Virtual Desktop with Windows 10 multi-session capabilities, Profile Container, and Office 365 Container with Citrix clients, agents, and management plane services



# Partner Value-Added Services



Partners will integrate with Rest APIs and PS cmdlets offered by WVD service.















Solutions developed by partners will be made available through Azure Marketplace.

Keyword (tentative) – Windows Virtual Desktop will be part of their marketplace title and will be displayed when using the keyword

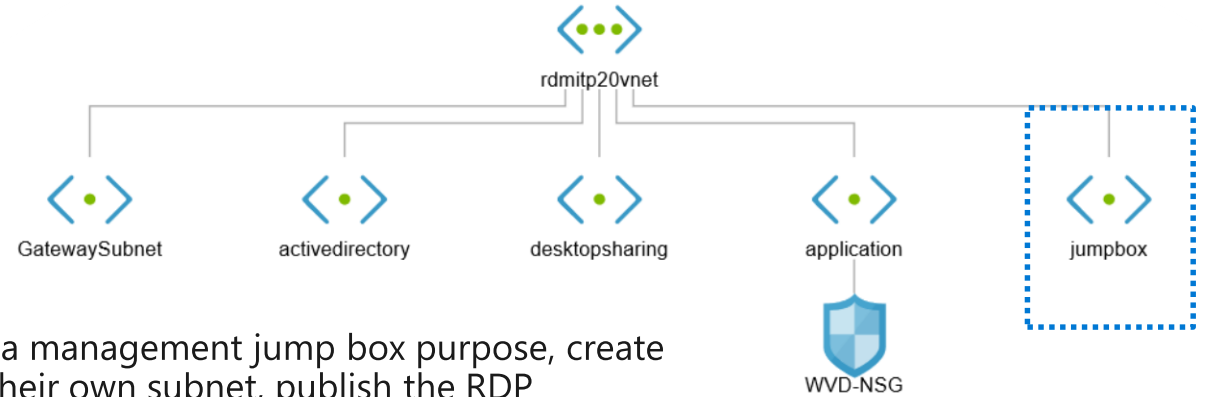
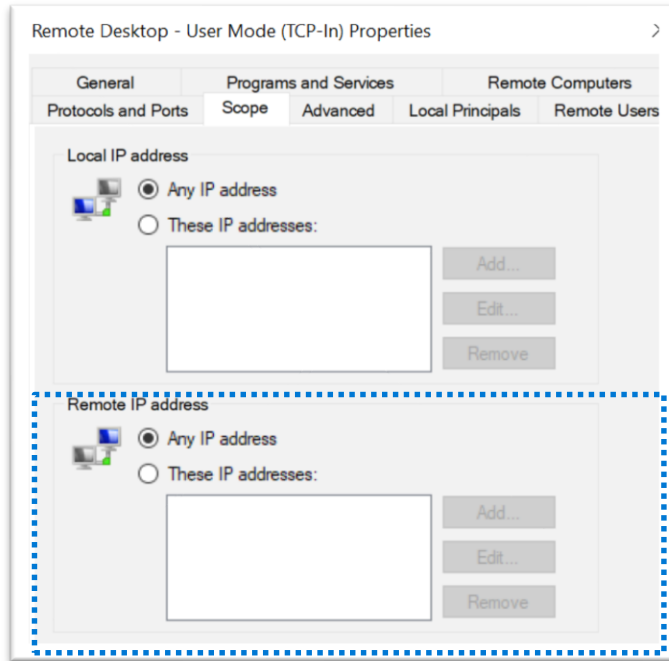


Other partners can offer their services independently as part of their cloud offering.

