



## SOLUTION BRIEF

# AZURE VIRTUAL DESKTOP AND IGEL OS

## SECURE, EFFICIENT, PRODUCTIVE CLOUD DESKTOPS ARE HERE!

Azure Virtual Desktop (AVD) is a comprehensive desktop and app virtualization service that delivers fully functional Windows desktops and applications as a desktop-as-a-service (DaaS) offering hosted in the Microsoft Azure cloud. As an alternative to using Windows running locally on a laptop or desktop PC, AVD allows you to replace Windows on your endpoint device with another operating system as long as that OS supports client software that can communicate with the AVD service. IGEL offers Linux-based IGEL OS, the next-gen edge OS for cloud workspaces that is verified by Microsoft to work with AVD.

### Why AVD? Let's Take a Look

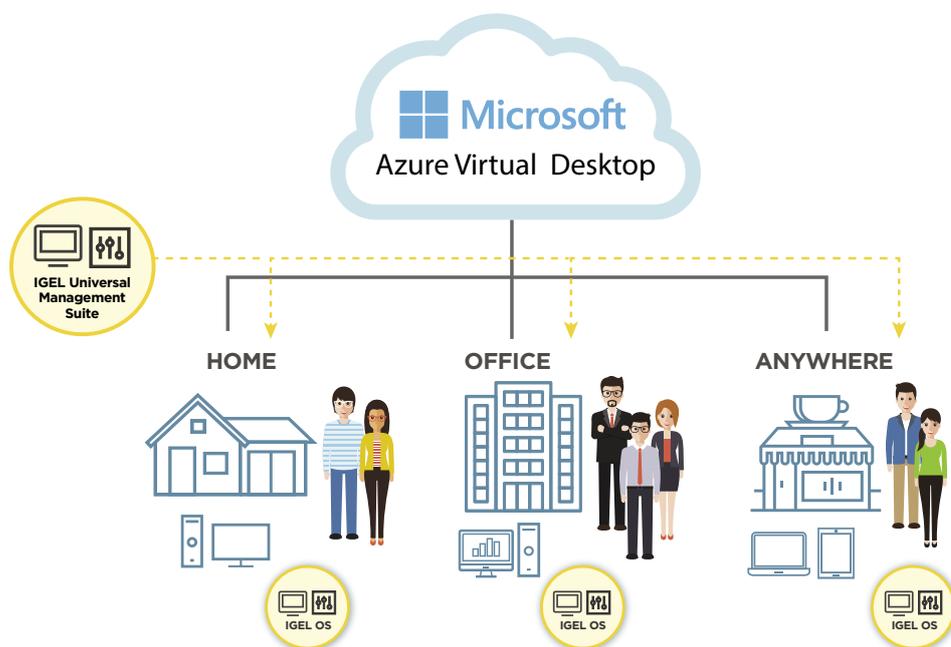
Announced on March 1, 2019, at that time Windows Virtual Desktop (WVD), AVD is gaining momentum for a number of reasons:

- AVD is the first broadly available DaaS offer from Microsoft via the Azure cloud.
- AVD is designed for businesses of all sizes, including large enterprises.
- AVD license subscriptions are included in most Microsoft enterprise license agreements (ELAs), making the transition to AVD as easy as paying for AVD consumption out of the Azure cloud.
- AVD includes **Windows 10 Enterprise multi-session**, a new Remote Desktop Session (RDS) Host that allows multiple concurrent interactive sessions, a feature available only on Windows Server previously. This capability, optimized for the Azure cloud, gives users a familiar Windows 10 experience while providing IT teams with the cost advantages of multi-session, including use of existing per-user Windows licensing instead of RDS Client Access Licenses (CALs). Multi-session thus makes it very efficient and cost-effective for enterprises to move users to Azure Virtual Desktop.
- AVD is an easy way to move users from Windows 7 to Windows 10 and eventually Windows 11 – simply migrate Windows 7 licenses to AVD Windows 10 desktop subscriptions on Azure. Now that Windows 7 has reached end-of-support, this easy migration to Windows 10 is especially attractive to those organizations who have yet to make the migration.
- AVD helps streamline enterprise IT, since the task of managing Windows on hundreds or thousands of physical desktops is minimized to managing AVD DaaS subscriptions
- AVD can offer the best Microsoft Office 365 experience with Office Professional Plus delivered from the Azure cloud.
- AVD is secure. Extensive security measures are available via the secure Azure cloud, including identity management, access control, network security, data protection, certificate and key management, and centralized visibility and attack prevention.

## The Perfect Pairing: AVD and IGEL OS

It's clear that AVD brings a host of capabilities that promise to make enterprise end user computing more powerful, convenient, and economical for organizations around the globe. And IGEL adds the perfect complement to AVD with IGEL OS, the next-gen edge OS for cloud workspaces. As a lightweight, simple, and secure Linux-based endpoint, IGEL OS is designed for secure access to AVD-delivered virtual apps, desktops, and cloud workspaces. Approved and verified for Microsoft Azure and Windows Virtual Desktop, IGEL OS is platform-independent software that runs on any compatible x86-64 endpoint device. Its server-based management and control software, IGEL Universal Management Suite (UMS), comprise a highly scalable endpoint management and control solution that frees enterprises to take full advantage of Azure-based cloud instances and AVD apps and desktops, including Windows 10 Enterprise multi-session. Together, AVD and IGEL OS can vastly reduce endpoint hardware and endpoint device management and operations costs. IGEL OS is therefore the ideal endpoint OS complement to AVD.

