



Microsoft Windows Virtual Desktop

Quickly deploy virtual desktops and apps to enable secure remote work





Windows server and desktop offerings today

Windows Server Desktop Experience

Scalable multi-session **legacy**
Windows environment

Windows Server

Multiple sessions

Win32

Office Perpetual

Long-term servicing channel

Windows 10 Enterprise

Native single-session **modern**
Windows experience

Windows 10

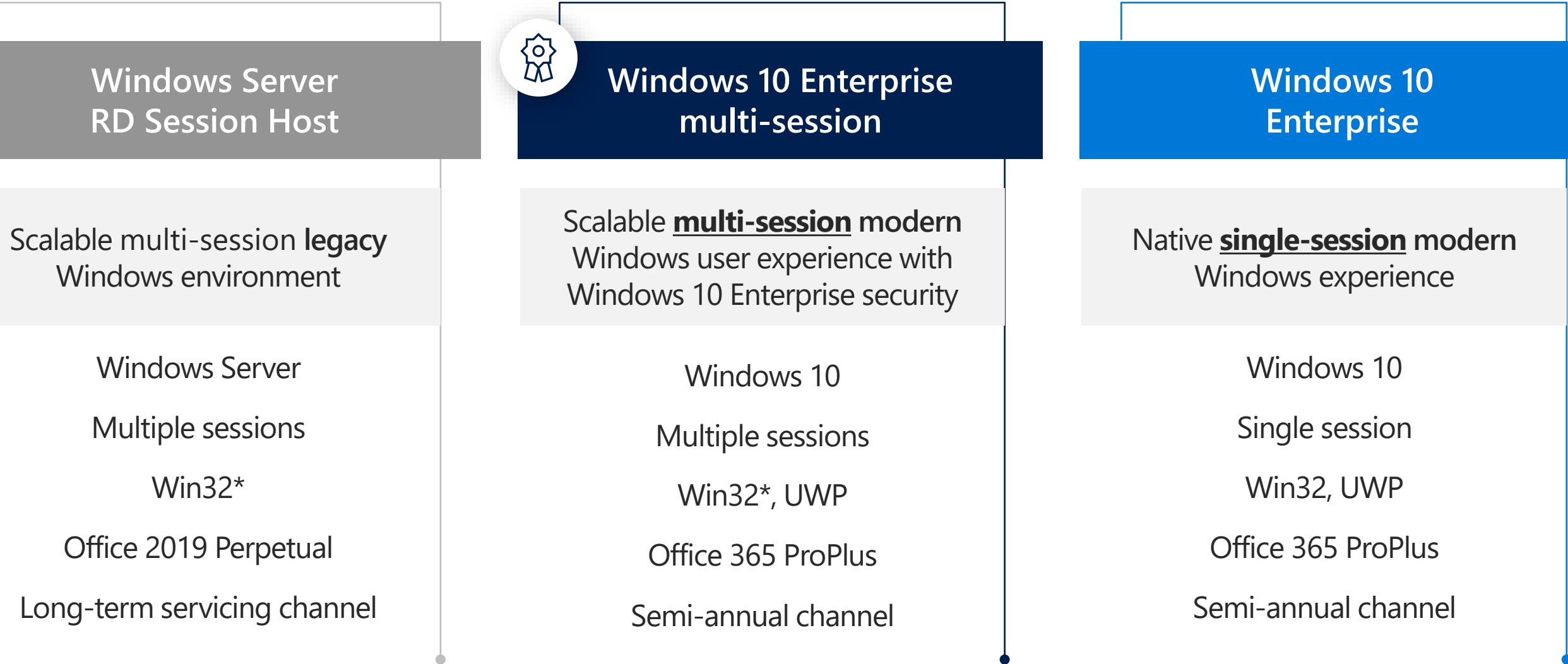
Single session

Win32, UWP

Office 365 ProPlus

Semi-annual channel

Extending the opportunities for virtualization



When is virtualization useful?



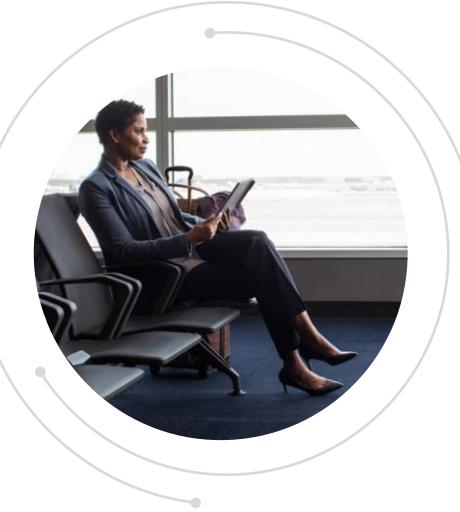
Security and regulation

Financial services
Health care
Government



Elastic workforce

Mergers and acquisition
Short-term employees
Contractors and partners



Remote employees

BYOD and mobile
Call centers
Branch workers

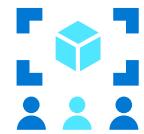


Specialized workloads

Design and engineering
Legacy apps
Software dev test

Windows Virtual Desktop is available worldwide

Empower IT to transform the workplace



Provide a full-desktop, authenticated experience for users at every level



Reduce the costs and time spent managing on-premises infrastructure



Simplify management, provisioning, and access to corporate data and apps



Deploy and scale in minutes



An optimized computing platform

High-level service architecture

- Can connect to on-premises resources via ExpressRoute or VPN
- User authentication using Azure Active Directory identities
- Integrates with Systems Center Configuration Manager and Microsoft Intune
- Supports devices running non-Windows operating systems with Linux thin-client SDK and other tools

Your subscription—your control

Desktops and remote apps



Full Desktop



RemoteApp



Windows 10 Enterprise
multi-session



Windows 10 Enterprise



Windows Server
2012 R2 and newer



Windows 7 Enterprise
Full Desktop

Management and policies



Image, app, and profile
management



User density, VM sizing,
and scaling policies



User management and
identity



Networking policies

Managed by Microsoft

Windows Virtual Desktop Service



Clients



Diagnostics



Gateway



Management



Broker



Load balancing

Infrastructure



Compute



Storage



Networking

Blending security across the Microsoft ecosystem

Microsoft 365

Conditional Access
Multi-Factor Authentication
Role-based Access Control (RBAC)



Azure

>90 compliance offerings
>3,500 global cybersecurity experts
6.5 trillion global signals daily
\$1 billion annual cybersecurity investment

Windows Virtual Desktop

Reverse Connect

Azure AD authentication
AD-joined virtual machines

Expanded geographic coverage generally available worldwide

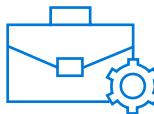
Faster performance and more support to ease compliance with local data policies, improve responsiveness, reduce latency.



Easier to deploy, configure, and monitor resources



- **First-party service connection**
 - Simplifies onboarding process
 - Eliminates need for Azure AD global admin consent during installation
- **AAD group and user assignment**
 - Quickly publish desktops and apps and control user access



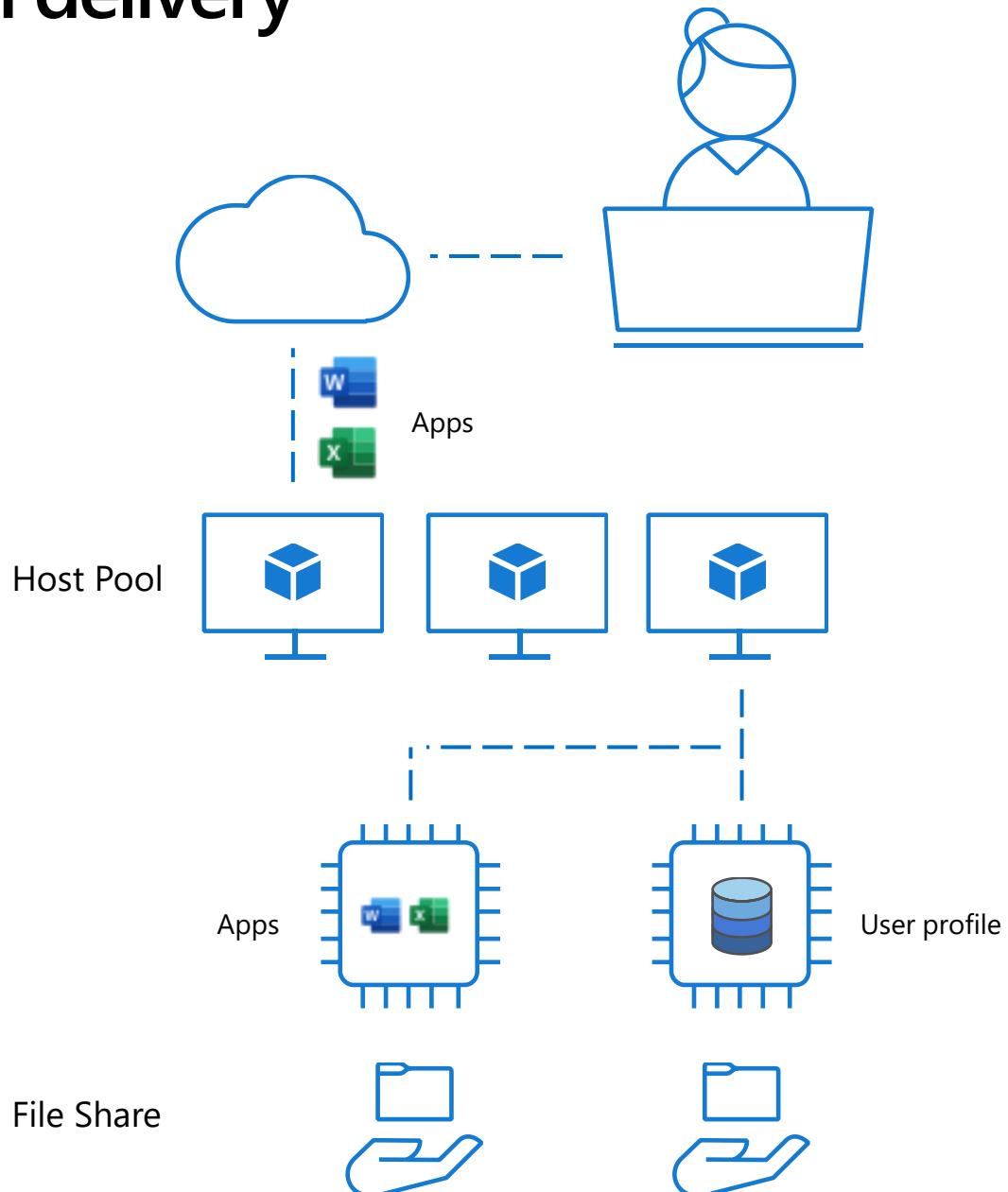
- **Azure Portal and PowerShell**
 - Accelerates Windows Virtual Desktop deployments using scripts
 - Architecture based on Azure Resource Manager (ARM)
 - Provides integrated Azure interface, PowerShell, and role-based access control

MSIX app attach for dynamic application delivery



Deliver MSIX-packaged applications on demand

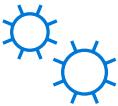
- Only authorized users can see or access apps
- Number of apps used doesn't impact sign in time
- Same experience using cloud and on-premises servers



Better performance and more connection options



- **Microsoft Teams**
 - Easier to provide shared workstations and access for front-line workers
 - **Coming in May:** New support for audio-visual (A/V) redirection, including peer-to-peer optimization
- **Linux thin-client SDK**
 - Support for non-Windows devices with thin-client SDK for Linux-based devices and processes



- **Autoscaling**
 - Schedule VMs to start and stop based on business hours to reduce cost and complexity
 - Serverless, based on Azure automation and Logic Apps
- **Service tags/URL security**
 - Meets firewall connection requirements with defined service tags

Pricing

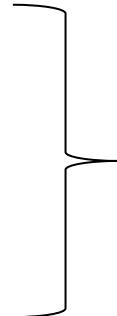
Many can access Windows Virtual Desktop with their current licenses



Client

Users with one of the following software licenses can use Windows Virtual Desktop to access instances of Windows 10 single, Windows 10 multi-session, and Windows 7:

- Microsoft 365 E3/E5
- Microsoft 365 A3/A5/Student Use Benefits
- Microsoft 365 F3
- Microsoft 365 Business Premium
- Windows 10 VDA per user
- Windows 10 Enterprise E3/E5
- Windows 10 Education A3/A5



Customers can access Windows Virtual Desktop from their non-Windows Pro endpoints if they have one of these user licenses



Server

Customers are eligible to access server workloads with Windows Virtual Desktop if they have one of the following user or device licenses:

- RDS CAL license with active Software Assurance (SA)

Pricing for Windows Virtual Desktop

Calculating your costs

An Azure user account and subscription are required to deploy and manage a virtual machine. Pricing factors include:

- Virtual machines and operating system (OS) storage
- Data disk (personal desktop only)
- User profile storage
- Networking

Making it work for you

- We offer pricing options such as [one-year or three-year Azure Reserved Virtual Machine Instances](#), for savings of up to 72 percent versus the pay-as-you-go plan
- [Monthly payment plan is now available upon request](#)
- Reserved virtual machines can be exchanged or returned