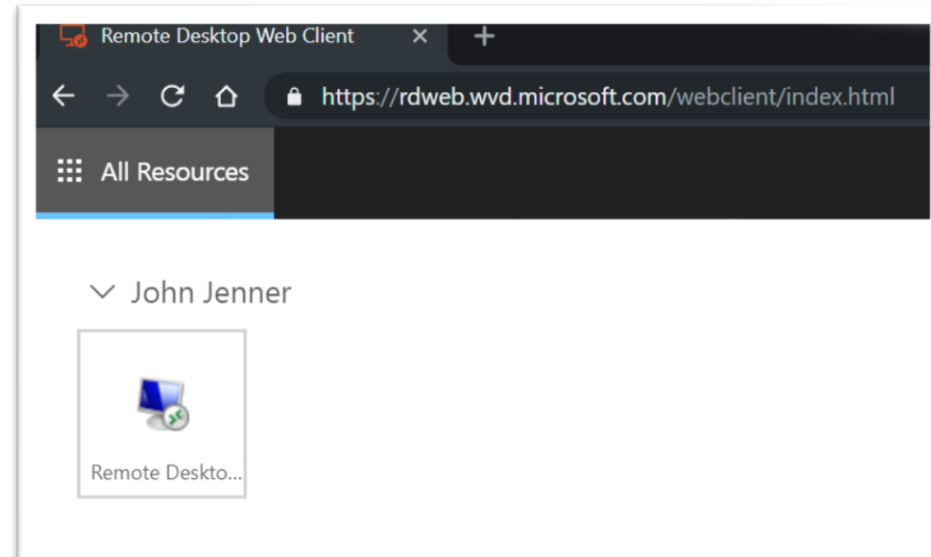
# Better Together Partners

WVD Partner:	What they offer:
	Cloud Jumper offers a fully managed service through their Cloud Workspace Management Suite. Their CWMS is a cloud-based platform for application service enablement, Desktop as a Service (DaaS) and Workspace as a Service (WaaS) orchestration, providing management and access to productivity tools. From a single pane of glass, IT can provision, manage, and optimize infrastructure for user workspaces. CloudJumper APIs allow further extensibility and integration with other enterprise systems.
	Citrix “extends” WVD with their Citrix Managed Desktop service. A managed DaaS offering which will allow you to leverage the Windows 10 multi-user image as part of Windows Virtual Desktop. Windows 10 multi-user will also be available in combination with the Citrix Virtual Apps and Desktop services.
	Lakeside assists customers in two ways: during the pre-rollout phase and with ongoing monitoring. Lakeside Software's Windows Virtual Desktop Assessment with SysTrack is a cloud hosted data analytics solution that enables IT to capture metrics and data about end user environments. This on-demand tool provides IT with a self-service platform to assess and quantify user, application and infrastructure requirements.
	Printing has always been, and continues to be an issue when “remote” locations are involved. With WVD this is no different. ThinPrint offers ezeep – a cloud-based printing solution for Windows Virtual Desktop, ensuring secure and easy (no VPN) connectivity to existing print environments and printing from any device. With ezeep services and software, existing print infrastructure can be utilized to print documents from the cloud.
	Liquidware Stratusphere UX gathers and provides user experience metrics to support the design of desktop images and infrastructure for Windows Virtual Desktop on Azure. Liquidware ProfileUnity and FlexApp harvest current user profile environments and applications to prepare for a smooth migration to Microsoft WVD. All managed and controlled from a single console.
	VMware will “extend” the Windows Virtual Desktop proposition through their VMware Horizon Cloud offering on Microsoft Azure. This will include the Windows 10 multi-user Operating System, optimizations for Office 365 ProPlus, and support for RDS environments.
	From the ControlUp console, IT gets end-user environment visibility to effectively monitor and troubleshoot performance issues. An intuitive dashboard provides insights and analytics for virtual desktop deployments, as well as options for automated reporting enriched with community benchmarks. ControlUp can manage multiple data sources and types, organizing them in high-performance data sets aggregated across compute, storage, and WVD.
	deviceTRUST enables conditional access enabling secure access to Windows Virtual Desktop, conditional application access within Windows Virtual Desktop as well as conditional Windows Virtual Desktop policies without any additional infrastructure.
	Customers moving their on-premises business services to Windows Virtual Desktop use Login VSI Enterprise Edition to evaluate and maintain optimal performance, scalability, and availability of Windows 10 Enterprise multi-session, Windows 10 Enterprise, and Windows 7.
	Nerdio provides the knowledge and technology to deploy, price, package, manage, and optimize customers' Azure deployment. Nerdio extends the value of Windows Virtual Desktop by making it easy to provision Azure resources and streamline deployment, including a straightforward GUI. With Nerdio for Azure, IT can automatically deploy and manage a complete Azure environment, including WVD, in under two hours.
	Use PolicyPak are to remove local admin rights and overcome UAC prompts, block Ransomware, manage multiple browsers, manage Internet Explorer's Enterprise and Compatibility modes, reduce the number of GPOs, manage Windows 10 File Associations, manage Windows 10 Start Menu and Taskbar, and manage Windows 10 Features and Optional features.
	PL empowers IT professionals to eliminate all print servers and deliver a highly available serverless printing infrastructure. Available as SaaS or as a web stack in your own private cloud, the PrinterLogic platform ensures users always have the right printers they need in their virtual sessions based on user ID, device name or location. Complemented by features such as print tracking and reporting, mobile printing, and secure badge release printing.
	Workspot extends the value of Windows Virtual Desktop by simplifying the provisioning process of cloud desktop infrastructure. Resources can be easily scaled up and down to meet the needs of different users and use cases. Infrastructure provisioning is automated, which means users can access their Windows Virtual Desktop environment from anywhere around the world with high availability.