## FUTURE-PROOF WITH IGEL



### Well Connected

IGEL OS supports and stays current with all popular virtual apps, desktops, and cloud workspace client protocols from Citrix, Microsoft, and VMware via four primary software releases per year. A broad technology partner ecosystem of more than 100 leading partners ensures integration of the latest technologies: authentication, dictation, e-signature, unified communications, printing, USB management and many more. Organizations can move to AVD knowing they don't need to dramatically change their users' work environment. The growing list of shared IGEL and Microsoft AVD partners includes:

- Citrix
- VMware
- Cloudjumper
- ControlUp
- deviceTRUST
- Lakeside Software
- Liquidware
- Login VSI
- PrinterLogic
- Tricerat

This extensive and growing group of technology ecosystem partners helps organizations to quickly adopt Azure Virtual Desktop services into their own unique user environments.

## Extending Security from the Azure Cloud to Your Users' Endpoints

IGEL OS bolsters the many security features inherent with the Azure cloud and AVD with its own range of security features to extend your security blueprint all the way from the AVD services in the Azure cloud to each user's endpoint device. Specifically, IGEL OS is:

- Minimal in size for a very small "footprint" and thus minimized malware attack surface
- Read-only
- Modular by design, keeping endpoints as "lean" as possible and minimizing the attack surface of the device by providing the ability to turn off unused features.
- Capable of delivering built-in enterprise level security with features like two-factor authentication, smart card readers, and trusted execution.
- Equipped with a unique "chain of trust" security architecture. Starting with the endpoint processor (select IGEL/AMD endpoint models) or UEFI, each key validation phase within the system boot process is checked and verified for integrity before the next phase in the process can begin.

This helps ensure the system integrity from the hardware/UEFI all the way to the AVD cloud. As a result, IGEL OS makes accessing AVD even more tamper-resistant and hence safer!



### THE IGEL CHAIN OF TRUST

- Ensures all components of a VDI/cloud workspace scenario are secure and trustworthy.
- As each component starts, it checks the cryptographic signature of the next, only starting it, if it is signed by a trusted party (e.g., IGEL, UEFI Forum).
- If a failure condition at any step is detected, the end-user is alerted, and IT can take appropriate action.

#### THE PROCESS

- 1 The software-related IGEL Chain of Trust starts at UEFI.
- 2 UEFI checks the bootloader for a UEFI Secure Boot signature.
- 3 Bootloader then checks the IGEL OS Linux kernel.
- 4 If the OS partitions' signatures are correct, IGEL OS\* is started, and the partitions are mounted.
- 5 For users connecting to a VDI or cloud environment, access software checks the certificate of the connected server.

\* IGEL OS 11.03 or later

## Deliver an Outstanding User Experience for Windows 365



The Future of Windows Is in the Cloud

– Businesses run on Windows, and Microsoft's introduction of Windows 365 transforms how Windows workspaces are delivered and used.

Windows 365 and IGEL OS combine to deliver a cloud workspace experience that keeps users happy and productive. Users enjoy their familiar Windows environment with fewer local hardware and software configuration headaches. Meanwhile, IGEL OS ensures that advanced applications and peripherals don't miss a beat.

- **No More Hardware Bottlenecks:** Lightweight, ultra-reliable OS that is highly responsive on a wide range of hardware
- **Application Performance Optimization:** Optimization of key multimedia and video collaboration applications like Microsoft Teams and Zoom
- **Seamless Peripheral Capabilities:** Extensive peripheral support, improving user experience and productivity

## Easy and Economical

IGEL OS further complements AVD by being extremely easy to manage and operate while driving down expenses. Consider the following factors:

- IGEL OS saves money to help ease the transition to AVD by minimizing capital expenditures (CAPEX). By extending the life of existing hardware, it postpones, in some cases for years, the cost and disruption of the dreaded "PC hardware refresh".
- IGEL OS is simple! Easy to use, it features no-touch deployment and drag-and-drop profiling that can make any IT admin's task of connecting user endpoints to AVD significantly less time consuming.
- IGEL OS is flexible. Firmware licenses are portable and can be assigned to other devices. If a AVD user acquires or decides to change their endpoint device, that user's IGEL OS license can be quickly and easily transferred to the new device.
- IGEL OS is designed to be highly customizable. For example, corporate branding or unique screensavers for corporate messaging can make endpoint devices look and perform exactly as desired in accordance with a customer's requirements. So, organizations of almost any size can move their desktops to AVD and retain the familiar and consistent desktop "look and feel" their users prefer.

With a vast installed base of over 3 million IGEL OS-powered clients used by over 17,000 customers, organizations can be confident that with IGEL OS, they already have a great endpoint OS for accessing AVD! Enterprises can subscribe to Azure Virtual Desktop from the Azure cloud with full confidence in the integrity, security, and manageability of their users' endpoint devices. For those organizations with many desktops still running Windows 7 desktops (there are many millions out there), there is no easier way to migrate to Windows 10 via AVD from the Azure cloud by simply loading IGEL OS onto their endpoints. It's Windows 10 migration that's quick and easy!

You can learn more about how IGEL OS and AVD make the "perfect pair" for easy, safe, and economical end user computing at [www.igel.com/avd](http://www.igel.com/avd).

**REQUEST A DEMO**  
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**next-gen EDGE OS**  
for cloud workspaces