Only infrastructure cost with BYOL

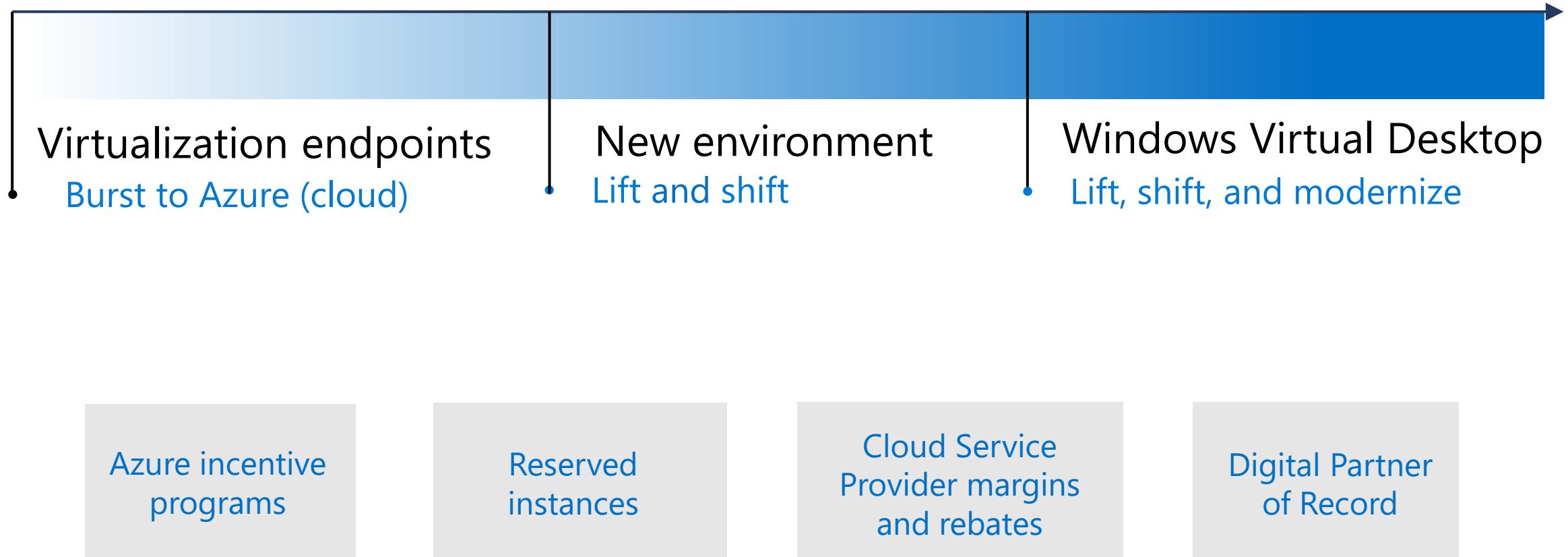
Windows Virtual Desktop session host virtual machines (including Citrix Cloud and VMWare Horizon Cloud on Azure deployments) are charged at Linux compute rates for Windows 10 single, Windows 10 multi-session, and Windows Server.

Customer only needs to bring appropriate Windows license



Pay only for the virtual machines (VMs), storage, and networking consumed when the service is in use.

All Azure discounts and benefits apply to Windows Virtual Desktop



Deployment Overview

How do you get started with a Windows Virtual Desktop pilot or deployment?

[Find out more at aka.ms/startWVD](https://aka.ms/startWVD)

STEP

1

STEP

2

STEP

3

- Choose how to connect and select an identity strategy
- Decide where to host FSLogix profiles
- Make sure your credentials are in place
- Set up your new tenant with an Azure Resource Manager (ARM) Portal
- Configure FSLogix
- Run optional scripts with PowerShell
- Manage virtual infrastructure in Azure
- Periodically review performance and usage patterns for end-user apps like Office 365

Network requirements and considerations

How to connect

Connectivity type Special 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

Identity strategy options

- Spin up a domain controller in your Azure subscription
- For cloud-based organizations, use Azure AD domain services
- For hybrid organizations, use VPN or ExpressRoute and make sure your on-premises domain controllers can be found in Azure

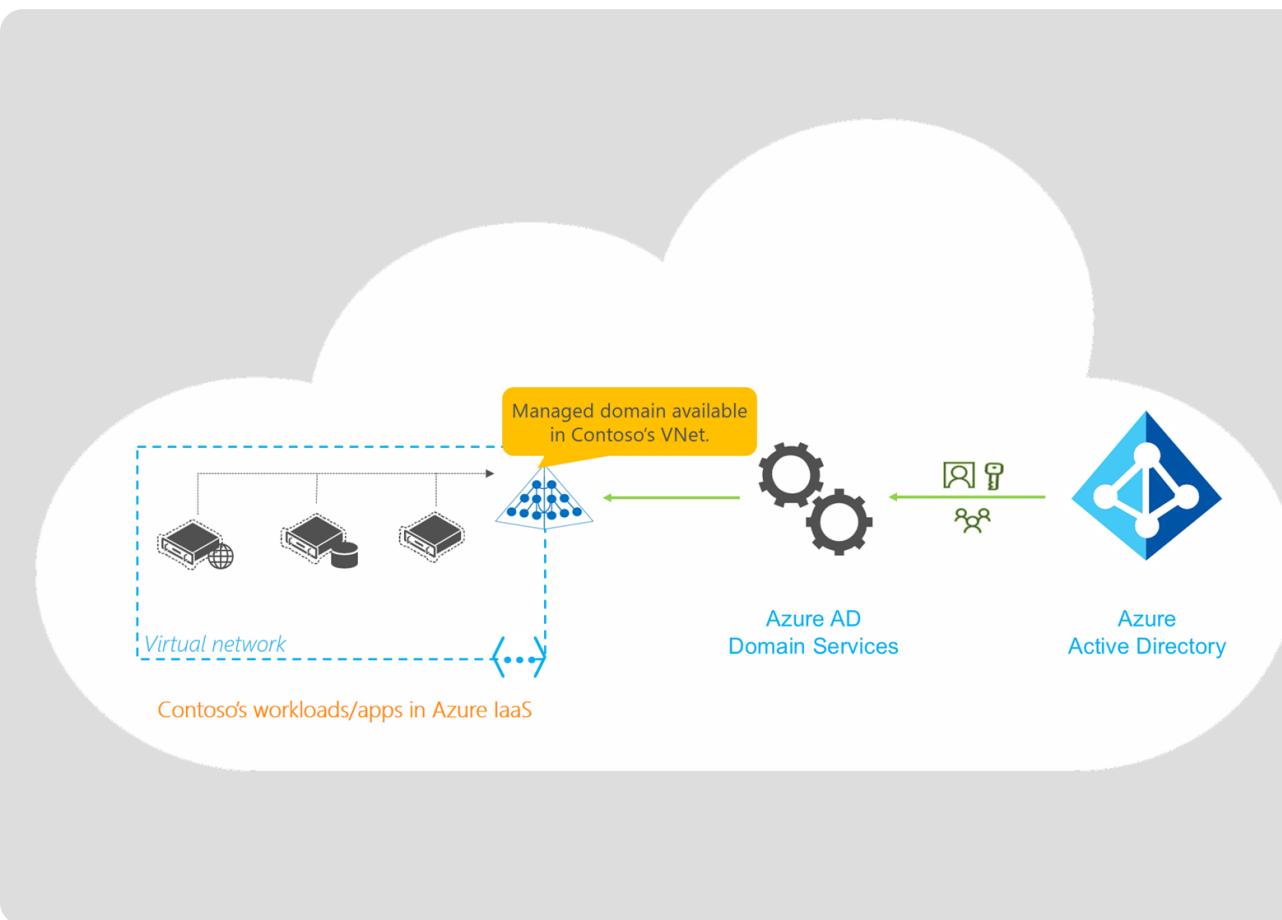
Recommended identity setup for cloud-based organizations

Everything that happens in Azure AD is automatically replicated to the domain controller that's being run for you as a managed service.

If a user changes their password, it automatically takes effect across all connected Azure services.



- Windows Server AD run as a service by Azure
- Allows VMs to be domain-joined
- Users recognized both in Azure AD and Windows Server AD

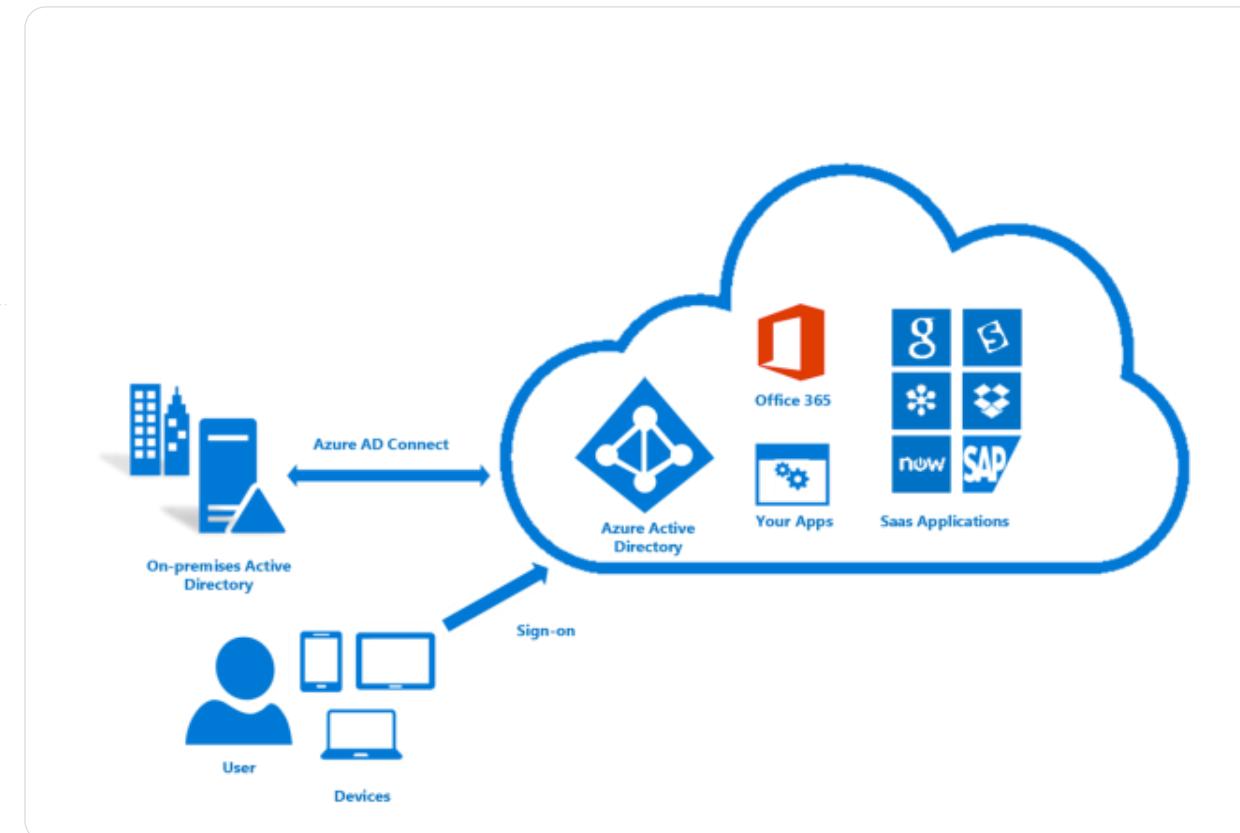


Recommended identity setup for hybrid organizations

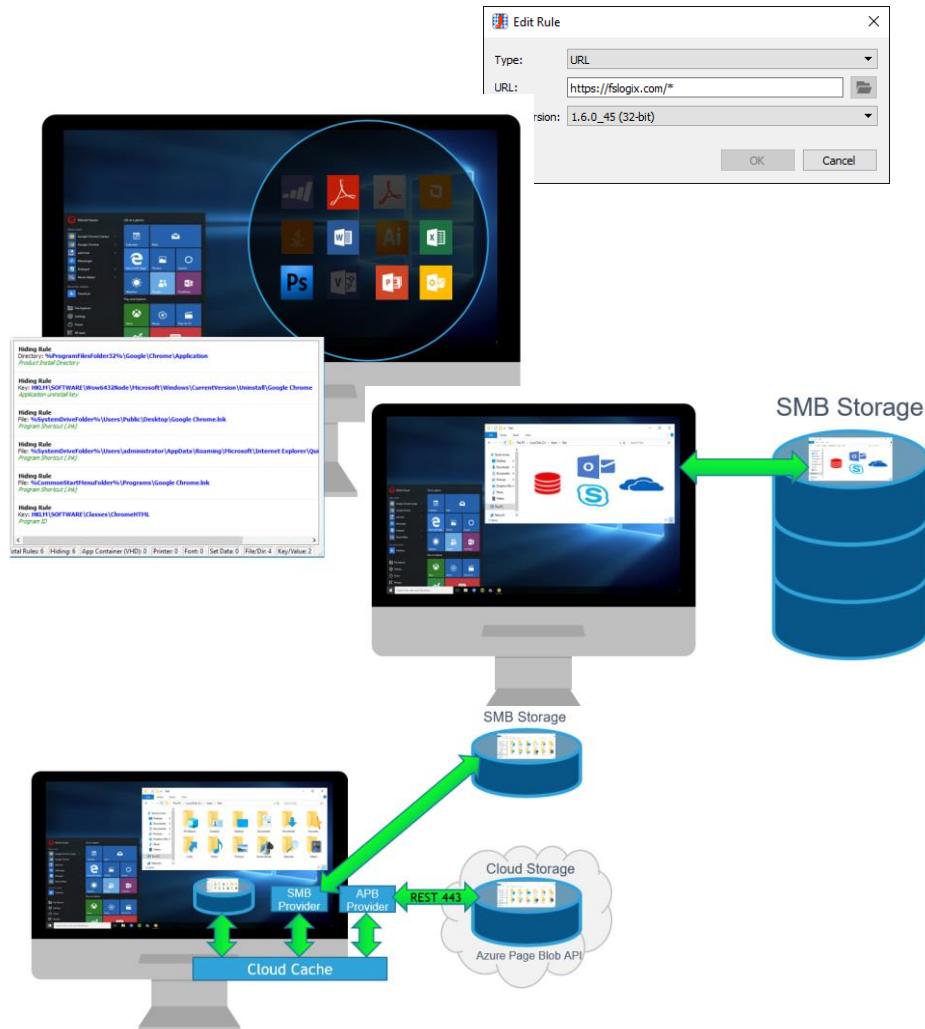
With this setup, you are managing identities from the on-premises Active Directory instance.