# Use Case - Jump Box or Bastion Host Scenario



To use the service as a management jump box purpose, create the session hosts in their own subnet, publish the RDP Application and apply a windows firewall rule that limits the scope of RDP to only allowed IPS and control access to the RDP application via UPN\SPN!



## Windows 7 Use Case

For clients that have Windows 7 desktops on-prem, you can use Windows Virtual Desktop to lift those on-prem Windows 7 clients to Azure and get another 3 years of free support.

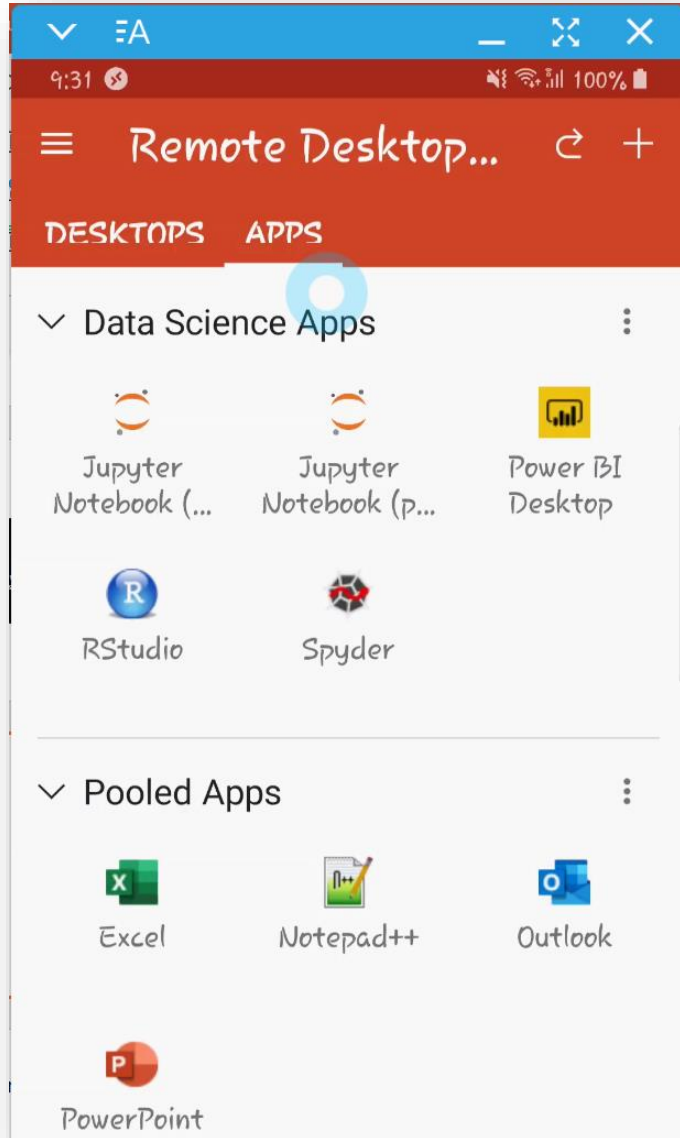


Work with our Desktop App Assure Team to migrate applications on Windows 7 to Windows 10 in Azure.

