Enabling Remote work with Microsoft Windows Virtual Desktop

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Virtualization scenarios

- **Security and regulation**
  - Financial Services
  - Healthcare
  - Government

- **Elastic workforce**
  - Mergers and acquisition
  - Short term employees
  - Contractor and partner access

- **Specific employees**
  - BYOD and mobile
  - Call centers
  - Branch workers

- **Specialized workloads**
  - Design and engineering
  - Legacy apps
  - Software dev test
Windows Virtual Desktop is a comprehensive desktop and app virtualization service running in the cloud.

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.
Enables Remote Work
Users can work from any device, anywhere*
*with an Internet connection, of course

Enables Device Virtualization
No more expensive desktops/laptops

Centralizes Desktop Administration
Imagine managing devices deployed across the world
Intune is still useful in this case

Enforces Security
Azure AD enforces MFA, conditional access
Provides additional reporting and audit tools

Simplifies Infrastructure
Citrix and RDS deployments are complex and require
many different server roles and hardware
Enable optimizations for Office 365 ProPlus

Deliver the recommended Office 365 ProPlus experience with multi-session virtual scenarios to provide the most productive virtualized experience to your users.

- Office 365 containers make Office more performant in a multi-session environment including Outlook and OneDrive for Business support

- Profile containers enable faster and more performant experience in non-persistent environments
DEMO
Remote Desktop on MacOS
Remote Desktop on Android
Remote Desktop on iOS
Deployment Overview
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
Windows Virtual Desktop

Provide a corporate desktop experience while working from home

- Azure based Virtual Desktop solution. Results of screen output presented to user
- Can be accessed from anywhere, by any user, at anytime. One main use case is remote working anyway – now more relevant than ever
- Enables users to work from home and get access to a corporate desktop or applications, i.e. can do their day job
Prerequisites to deploy Windows Virtual Desktop

Get started at aka.ms/startwvd

**STEP 1**
Choose an identity strategy
- Azure ADDS
- VM with AD configured
- ExpressRoute or VPN to on-premises DC

**STEP 2**
Choose where to host FSLogix profiles
- Fileserver
- Azure Files with Azure ADDS
- Azure NetApp Files

**STEP 3**
Make sure you have all credentials needed
- Subscription admin
- Azure AD global admin
- Active directory administrator
- WVD tenant admin
## Identity Strategies

<table>
<thead>
<tr>
<th>Option</th>
<th>Pros</th>
<th>Cons</th>
</tr>
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<tbody>
<tr>
<td>Spin up a DC in your Azure subscription.</td>
<td>Can sync with on-premises DCs if VPN or ExpressRoute is configured. All familiar AD Group Policies can be used. Virtual machines can be paused or stopped when needed to reduce costs.</td>
<td>Adds additional management of a VM and Active Directory in Azure.</td>
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<tr>
<td>For cloud-based organizations, use Azure AD DS.</td>
<td>Great for test or isolated environments that do not need connectivity to on-premises resources. Azure AD will be your leading source for identities.</td>
<td>AD DS will always be running resulting in a fixed charge per month.</td>
</tr>
<tr>
<td>For hybrid organizations, use VPN or ExpressRoute and make sure your on-premises DCs can be found in Azure.</td>
<td>Adds additional management of a VM and Active Directory in Azure. No AD DS or Domain Controller required in Azure.</td>
<td>Latency could be increased adding delays during user authentication to VMs. This assumes you have an on-premises environment, not suitable for cloud only tests.</td>
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</table>
Recommended identity setup for cloud-based organizations

- Azure AD
- Azure AD Domain 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**

- **Azure AD**
- **Windows Server AD on-prem connected to Azure**
  - ExpressRoute or site-to-site VPN to Azure
  - Azure AD Connect to synchronize identities
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
Implementation Guidance – infrastructure management
Master Image Management

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

- Azure Update Management
- System Center Configuration Manager
- 3rd 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
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

- 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.

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.

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.
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

Improved printing messages

Built-in Windows client first to adopt
Full desktop vs. RemoteApp

Based on what your users need to do.

<table>
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<th>Full desktop</th>
<th>Use RemoteApp</th>
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<tr>
<td>Power Users / Developers that need to install their own apps or admin privileges</td>
<td>Clients vary widely and application consistency is impacted</td>
</tr>
<tr>
<td>Clients lack computing power / outdated</td>
<td>Different version of the same app from different OS</td>
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What are the eligible licenses for WVD?

- You are eligible to access Windows 10 and Windows 7 with Windows Virtual Desktop if you 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
- *Customers can access Windows Virtual Desktop from their non-Windows Pro endpoints if they have a Microsoft 365 E3/E5/F1/Business/A3/A5/Student Use Benefits or Windows 10 VDA per user license.
# Windows Virtual Desktop Remote Desktop Offer

## MSFT Gives

- ✓ Up to $20,000 in customer incentives [ ECIF ]
- ✓ Up to $15,000 in Azure credits (valid for 3 months)
- ✓ Access to assessment and migration acceleration tools:
  - Lakeside: [https://www.lakesidesoftware.com](https://www.lakesidesoftware.com)
  - Nerdio: [https://getnerdio.com/](https://getnerdio.com/)
  - Liquidware: [www.liquidware.com](http://www.liquidware.com)
  - CloudJumper: [https://cloudjumper.com/](https://cloudjumper.com/)
- ✓ Access to private preview of WVD Azure Portal (for customers who choose WVD Native solution)
- ✓ Access to WVD Design and Deployment Helpdesk to assist in technical design questions

## Customer Commits

- ▪ 25+ monthly active users (MAU) in production in ~ 3 months
- ▪ Commitment to Success Criteria as documented in signed Deployment SOW with Partner
COVID-19 Nonprofit Azure

Eligible Organizations

- Human Services
- Health support
- Public Safety
- Food and Nutrition
- Housing Support
- COVID-19 Research

Offer Details

- Windows Licensing:
  - Up to 100 donation licenses Win Upgrade via TechSoup
  - 100 seats of WinE3 trial licenses (6-month trial)

- Azure Sponsorship:
  - One-time request of $7K in Azure Sponsorship credits available through June 30th (to be used within 1 year)

- Help Desk Support:
  - Sponsorship onboarding concierge
  - Windows Virtual Desktop Technical Support Desk
  - Microsoft Community Training (MCT) Concierge

Actions

Visit your Nonprofit Portal to access the offer*
Offer available through June 30th, 2020

Offer only available to organizations who meet COVID-19 eligibility criteria*
WHAT NOW?
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- Roadmap
- Announcements
- Demos
- Training
- Azure Office Hours
- Nonprofit donations and discounts

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Microsoft Azure expert office hours for nonprofits

https://nonprofits.tsi.microsoft.com/azure-expert-office-hours/

Join Azure expert Robert Dolney as he answers your burning Azure questions!

Do you:

- Want to know more about recent Azure developments?
- Have an idea for a project but not sure where to start?
- Consider yourself an Azure pro and need a second opinion on a vexing problem?
- Do you want to know what other Nonprofits are working on and asking about?

If you answered YES to any of the above, we’d love to have you attend our Azure office hours. And if you answered NO to all of the above, then still join us – you never know what you’ll learn! But please leave your baggage at the door. This is not a place to bring your support issues to (although you may find a shoulder to cry on).

We currently offer Azure office hours weekly on Fridays, rotating through North America, EMEA, and APAC time zones so that our customers around the world
Thank you!

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