- ExpressRoute or site-to-site Virtual Private Network (VPN) to Azure
- Azure AD Connect synchronizes identities

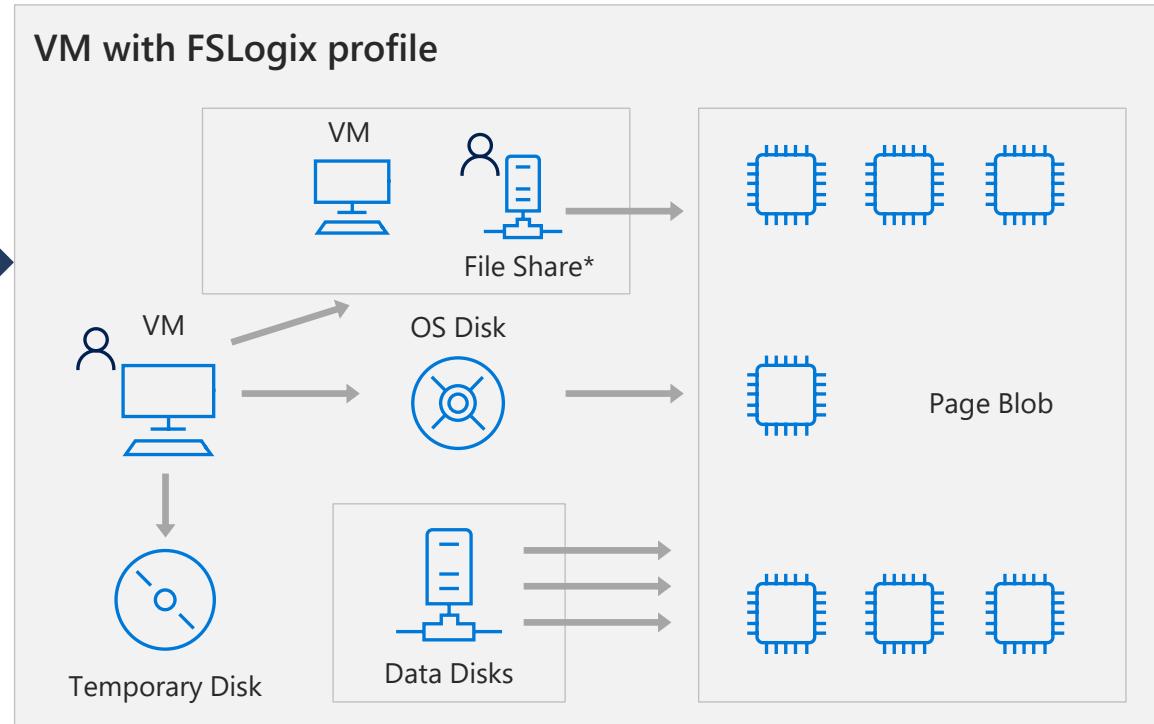
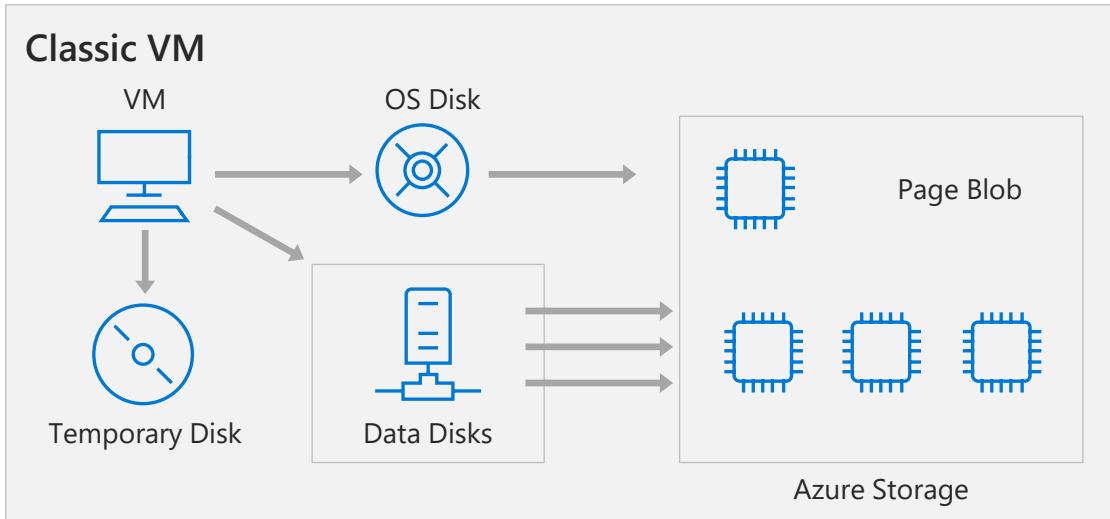


FSLogix profile options



- File server technology now integrated with Azure
- Manages Azure Files with Azure Active Directory Domain Services
- Handles Azure NetApp Files as well

Extend your storage options with Windows Virtual Desktop

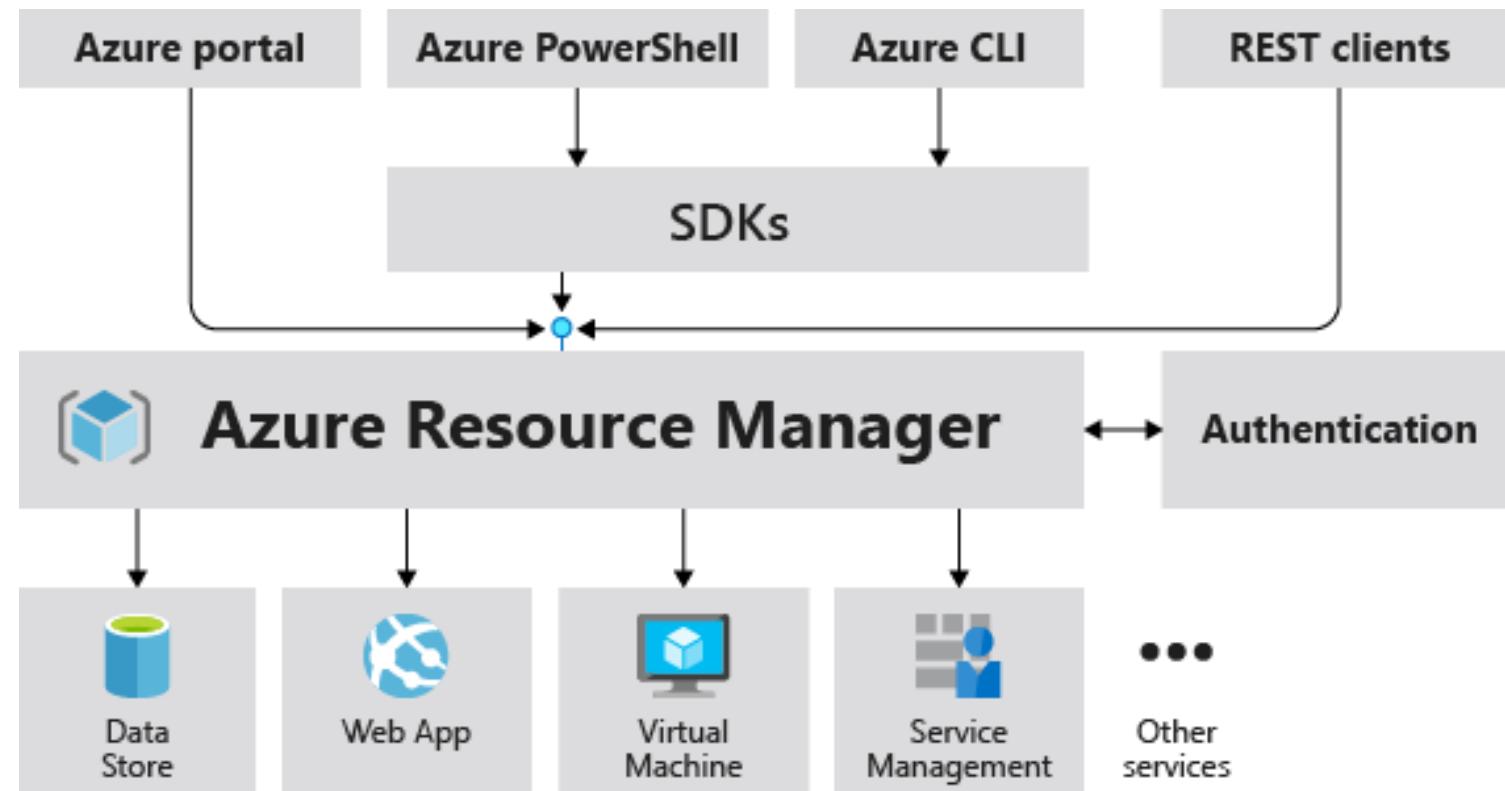


Dependencies

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

Create a Windows Virtual Desktop

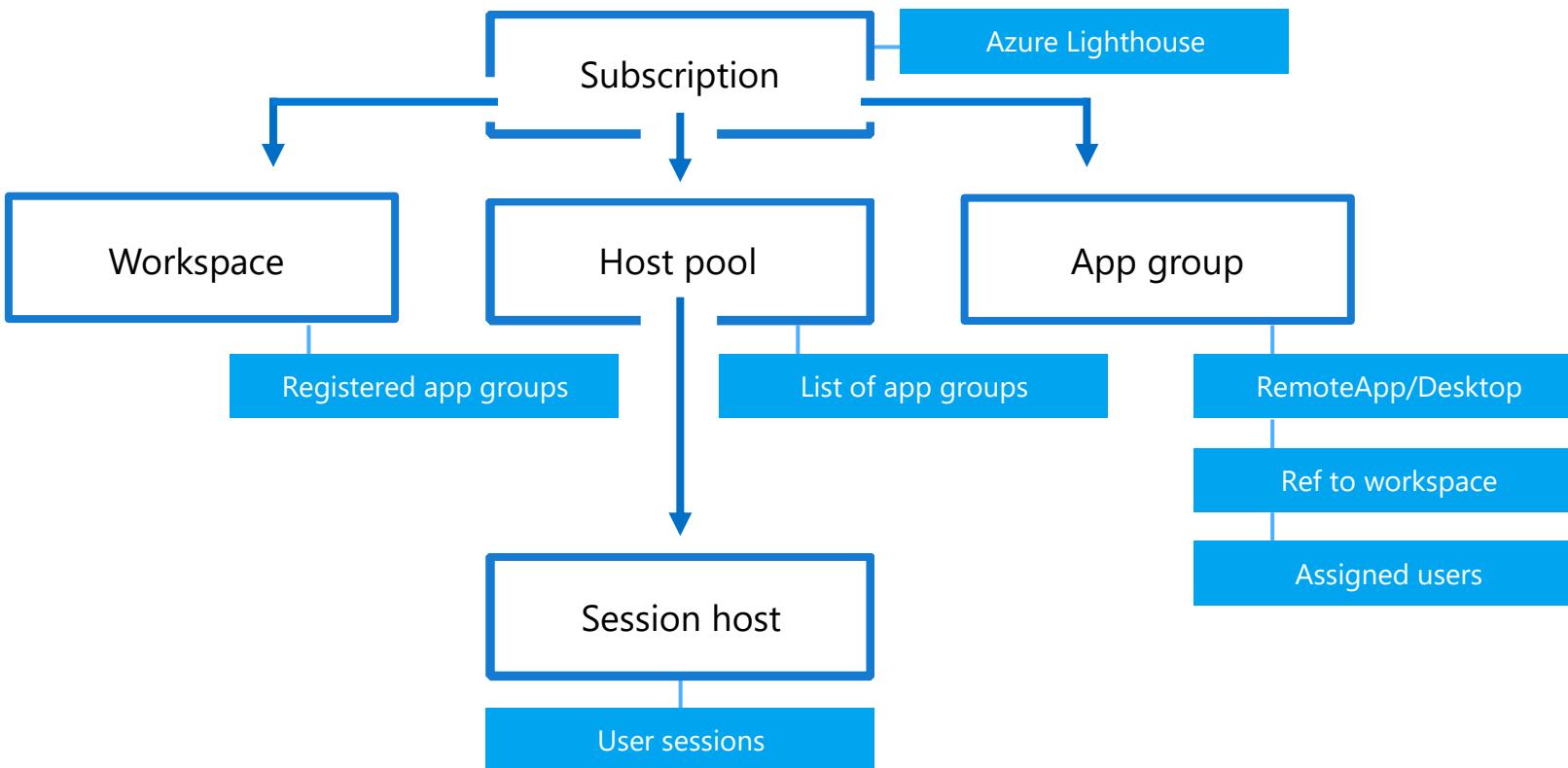
Choose one of four options for deployment and maintenance. Then, select the appropriate geography for your service metadata storage.