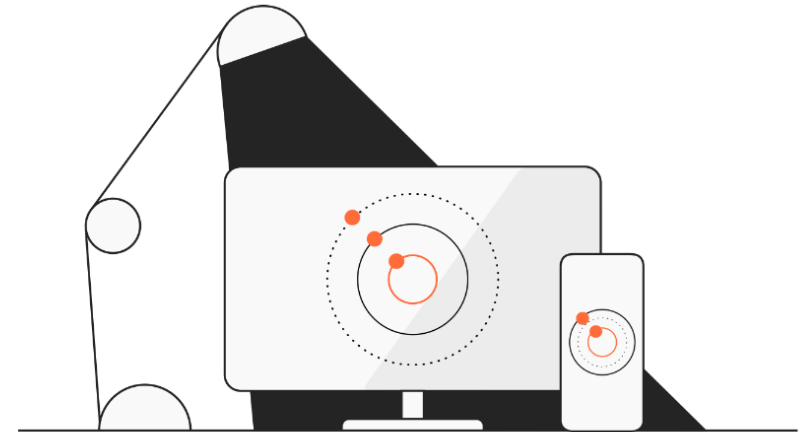
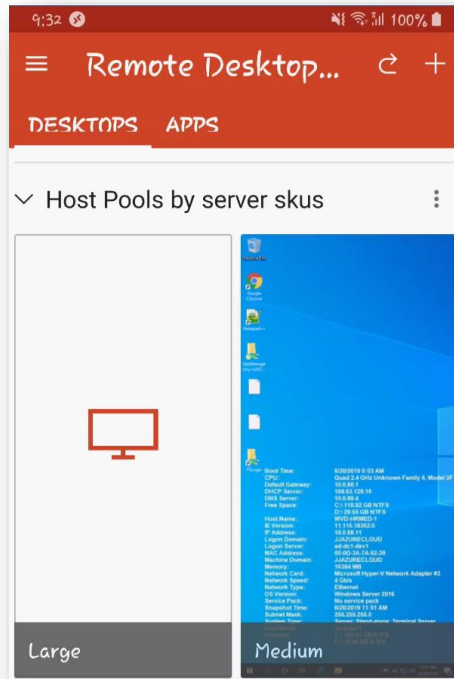


Evaluate modernizing the Windows 7 application for Windows 10 Multi-session and save on server compute.

