



**Description**

<b>General Mgmt:</b>	WVD will be controlled, configured, and monitored through an Azure based management control panel – the technology formerly known as RDMI. A new WVD GUI management section, within the Azure portal is being worked on. No time lines as of yet. The WVD control panel houses the Broker, Web Access, Diagnostics, the Gateway role, and Load Balancing (which is part of the Broker, by the way, it’s not a separate role). The Azure management control panel will be, provisioned, maintained, etc. by Microsoft.
<b>Mgmt. tools:</b>	ARM Templates will be made available through GitHub – manually editable. Microsoft offers Rest API’s and PowerShell (to Rest) support. WVD, from start to finish can be completely managed through PowerShell and/or REST. Using both Microsoft’s SCCM and/or Intune (part of MS 365) is optional as well. SCCM can be used to manage your server operating systems, while Intune can be used to manage your desktop operating systems. Microsoft’s new Diagnostics service can be used to troubleshoot errors on the WVD platform – end to end.
<b>Supported OS’s:</b>	Windows 10 Enterprise multi-session and single user. Windows 7 (free extended support up till 2023). Windows Server 2012 and upwards.
<b>Licensing / costs:</b>	Win 10 single and multi-session as well as Windows 7 will require one of the following licenses: Microsoft 365 E3, E5, A3, A5, Business or Windows E3, E5, A3, A5. For Windows Server 2012 R2, 2016, 2019 you will need a RDS Client Access License (CAL) with Software Assurance. The WVD service as part of the above mentioned license will be free of charge, you pay for the Azure (IaaS) resources consumed by your VM’s. In other words, the WVD management control panel will be free of charge, the rest isn’t.
<b>Application support:</b>	WVD is optimized for Office ProPlus (Win 10 single and multi-session). Both Win 10 Enterprise single and multi-session will support Win32 applications as well as the modern UWP type applications. All other OS’s as part of WVD only support Win32 applications. Individual app groups can be created for different sets of users, users can be assigned to multiple app groups.
<b>Image Mgmt:</b>	Customers will be responsible for maintaining their own compute images holding their applications, security patches, and other software. Images can be created manually in the form of a VHD or VHDX, which can be uploaded to Azure. You can use managed and on-managed disks. Default images are also available, pre-configured to get you up and running quickly. These will be selectable from the Azure management control panel while setting up the WVD service. VM’s/hosts can be configured as Pooled, Assigned, Persistent, and Non-persistent.
<b>Scaling / sizing:</b>	There is a script available to help you automatically scale hosts as you go. ARM templates will be made available to help with this as well. When selecting your VM’s/hosts you can pick any machine type available from the Azure marketplace. In theory, your WVD machine, including Win10 multi-session can handle an unlimited number of connections and users. You decide. This, of course, will come down to sizing, assigning VM resources and such. Load tests have been done by independent parties which show that the multi-session WVD Win 10 version can host about 20% less users per machine when compared to Windows Server 2016/2019 based on the same specs. Multiple tools around scaling will be published later.
<b>Profile / Fslogix:</b>	Fslogix adds: Outlook caching and Windows search support, OneDrive for Business, including files on demand support, Native SharePoint in Windows Explorer, 365 ProPlus computer activation license roaming, * Skype for Business GAL caching, * Teams support for virtual desktops, Cloud Cache with auto storage failover and globally redundant disaster recovery for profiles, and finally, Application Masking. If you own, or buy Microsoft 365 E3/A3/E5/A5, Win 10 Enterprise E3/A3/E5/A5, Win 10 Education A3/A5, Win 10 VDA per user licenses, or RDS Call licenses (all of them), you are entitled to use the entire FSLogix product suite on-prem and in the Cloud. You don’t need SA (Software Assurance) for desktops. You do need SA to run server OS based WVD’s in Azure. It’s still a separate download, the agent will get a rebrand once WVD hits GA. No talk of the bits and bytes being made a permanent part of Win 10 just yet.
<b>Multi-tenant and Identity:</b>	Today Azure AD is not (yet) fully supported, only when it’s kept in sync with an on-premises Active Directory. For this to work you will need to have a valid Azure subscription. An Azure Active Directory. A Windows Server Active Directory in sync with Azure Active Directory – use Azure AD Connect or Azure AD Domain Services for this. A virtual network (vNet) that either contains or is connected to the Windows Server Active Directory. Virtual machines can’t be Azure AD-joined. They must be standard domain joined or hybrid domain joined. Support for Azure Active Directory only will be possible in the future. A WVD tenant needs to be created and mapped to your Azure AD tenant. You can create multiple (separate and isolated) WVD tenants within your Azure subscription. Because of the multitenant architecture different AD setups, on a per customer basis will be used.
<b>Azure Regions:</b>	Once GA, WVD based machines can be located in different regions within Azure, spread across the globe. During the preview phase this is limited to East US 2 and US Central.
<b>Connectivity:</b>	Each VM will have an agent installed which takes care of the communication between the VM and the control panel. Connectivity options include: a HTML5 RD Web, Client RemoteApp and Desktop Connections, and the WVD Client App. VPN’s en Azure EXPRESSROUTE to connect back (and forth) to your existing on-premises environment are both supported.
<b>Load Balancing:</b>	Load Balancing as part of WVD Windows 10 multi-session comes in two flavours, Breadth and Depth. Breadth is the default mode and based on Reserved Azure instances (IaaS). With Breadth user will spread evenly across your virtual machines. Depth load balancing is optional for pay per use VM’s and works by first filling up the first VM up to a configurable amount of users before spinning up a next one, and so on. This is an automated process which can be configured using various ARM templates. You can set thresholds for when machines need to be provisioned, or perhaps decommissioned. Load balancing can be configured using PowerShell. There are separate Cmdlets available. Multiple tools around scaling, load balancing and diagnostics will be made available. Mostly in the form of ARM templates as mentioned above.
<b>Security:</b>	Reverse Connect: Outbound (WebSocket) connections from customer VM’s to the Broker and Gateway – no inbound ports to customer environments are needed. Bidirectional communication between VM’s and WVD infra goes over 443. All that’s available from a Microsoft 365 perspective, feature and security wise, will be applicable to the WVD as well.

\* Both SfB and Teams are currently not (officially) supported by/on WVD. Visit [basvankaam.com](http://basvankaam.com) for more articles on the Windows Virtual Desktop and other Cloud and EUC related material.