Documentation: aka.ms/WVDpreview

Getting Started Guide: aka.ms/startWVD

Azure Resource Manager object model



Automation

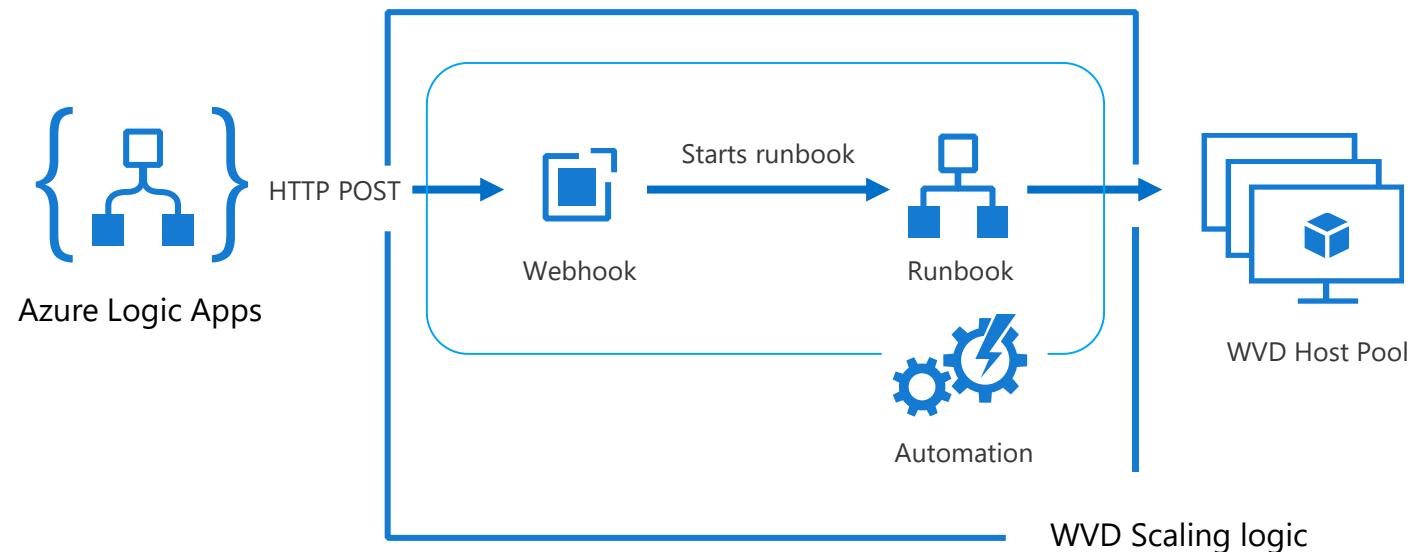
Keep costs low and minimizes IT administration time by using ARM templates and automation

- Create or update VMs for a host pool

- [Create and provision host pool](#)
- [Update VMs in existing host pool](#)

- Scale your host pool

- [Robust Azure tools](#)



["Optimize" Demo bench video](#)

Azure AD Domain Services

Home > Resource groups > aad-ds > GT090617.com

GT090617.com
Azure AD Domain Services

Search (Ctrl+/
Delete

Overview  GT090617.com  Running 

Activity log 

Access control (IAM) 

Settings

Properties 

Secure LDAP 

Synchronization 

Health 

Required configuration steps

 Enable Azure AD Domain Services password hash synchronization

Create a storage account

The screenshot shows the Azure Storage Accounts blade. On the left, a list of existing storage accounts is displayed, including '5pykb2ehnlz26adsa', 'aaddsdiag976', 'aadrgdiag794', 'afrdmi', 'cs425e8c5f21e4ex4b1exbbe', 'image217', and 'mswithafsa'. A new storage account, 'mswithafsa', is currently selected and highlighted with a blue background. The main pane displays the 'mswithafsa - Files' storage account details. It includes a search bar, a sidebar with navigation links like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Data transfer, Events, Storage Explorer (preview), and Settings, and a table showing a single file share named 'profiles'.

Storage accounts

GT090617

Add Edit columns More

Filter by name...

NAME	MODIFIED	QUOTA	...
profiles	2/28/2019, 8:20:51 AM	100 GiB	...

mswithafsa - Files

Storage account

File share Refresh

Storage account: mswithafsa

NAME	MODIFIED	QUOTA	...
profiles	2/28/2019, 8:20:51 AM	100 GiB	...

Create a custom Azure role - continued



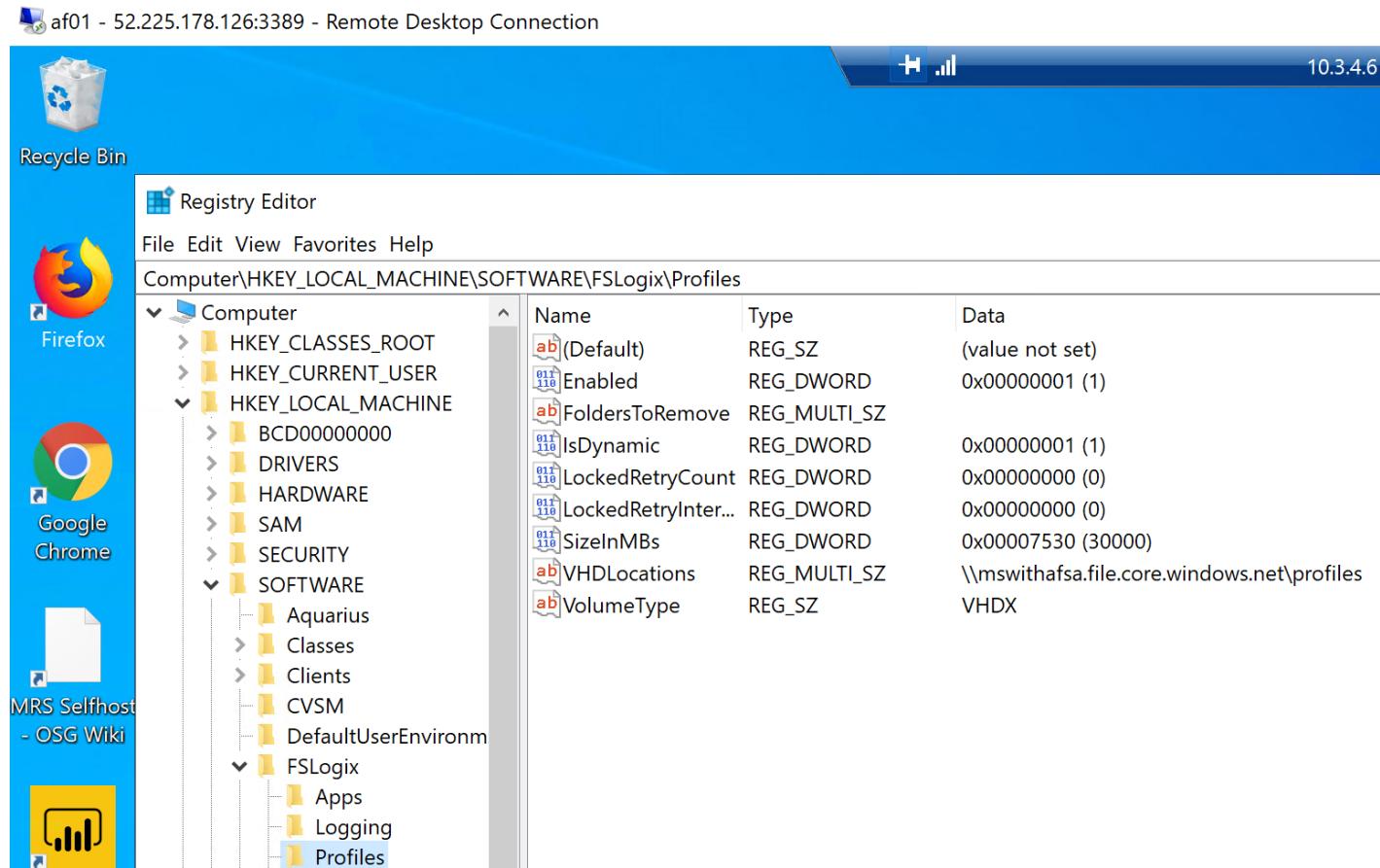
#Onetime operation

```
net use g: \\mswithafsa.file.core.windows.net\profiles  
9IJ78n+SFuAlmH06Ix93mQ4q9z0S3rAjTo9vKP5yoVTbfkqmmq8az8yG  
X3rpAEEqzR6bBZCZ4ivyzb9SMZY04Q== /user:Azure\mswithafsa
```

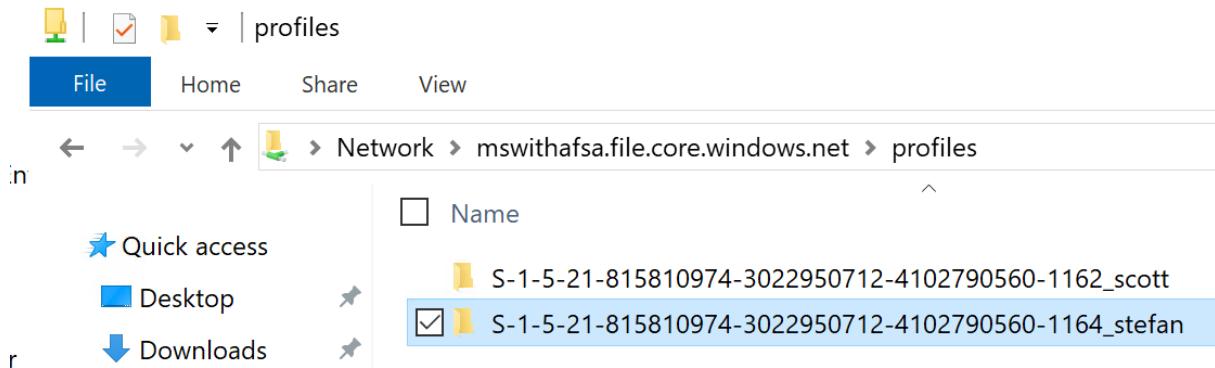
#Grant users permissions

```
icacls g: /grant stefan@wvdcontoso.com:(f)  
icacls g: /grant pieter@wvdcontoso.com:(f)
```