# Windows Virtual Desktop Mobile Android

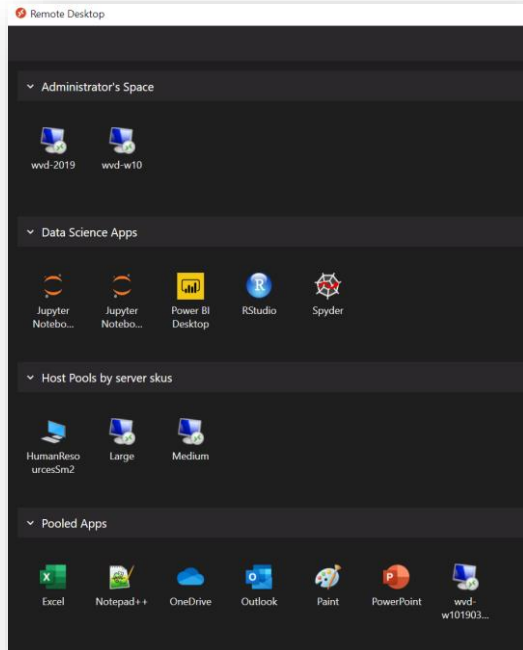


<https://www.samsung.com/global/galaxy/apps/samsung-dex/>

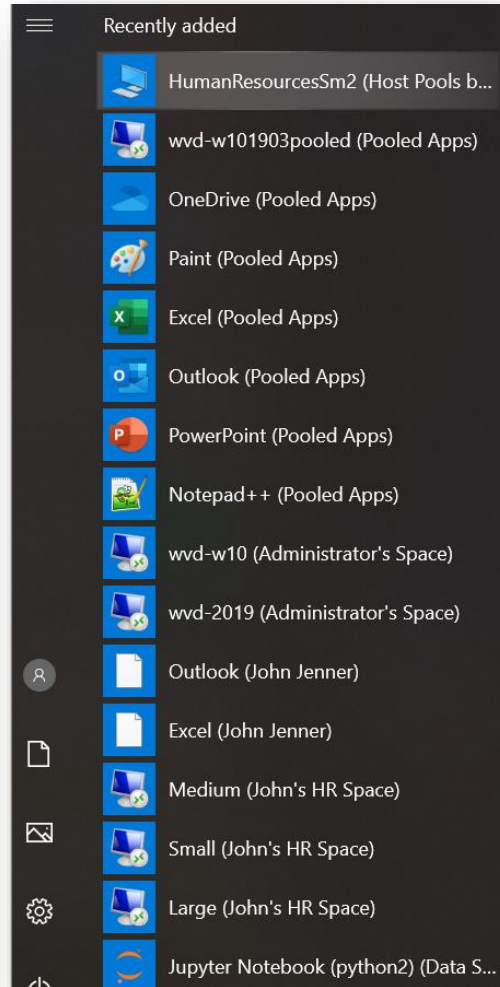


Samsung DeX is getting ready to start.