Configure FSLogix



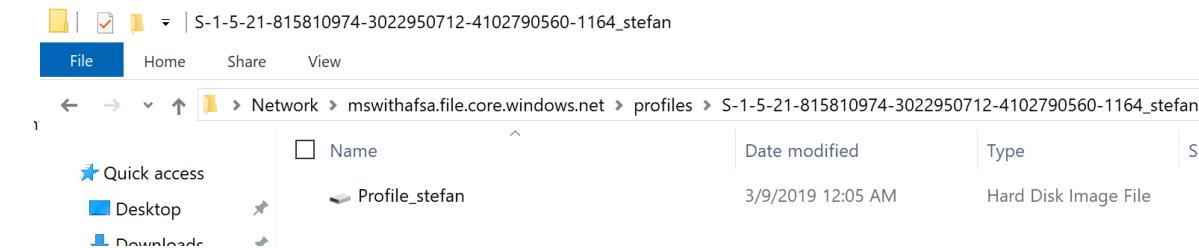
Windows Virtual Desktop with FSLogix



Admins assign users to session hosts

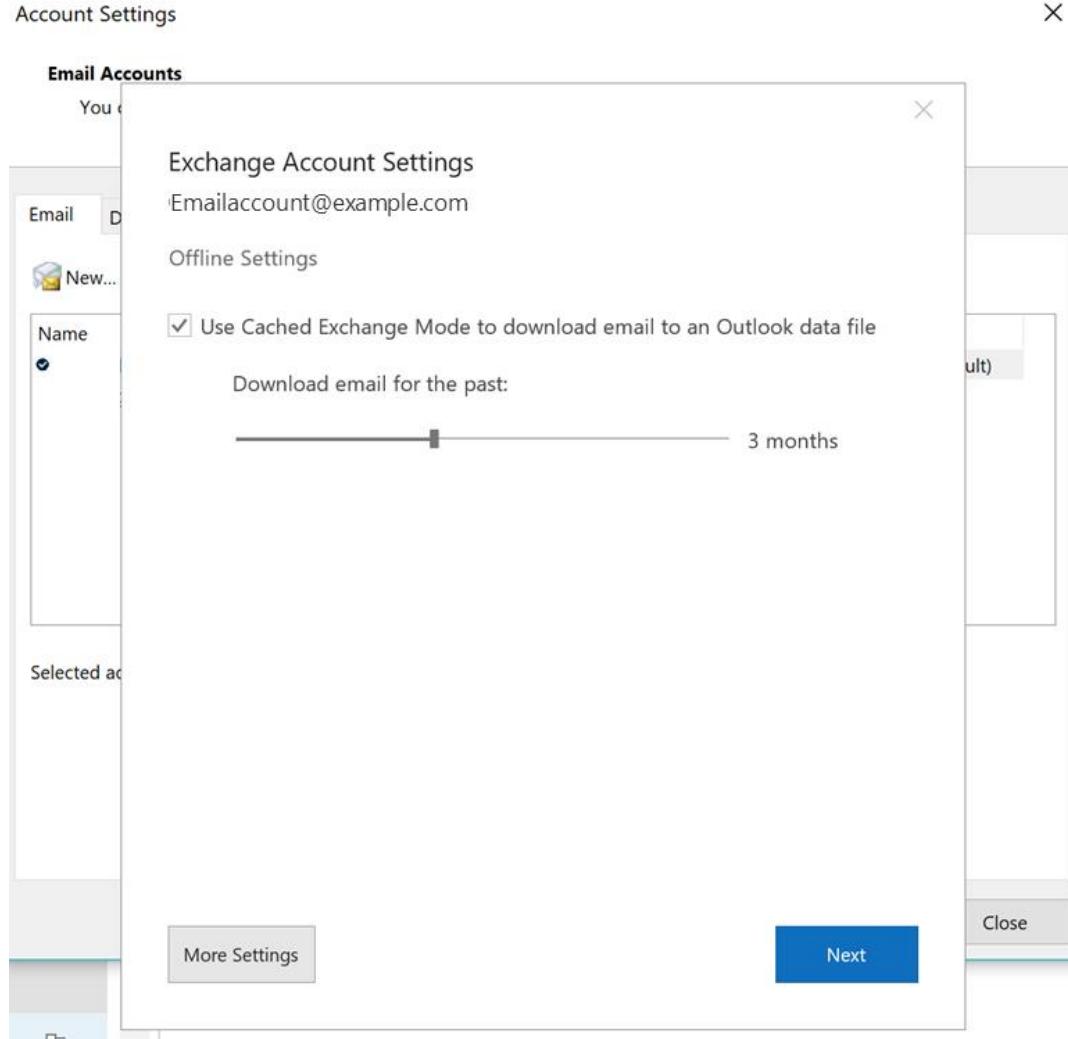


End-users log in



Profiles are assigned

Running Outlook on Windows Virtual Desktop



- Virtual environment-friendly default settings
- Inbox syncs prior to Calendar for a faster startup experience
- Option to reduce Calendar sync time
- Reduce the number of folders synced by default
- Windows Desktop Search is now per-user

Requirements

- FSLogix
- Shared Computing Activation for Office

OneDrive



- Co-authoring and collaboration capabilities in Windows Explorer, powered by OneDrive
- OneDrive sync runs in non-persistent environments
- Files on demand
- Auto-populate user profile folders

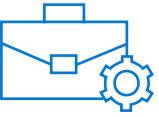
Per-machine install steps

- Download OneDriveSetup.exe
- Run “OneDriveSetup.exe /allusers” or by using SCCM
- OneDrive starts when setup is complete. Any accounts added on the computer are migrated automatically.

Implementation Guidance

Infrastructure management

Master image management



The master image can be managed by already existing processes and technologies, including:

- Azure Update Management
- System Center Configuration Manager
- Third-party



A “best practices” document helps to configure a golden image for Windows Virtual Desktop



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

[Preparing a Master Image](#)

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

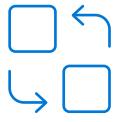


All VMs must be at the same update level after maintenance window is completed



Use SCCM to manage your images

Profile Management



Profile Container

- The 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 login
- Content appears to be in its native location

Benefits

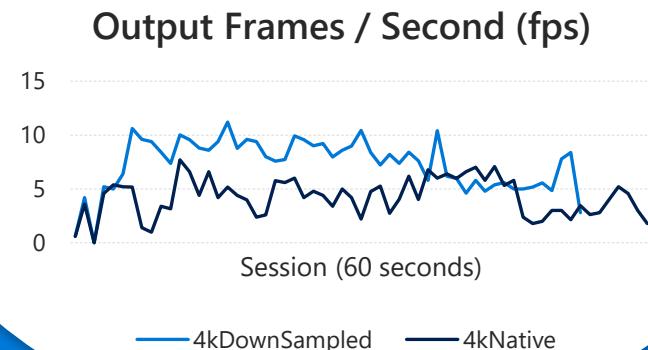
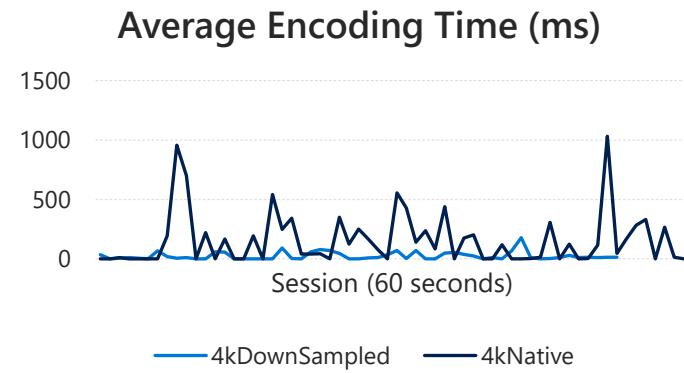
- Extremely fast login times
- Helps to eliminate profile corruption
- Uses native Windows VHD capabilities
- Easy to deploy and manage
- Seamless end-user experience



Cloud Cache

- Cloud Cache absorbs reads and optimizes writes into cost-effective payloads
- Adds a local cache component
- Applications communicate with the local cache and the cache connects with the remote container
- If the connection to the remote container is interrupted, the apps still work because they're connected to the cache
- If the interruption is short, or data that isn't in the cache is requested during the outage, everything behaves normally
- When the connection comes back online, the system reconnects and re-syncs if necessary

Video and graphics improvements



Video playback always uses hardware acceleration

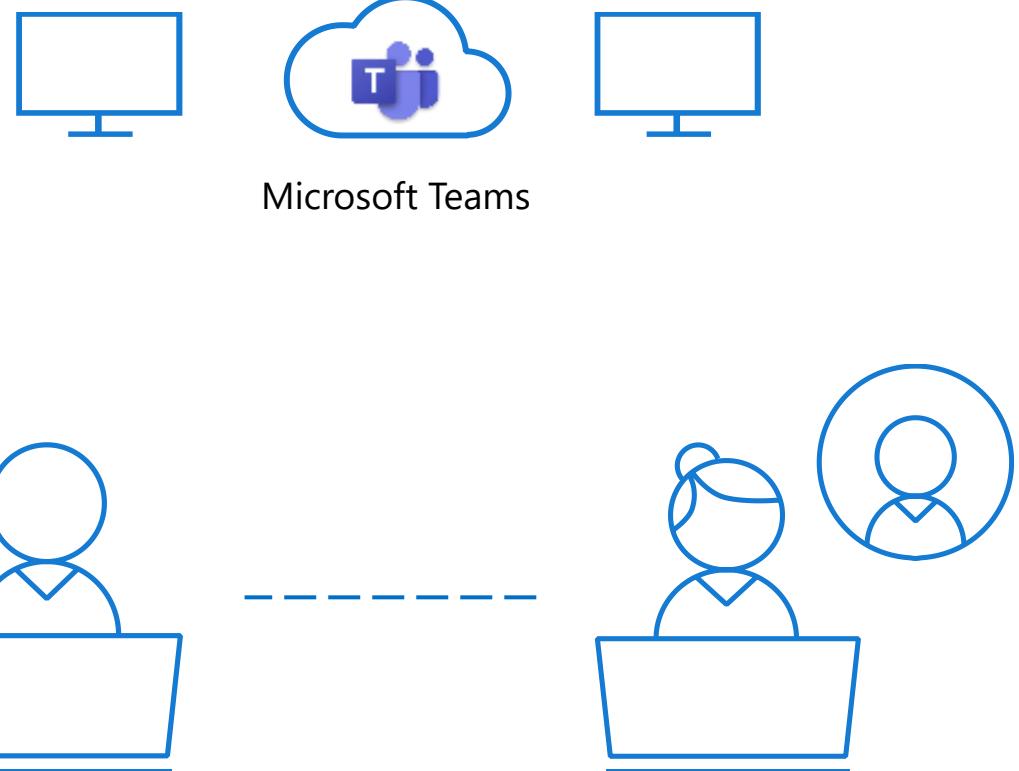
Smooth playback when moving the video window reduces tearing

4K downsampling

Device redirection for smoother video and audio streaming

High-level redirection for built-in or attached video cameras

- Uses less network bandwidth compared to USB camera redirection
- Increased video frame rate, up to 30 fps
- Redirect multiple cameras
- **Coming in May:** fully optimized calling and meeting experiences for Teams videoconferencing



Improved printing messages

- Visible in Windows client

Demo

Windows Virtual Desktop Multi-session

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

Multiple users

Win32

Office 2019 Perpetual

Long-term servicing channel

Virtualizing Windows 7



- Three-year Extended Support Update (ESU)
- Requires full Windows 7 desktop
- Use App Assure or another option first



Windows 7

Scalable, multi-user legacy
Windows environment

Windows 7

Single user

Legacy Win32

Office 2019 Perpetual

Full desktop only

Windows Virtual Desktop deployment and management options



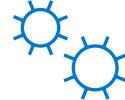
Deployment

Onboarding is through Azure Marketplace or through GitHub using ARM templates to deploy new or update existing host pool



Management

- Azure Portal enables native integration post GA for deployment and management alongside other Azure services
- Use representational state transfer (REST) APIs to set up and manage Windows Virtual Desktop directly and build complex workflows
- 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

Full desktop vs. RemoteApp

Base this decision on user requirements

Full desktop

- Power users and developers who need to install their own apps or require admin privileges
- Clients lack computing power; may be using outdated systems

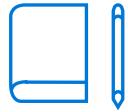
Use RemoteApp

- Clients vary widely and application consistency is impacted
- Different version of the same app from different OS

Performance guidance



VM should be deployed to Azure regions with Windows Virtual Desktop clusters



Active Directory data centers should be located in each region that has session host pools



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



Use multi-session user density for the most cost-effective option



VM configurations should match use case and host pool needs

FSLogix technologies

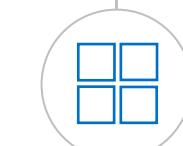
Eligible customers get access to three core pieces of technology



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



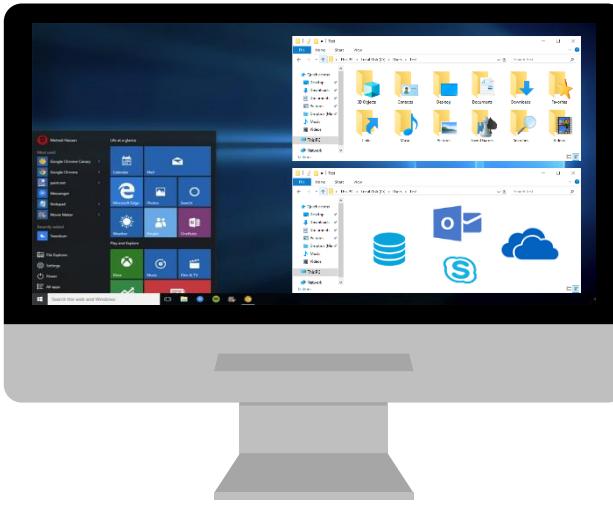
Office 365 Container



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 file system load

Benefits



Container



Profile Container



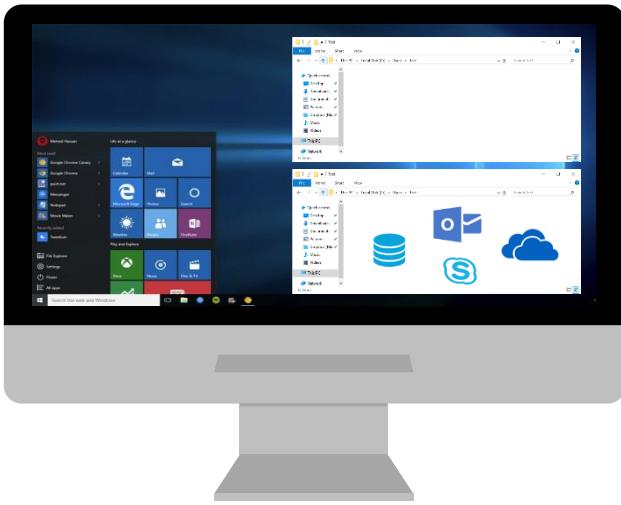
Office 365 Container



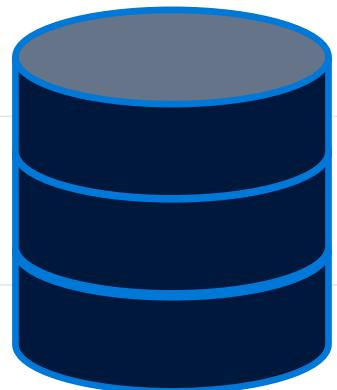
App Masking



Java Redirection



SMB Storage



Places entire user profile in network-based container

Extremely fast sign-in times

Helps to eliminate profile corruption

Works alongside existing User Environment Management platforms

Benefits



Container



Profile Container



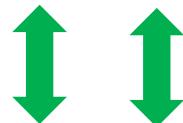
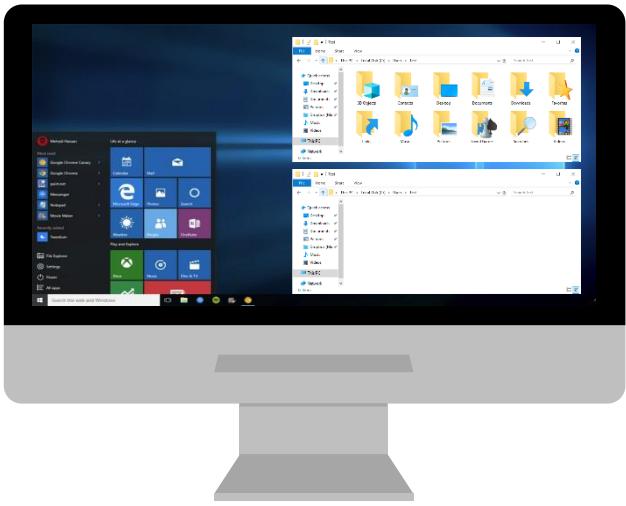
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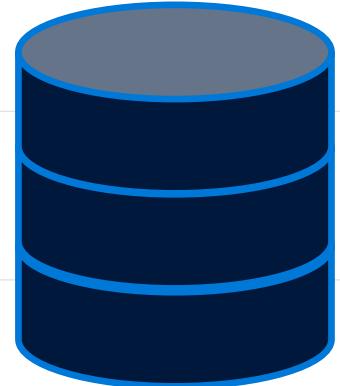
App Masking



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
 - 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
-  Profile Container
-  Office 365 Container
-  App Masking
 - Massively reduces the number of gold images to maintain
-  Java Redirection



Benefits



Container



Profile Container



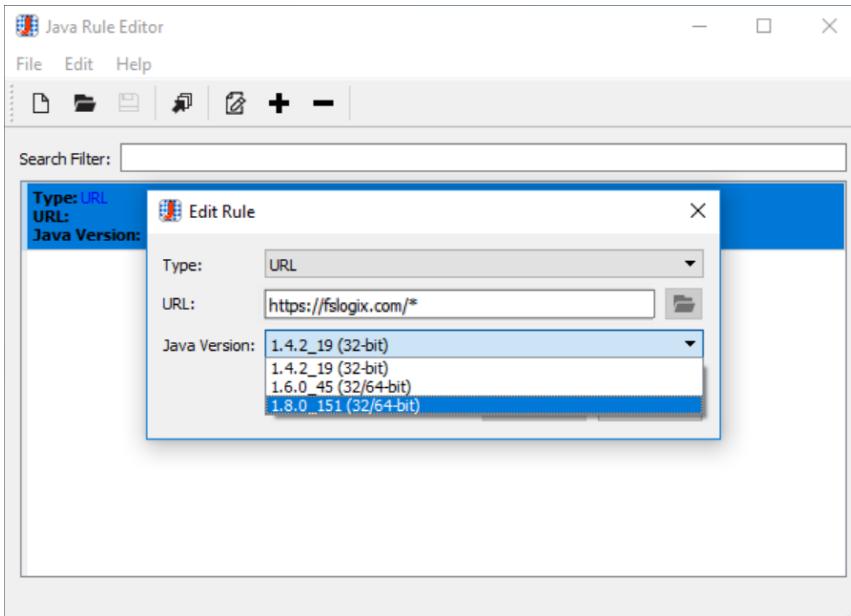
Office 365 Container



App Masking



Java Redirection



Securely co-locate multiple versions of Java on the same base image

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

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

FSLogix entitlements



Access to FSLogix technology*

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

- Microsoft 365 E3/E5/F3/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
- Remote Desktop Services (RDS) SAL

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

Office support dates

Full configuration support end dates: Support for Microsoft 365 Apps for enterprise is defined by the [Modern Lifecycle Policy](#), which requires customers to maintain an up-to-date configuration in order to stay in support. Support for non-subscription versions of Office is defined by the [Fixed Lifecycle Policy](#), which offers a fixed term of support regardless of configuration. However, the nature and extent of support available for in-support, non-subscription versions of Office running on out-of-support versions of Windows will depend on the nature of the specific issue. Learn more at: [Microsoft Lifecycle Policy FAQ](#).

	Microsoft 365 Apps for enterprise No end date	Office 2019 Oct 2025	Office 2016 Oct 2025	Office 2013 April 2023	Office 2010 Oct 2020
Win10 SAC No end date	No end date	Oct 2025	Oct 2025	Apr 2023	Oct 2020
Win8/8.1 Jan 2023	Jan 2023	N/A	Jan 2023	Jan 2023	Oct 2020
Win7 (w/ or w/ ESU) Jan 2023	Jan 2020*	N/A	Jan 2020†	Jan 2020†	Jan 2020†
Windows 10 Enterprise Multisession No end date	No end date	N/A	N/A	N/A	N/A
WS 2019 Oct 2028	Oct 2025	Oct 2025	N/A	N/A	N/A
WS 2016 Jan 2027	Oct 2025	N/A	Oct 2025	Apr 2023	Oct 2020
WS 2012 / 2012 R2 Oct 2023	Jan 2020	N/A	Oct 2023	Apr 2023	Oct 2020
Win10 LTSC 2018 Oct 2028	N/A	Oct 2025	N/A	N/A	N/A
Win10 LTSB 2016 Oct 2026	Jan 2020	N/A	Oct 2025	Apr 2023	Oct 2020
Win10 LTSB 2015 Oct 2025	Jan 2020	N/A	Oct 2025	Apr 2023	Oct 2020

Office 365 service connectivity support end dates As of October 13, 2020, connectivity support to Office 365 services (e.g. Exchange Online, SharePoint Online, OneDrive) will require Microsoft 365 Apps, Office 365, or non-subscription versions of Office in mainstream support. Learn more: [Microsoft 365 Apps for enterprise Updates](#).

Office 365 Services No end date	No end date
Microsoft 365 Apps for enterprise No end date	No end date
Office 2019 Oct 2025 (mainstream support ends Oct 2023)	Oct 2023
Office 2016 Oct 2025 (mainstream support ends Oct 2020)	Oct 2023†
Office 2013 Apr 2023	Oct 2020
Office 2010 Oct 2020	Oct 2020

*Beyond January 2020, Office 365 and Microsoft 365 Apps clients running on Windows 7 and Windows Server 2008 R2 (with or without ESU) will receive Office security updates thru January 2023. Learn more: [Windows 7 end of support and Microsoft 365 Apps](#).

†Office 2016, 2013, and 2010 clients running on Windows 7 and Windows Server 2008/2008 R2 (with or without ESU) will continue to get monthly updates through the end of the Office client's lifecycle..

‡Although mainstream support for Office 2016 ends on October 13, 2020, Office 365 services will continue to be supported with Office 2016 until October 2023. Learn more: [Helping customers shift to a modern desktop](#)

Migration

Remote Desktop Services and Windows Virtual Desktop

Remote Desktop Service is ideal if you want...

- Full end-to-end control of the desktop virtualization environment
- In-place upgrade of existing Windows Server RDS environment to extend current deployments
- Supports pure cloud, pure on-premises, and hybrid
- Support for lift and shift, burst-to-cloud migrations

Windows Virtual Desktop is ideal if you want...

- Microsoft to manage the brokering platform as a service
- Windows 10 Enterprise multi-session capabilities and free Windows 7 ESU
- Optimized Office365 ProPlus support
- Workload support only on the cloud (supporting services can be on-premises)
- Support for lift and shift for personal desktops

Transformation path 1: Operational efficiency



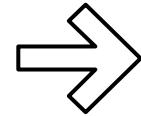
Data center contracts expiry



Urgent capacity needs



Quickly integrate acquisitions

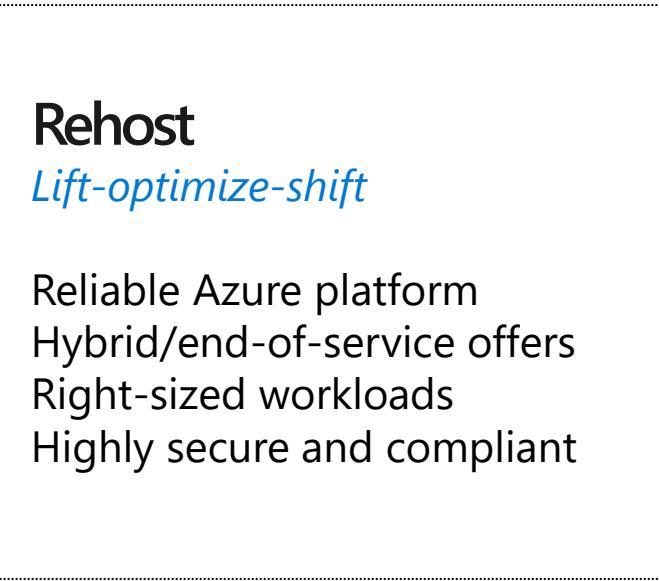


Software and hardware refresh



Software end of support

Infrastructure-oriented drivers



Data security



Easier compliance



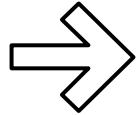
Innovative applications

App-oriented modernization drivers

Transformation path 2: Innovation and efficiency

Infrastructure-oriented

-  Data center contracts expiry
-  Urgent capacity needs
-  Quickly integrate acquisitions
-  Software and hardware refresh
-  Software end of support



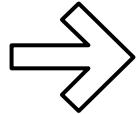
Rehost

Lift-optimize-shift

- Reliable Azure platform
- Hybrid/end-of-service offers
- Right-sized workloads
- Highly secure and compliant

App-oriented

-  Security threats
-  Compliance
-  Application innovation



Refactor | Rearchitect | Rebuild

Driven by app prioritization

- Containers, PaaS, and serverless technologies in Azure

Azure Migration Program

Available to all Azure customers, scaled through specialized migration partners



Best practice guidance



Offers and incentives



Technical skill-building



Infrastructure and
data foundations



Migration planning
and execution



Digital
resources



Migration
tools



Azure
trainers



FastTrack for
Azure
engineers



Specialized
partners

Reduce cost and risk | Accelerate migration velocity | Deliver customer success

Learn more | Azure.com/AMP

Windows Virtual Desktop Migration | Pooled resources

Steps to migration

User identity

Sync user identities and password hash from on-premises Active Directory (AD) to Azure Active Directory (AAD)

Setup AD instance on Azure using ASR or continue using on-premises AD

Virtual Machines

Bring your own image from on-premises and create new VMs on Azure

Lift and shift VMs from on-premises

Register them with Windows Virtual Desktop infrastructure

User and app data

UPDs not supported on Windows Virtual Desktop

Convert UPD into Profile Container—conversion tool available in GitHub soon

Sync to Azure using Azure file sync or file server replication

Client (end-user) capabilities

Download Windows Virtual Desktop client for Windows or use web client

Continue using existing RD clients available through app stores

Windows Virtual Desktop Migration | **Personal** Desktop

Steps to migration

Virtual Machines

Lift and shift VMs from on-premises

Register them with Windows Virtual Desktop infrastructure

Client (end user) capabilities

Download Windows Virtual Desktop client for Windows or use web client

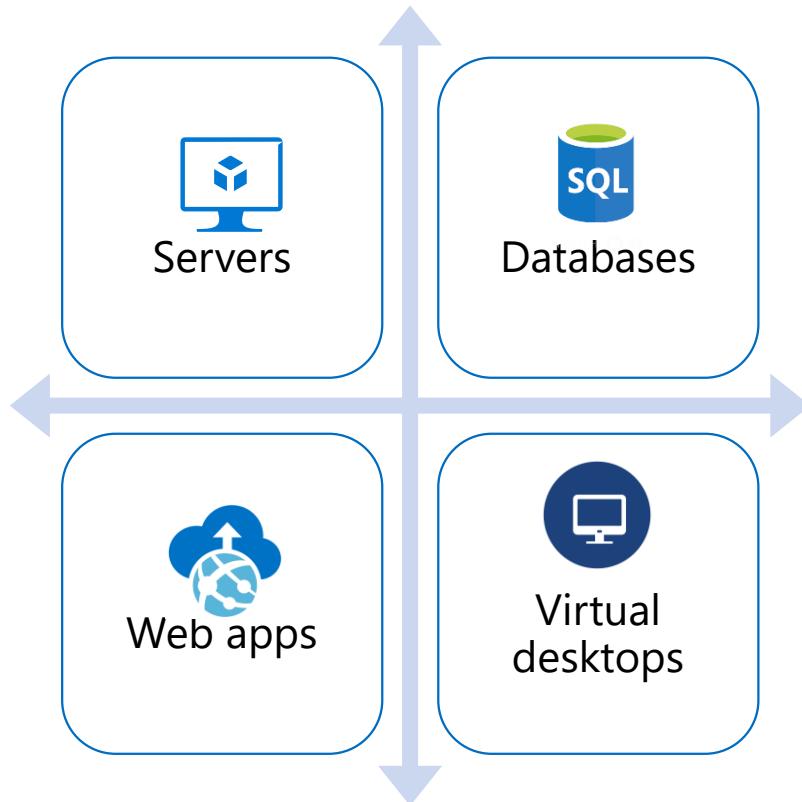
Continue using existing RD clients available through App stores