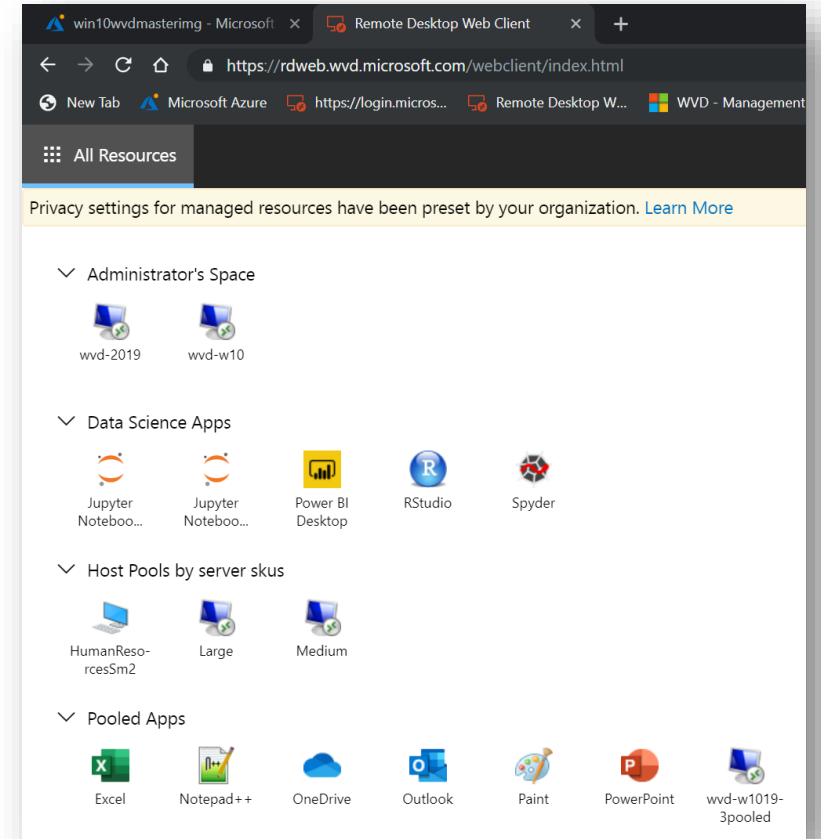
# Windows Virtual Desktop 3 ways



RDClient



Windows 10 Start  
Menu Integration

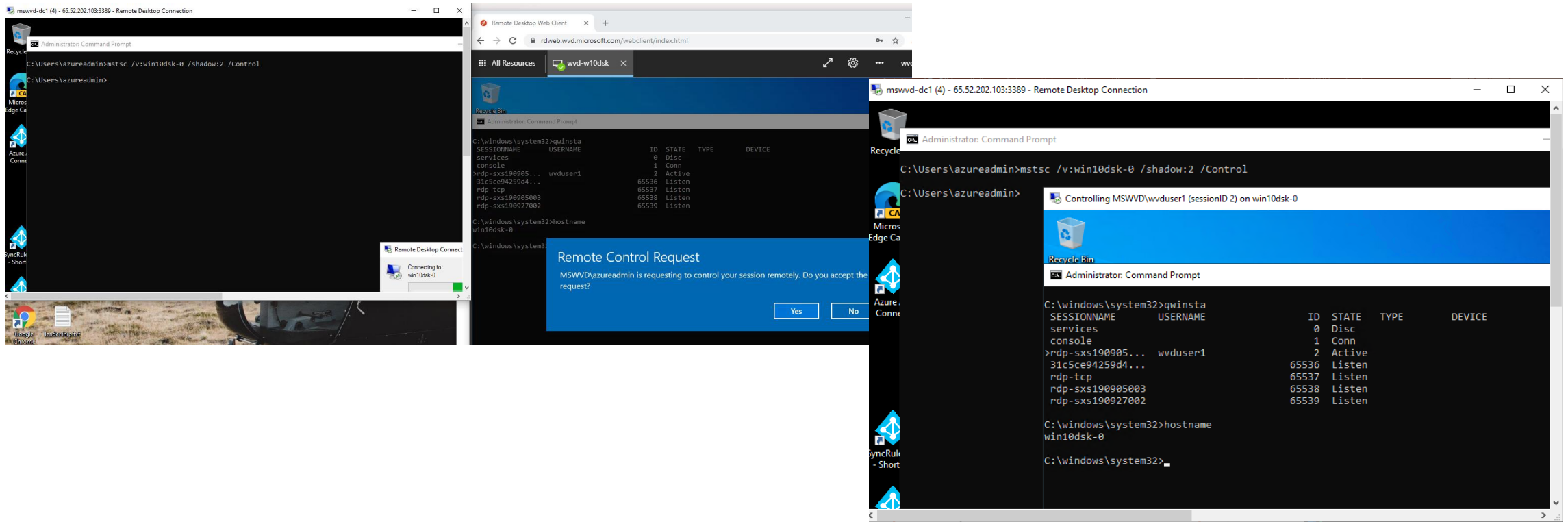


HTML 5 Browser



# Shadowing Sessions

- First, RDP to a jump server in your environment that can communicate to all your WVD Session hosts.
- On the session host you want to shadow, have the user run `qwinsta` from a CMD window. Take note of the session ID. Type hostname to get the servername.
- From the jump box server, open a CMD window and type:
  - **`mstsc /v:TARGETSERVER /shadow:2 <This is the session number> /Control`**



# Direct user assignment to session host

- Automatic assignment for persistent vms
  - Build a host pool with 25 session hosts flagged as persistent and as each user logs into a session host that has not been logged into, they get assigned to that host permanently.
- Direct assignment of session host to pre-determined user
  - Build a host pool and flag it as persistent.
  - Set the host pool assignment to 'Direct'.
  - Add the user to the Desktop application group in the host pool.
  - Deploy the session hosts
  - Assign the user to a specific session host.

# Getting Started with MSIX

- To use an Azure VM for Nested Virtualization
  - Spin up an Azure VM using D4s\_v3 series
  - Install the Hyper-V feature
  - Use Hyper-V Quick Create to build a MSIX VM for App packaging or Build your own
  - Create Self-Signed Cert
  - Build your app package
  - Deploy and Test