End-user assignment

Use Windows Virtual Desktop direct assignment capability to assign personal desktops to specific users

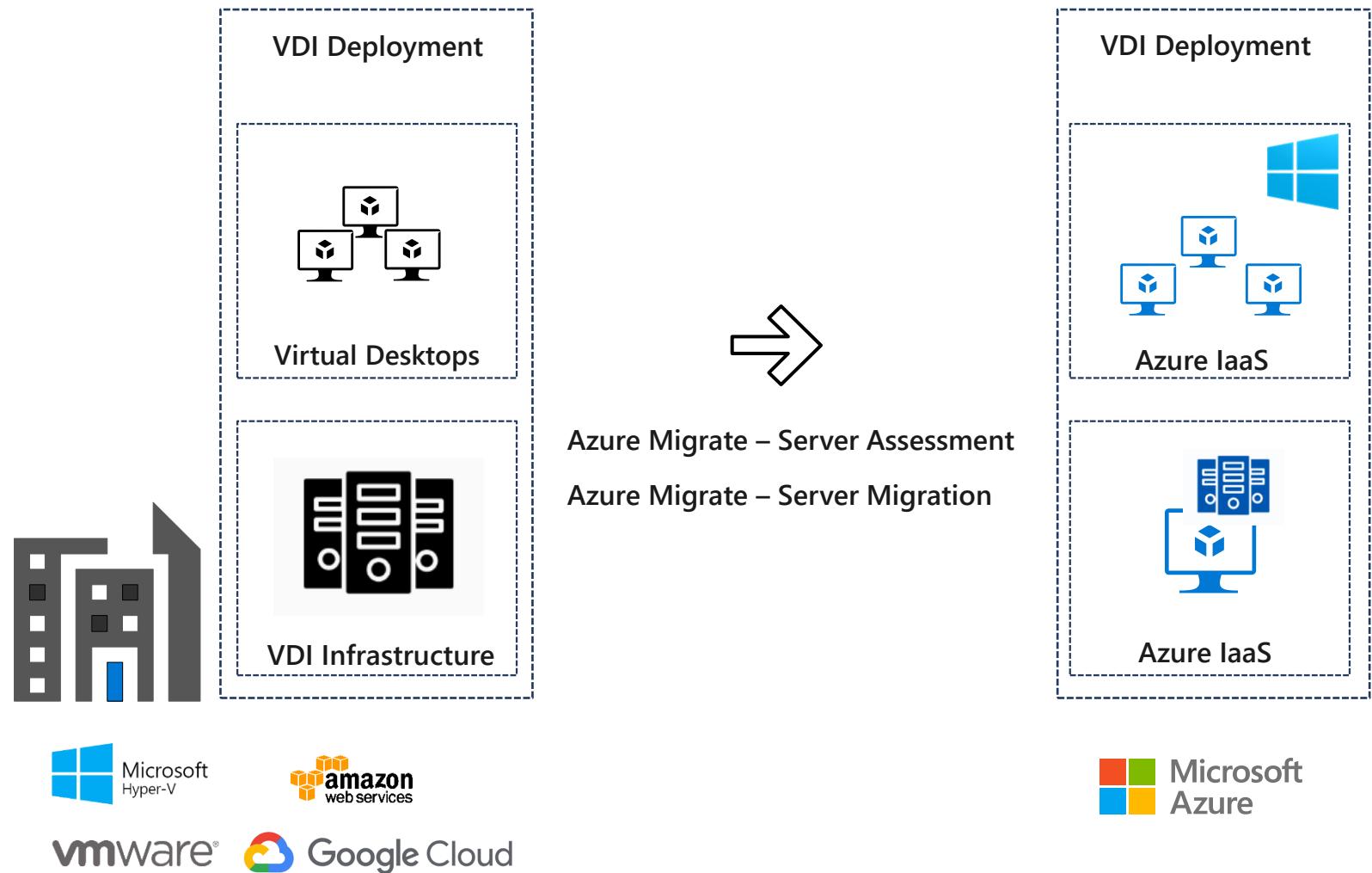
Azure Migrate | Hub for all migration tools

Discover, assess, and migrate applications, infrastructure, and data with Azure Migrate



- Assessments for readiness, sizing, and cost estimation
- Migration with near-zero downtime
- Integrated experience and end-to-end progress tracking
- Choice of tools with ISV integration

VDI migration | Azure IaaS



Azure Migrate Hub

Screenshot of the Microsoft Azure (Preview) interface showing the Azure Migrate Hub overview.

The page title is "Microsoft Azure (Preview)" and the sub-page title is "Home > Azure Migrate".

The left sidebar includes:

- Search (Ctrl+/)**
- Overview** (selected)
- Migration goals**
 - Servers**
 - Databases**
 - VDI**
 - Web Apps**
 - Data Box**
- Manage**
 - Discovered items**
- Support + troubleshooting**
 - New support request**

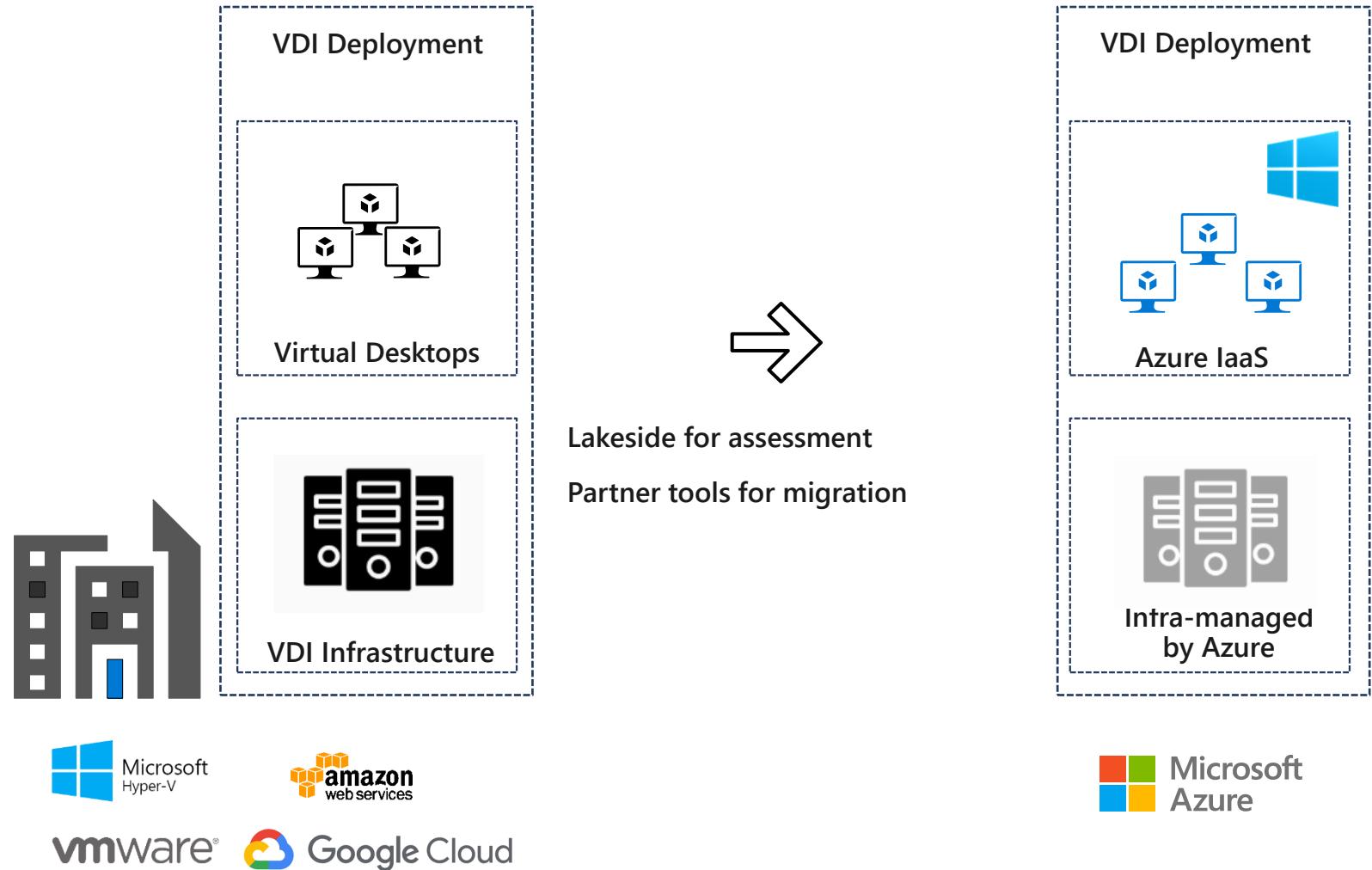
The main content area features a "Get started" button and the heading "Migrate your on-premises datacenter to Azure". It provides instructions to "Discover, assess and migrate your on-premises applications using Microsoft or third-party tools, or [find an expert](#) to help with your migration." It also includes a "Learn more" link.

The content is organized into three sections:

- Windows and Linux servers**: Shows a rocket launching from a stack of server racks towards a cloud. Includes a "Discover, assess and migrate your on-premises VMware and Hyper-V virtual machines or Physical servers to Azure." button and a "Assess and migrate servers" button.
- SQL and other databases**: Shows a rocket launching from a stack of database cylinders towards a cloud. Includes a "Discover, assess and migrate your on-premises databases to Azure SQL Database Managed Instance or Azure SQL Database." button and a "Assess and migrate databases" button.
- Web apps, data and Virtual Desktop Infrastructure**: Shows a rocket launching from a stack of icons (cloud, database, monitor, cube) towards a cloud. Includes a "Assess and migrate web apps (new)", "Assess virtual desktop infrastructure (new)", and "Migrate data" buttons.

At the bottom, there is a "Useful links" section.

VDI migration | Windows Virtual Desktop



Partner value-added services



Partners integrate with REST APIs and PS cmdlets offered by Windows Virtual Desktop service



Solutions developed by partners are available through Azure Marketplace



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

Microsoft Azure is Citrix's strategic and preferred public cloud



Why Windows Virtual Desktop and Citrix make sense together

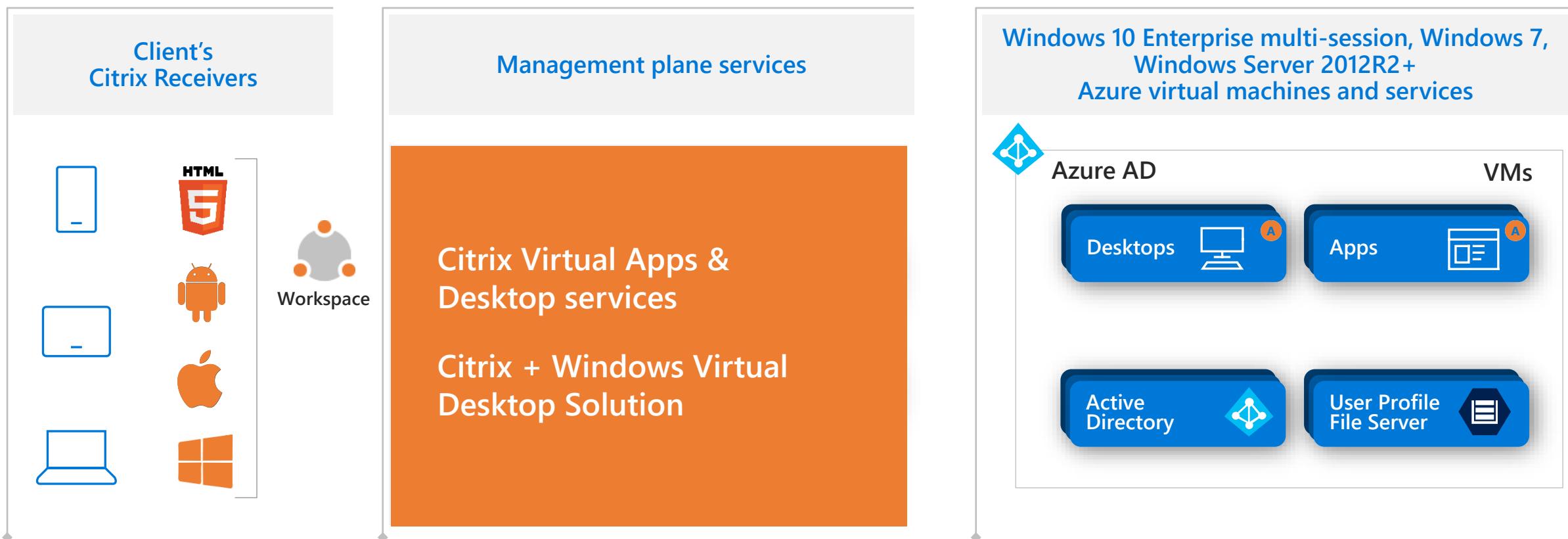
- Combine the value of Microsoft 365 with Windows Virtual Desktop in Citrix offerings
- Drive incremental Azure Consumed Revenue: Help accelerate customers' cloud initiatives and enable enterprise IT to streamline migration

Windows Virtual Desktop integrates with Citrix Workspace and Citrix Virtual Apps on desktops

- Provide multi-session Windows 10 user experience on Azure, Office optimization with Office 365 Containers, Profile Containers, app masking, and extended security updates
- Centrally manage hybrid deployments with Windows Virtual Desktop on Azure and manage existing on-premises Citrix Virtual App and Desktop services
- Rapidly provision Windows Virtual Desktop resources at scale

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



App Assure: Microsoft's application compatibility promise

Microsoft is committed to ensuring your apps work on the latest versions of our software. If you encounter any issues, we will help you remediate them at no additional cost.