<https://docs.microsoft.com/en-us/azure/virtual-desktop/app-attach>

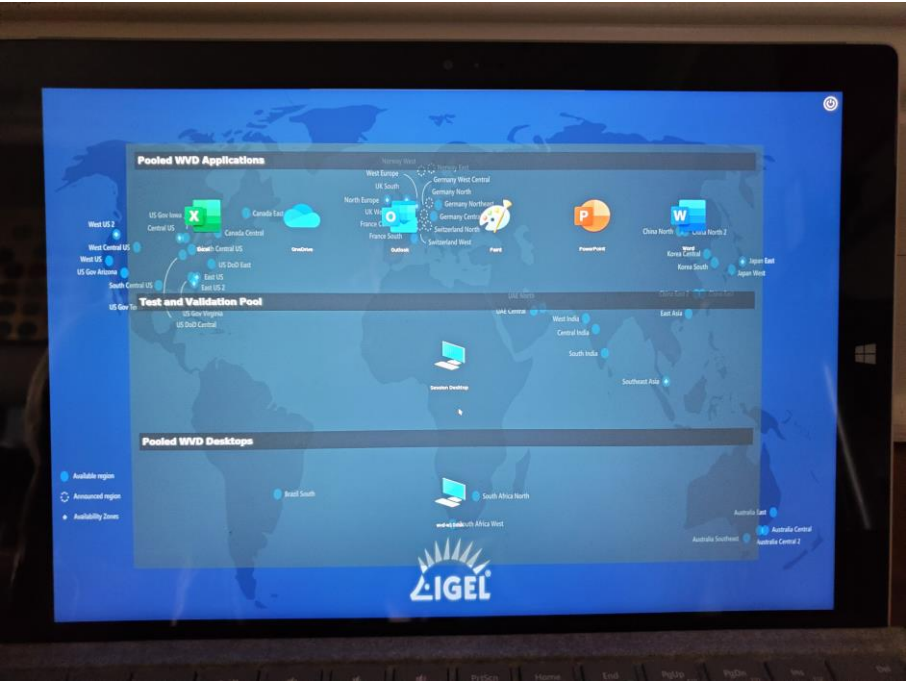


# Demo – Portal Deployment and PS executions

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# Igel Demo

## USB device to launch WVD



Remote Desktop (Insider)

Pooled WVD Applications



Excel



OneDrive



Outlook



Paint



PowerPoint



Word

Pooled WVD Desktops



wvd-  
w10dsk

Test and Validation Pool




Session  
Desktop

# WVD Portal v2 Demo

## WVD Azure Portal Integration Demo

[Home](#) > Windows Virtual Desktop

 **Windows Virtual Desktop**  
Microsoft

[Overview](#)


**Manage**

[Workspaces](#)

[Host pools](#)

[Application groups](#)

[Users](#)

**John, create a host pool!**

Easily scale your VM deployment. Create host pools to easily manage assignments, application groups, and settings for your entire organization.

[Create a host pool](#)

**Documentation and help**

**Getting started**

Welcome to Windows Virtual Desktop!

[Learn more](#)

**Create your own image**

Capture and create a managed image.

[Learn more](#)

**Cost calculator**

How much will your deployment cost?

[Learn more](#)

**Profile containers**

Profile disks are out. Containers are in.

[Learn more](#)

# Additional Resources – How to Videos

1. [WVD Deployment](#)
  2. [WVD Management](#)
  3. [WVD User Profiles](#)
  4. [WVD High Availability of User Profiles](#)
  5. [WVD User Experiences](#)
  6. [WVD Web Management UX](#)
  7. [WVD Scaling Out](#) (Building new session hosts in existing host pools manually)
  8. [WVD with Azure AD Domain Services](#)
  9. [WVD Web Diagnostics tool](#)
  10. [WVD Automation](#) (Build new session hosts in existing host pools with a custom PowerShell script extension)
  11. [WVD Monitoring](#) (Sepago)
  12. [WVD Updates](#) (Build new, throw away the old with my custom ARM Template to build new Session hosts in existing host pools, joining to domain and adding to WVD automatically)
  13. John Jenner Github Repo location:  
<https://github.com/hardeights?tab=repositories>
- <https://windowsvirtualdesktop.uservoice.com/forums/921118-general>
  - <https://techcommunity.microsoft.com/t5/Windows-Virtual-Desktop/bd-p/WindowsVirtualDesktop>
  - <https://azure.microsoft.com/en-us/services/virtual-desktop/assessment/>
  - <https://azure.microsoft.com/en-us/updates/>
  - <https://www.microsoft.com/en-us/microsoft-365/roadmap?filters=Windows%20Virtual%20Desktop>