Windows Virtual Desktop

Windows 10 Enterprise multi-session

Virtualized apps that run on Windows Server Remote Desktop Session Host will run on Windows 10 Enterprise multi-session as part of Windows Virtual Desktop

Windows 10 Enterprise

Apps running in any Windows 7 and Windows 10 virtual desktop environment will run on Windows 7/Windows 10 Enterprise as part of Windows Virtual Desktop

and

Apps running on Windows 7 and Windows 10 client devices will run on Windows 7/ Windows 10 Enterprise as part of Windows Virtual Desktop

Call to action

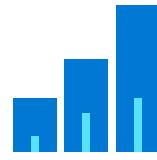


**Get started
today**

aka.ms/WVDGetStarted

**See a step-by-step
deployment guide**

aka.ms/WVDVirtualEvent



**Simulate the
end-user
experience**

[aka.ms/WVD/Experience
Estimator](https://aka.ms/WVD/ExperienceEstimator)



**Use the Azure
calculator to
estimate your costs**

aka.ms/WVDPricing

Key components of the Windows Virtual Desktop pitch

This section is for Internal/Field use only and should not be shared with customers

Connect customer challenges to Windows Virtual Desktop



Customer challenges

Client experience trade-offs in multi-session environments

Poor O365 experience in non-persistent multi-session environment
due to data persistence requirements (Outlook, OneDrive, etc.)

Scalable **Remote Desktop deployment requires deep knowledge to run smoothly**; diverse user needs require complex image management

Deploying/monitoring/updating virtual deployments is a **high-overhead** function



How Windows Virtual Desktop helps

Deliver the only multi-session Windows 10 experience

- Easily select Windows 10 multi-session or single-session
- Virtualize Store and legacy apps in minutes
- **Transition help:** Free Windows 7 Extended Security Updates

Enable optimizations for Office 365 ProPlus

- Containerized User Profiles (FSLogix) with fast VHD load times
- OneDrive and Teams per machine Install
- Outlook and Windows search improvements

Migrate your existing Windows server desktop (RDS) and apps to Azure

- Simplified management and deployment experience
- Reduced management costs
- Strong app compatibility

Deploy and scale in minutes

- Azure management portal for Windows Virtual Desktop
- Built-in security and compliance
- Partner ecosystem extensibility

Acknowledge and solve for AWS Workspaces compete

Summary of AWS Workspaces



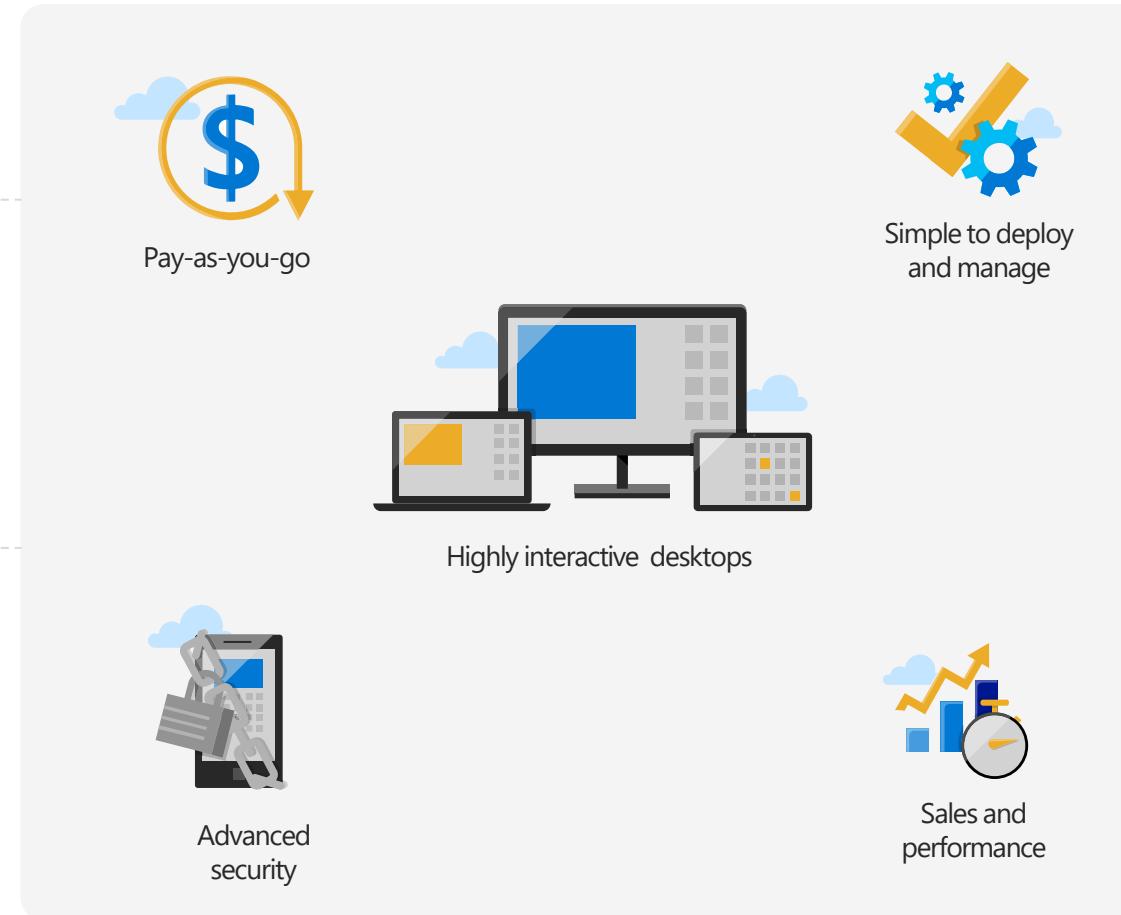
Fully managed cloud desktop service.



Amazon Web Services has two offerings: Amazon AppStream for streaming remote applications and Amazon WorkSpaces for provisioning cloud-based virtual desktops running Windows.



Amazon Workspaces is mostly run on a session-based desktop. They support client-based desktop virtualization and dedicated hardware (instead of shared hardware) for provisioning.



Acknowledge and solve for AWS Workspaces compete

How does Windows Virtual Desktop compare?

		 Windows Virtual Desktop	 Amazon Workspaces
Supported OS	Win10 Ent, Win10 Ent multi-session, Win7, WS 2016, 2019, 12R2	Windows Server (skinned as Win7)	
License	Included in Win 10 E3, M365 E3 and W10 VDA RDS CAL also eligible	WS RDS SAL or CAL required	
Virtualization flexibility	Desktop and RemoteApp	Desktop only ³	
User Experience	Win 10 single or multi-session with full Office 365 PP	Win7 skin on Win Server with limited Office	
VM Types	All Azure VM instances available in region	Limited to 7 configurations	
Pricing approach	IaaS-based pricing based on usage	Per user, fixed pricing	
Entry Cost (does not include Win E3 licensing cost)	Estimated calculated price points with RIs Single session – starting at ~\$42 pupm Multi-session – starting at ~\$7 pupm	Single session – starting at \$21 pupm + \$5.11 pupm RDS-SAL	
Management GUI	Separate Web UI as Azure App Svc	Integrated w/ Console	
Monitoring GUI	Separate Web UI as Azure App Svc	Integrated w/ CloudWatch	
Onboarding	Pre-reqs: AD-AAD Sync, PowerShell File Server VMs for profile disk	Simple, quick via portal	
App deployment	Third-party app layering	Integrated app layering (WAM) ²	
Geo/region	Starting with NA(2)	NA(3),SA(1),EU(3),Asia(2),Aus(1),Jpn(1)	

Follow the playbook: Citrix



Suggest Windows Virtual Desktop when it's time to replace an existing virtualization solution or build a new one

#1

Windows Virtual Desktop on Azure + on-premises deployments

- Pitch joint offerings with the Citrix Virtual Apps and Desktops service and Citrix Workspaces
- Customers can manage hybrid scenarios with Citrix on-premises workloads under one management console

#2

Migrate on-premises services to Windows Virtual Desktop

- Pitch Windows Virtual Desktop and/or Citrix joint offerings with Citrix Virtual Apps and Desktops service and Citrix Workspaces
- Windows Virtual Desktop benefits—such as multi-session Windows 10 and Office 365 ProPlus optimization—are key drivers for moving to Windows Virtual Desktop on Azure

#3

Citrix Cloud: RDS/VDI on Azure only (not ready to onboard Windows Virtual Desktop)

- Pitch Citrix Virtual Apps and Desktops service running RDS/VDI on Azure

If moving to Azure isn't an option right now, customers can upgrade to the newest versions of Remote Desktop Services on-premises and Citrix for improved functionality and easier cloud migration later

Follow the Playbook: VMWare Horizon Cloud



Suggest VMware when the customer has multiple independent on-premises servers

#1

Accelerate cloud adoption

- Customers can try Microsoft Azure on a use-case-by-use-case basis
- Recommend hybrid environments with existing Horizon on-premises and Windows Virtual Desktop in Azure*
- Highlight the common management tools and skillsets for all environments
- Customers get a single pane of glass for all workloads

#2

Maximize cost savings

- Pitch the Windows Virtual Desktop entitlement, features, and simple pricing
- Customers can optimize costs at scale with advanced power management that matches utilization and saves money
- Support a broader Windows 10 migration to Windows Virtual Desktop with multiple deployment options

#3

Exceptional user experience

- Pitch Workspace ONE Access and Intelligent Hub for highly secure access to apps and desktops
- These offerings provide enterprise-class performance on a broad range of clients with dynamic remoting protocols
- Users get a consistent experience across all devices

Promote integrated Windows Virtual Desktop and VMware Horizon, including FSLogix and Dynamic Environment Manager, to accelerate customer time-to-value

The growing Windows Virtual Desktop partner ecosystem

Systems Integrators (SIs and GSIs)



Independent software vendors and value-add partners *Software and services*





Thank you.

Internal Resource List



OnRamp Tab location + section



Deliverable (location on Teams)



URL on Onramp/GearUp

Readiness – Decks	Update L100 Deck	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-11662
Readiness – Demo	Windows Virtual Desktop Hands on Labs - labs	https://handsonlabs.microsoft.com/handsonlabs/SelfPacedLabs?storyGuid=C552F008-20D1-4A33-A0B7-EC9F9AA483A4
Readiness – Decks	Windows Virtual Desktop L300 Presentation	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12553
Readiness – Videos	Mechanics video (with deX)	https://www.youtube.com/watch?v=30dOLcZ4_9U&feature=youtu.be
Readiness – FAQ	FAQs Internal: Update (Review for Public Preview)	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12152
Partner – Windows Virtual Desktop Samsung	Windows Virtual Desktop and Samsung DeX joint solution	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12559
Readiness – Decks	FSLogix disclosure	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12557
Readiness – Decks	Reviewers Guide	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12556
Readiness – Decks	Quick Start Guide	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12555
Readiness – Decks	Architectural Guidance	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12554
Partner – Decks	Windows Virtual Desktop Partner Pitch Deck	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12560
GearUp ONLY	Intelligent Cloud Business Field Alert - Announcing Public Preview of Windows Virtual Desktop	https://microsoft.sharepoint.com/sites/infopedia/pages/layouts/kcdoc.aspx?k=g03kc-1-12558
		End-user scenario: Anywhere, Anytime Access to Windows Remote Desktops Click-through Demo
		End-user scenario: Security and Compliance with Windows Virtual Desktop RemoteApps Click-through Demo
		Administrative scenario: Windows Virtual Desktop: the Administrator's Experience Click-through Demo
		IT Pros Webcast – All you need to know about Windows Virtual Desktop
N/A: On24		

Non-Azure Resource Manager Object Model

