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AZURE VIRTUAL DESKTOP: THE UP-TO-SPEED GUIDE

10-minute read

Azure

Contents

The prospect of cloud PCs

The shift to remote and hybrid working has triggered a series of seismic events in client computing. Staff moving away from centralised office locations has exposed the management headaches of maintaining end-user computing environments in this new era. Hardware supply has challenged the provision of suitable devices, often forcing frustrated personnel into using their own technology. What's more, troubleshooting non-corporate devices no longer on the company network has stretched IT teams to the max.

Companies estimate that 70% of their apps are now SaaS apps and forecast this to grow to 85% by 2025[1]. When most devices now run decentralised apps from the cloud, it only stands to reason those businesses should also consider the prospect of running entire PCs in the same way. To do that means virtual desktops.

Microsoft Azure is experiencing extraordinary growth. Familiar technology and lightning innovation make it an attractive prospect for IT teams. The recent launch of Azure Virtual Desktop makes moving desktops to the cloud achievable for organisations of every size.

If you've thought about using a virtual desktop in the past and the cost or complexity was holding you back, now is the time to consider it. This up-to-speed guide is intended as a starting point for your research if you're evaluating whether Azure Virtual Desktop might work for your business.
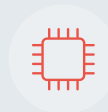
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What is a virtual desktop?

Before we go any further, it's useful to frame what a virtual desktop is. While there are lots of definitions, we think this is most accurate:

"A virtual desktop is a software emulation of a hardware device that runs on a physical or virtual machine at a remote location, hosted either on-premises or in the cloud".

Some important attributes define a virtual desktop:

Compute power is delivered centrally
from a data centre, not from user devices

Software is no longer
hosted on the devices

Security privileges are managed centrally, and
user device security is much less important

Data is not stored on the device
but retained in a data centre

Desktops are managed
and protected centrally

Why virtual desktops and why now?

Recent global events have shown us how businesses need to be able to respond at a moment's notice. Providing flexible compute services to users has been put under the spotlight, challenging experience, speed, availability, and security.

Furthermore, a growing dependence on cloud platforms and SaaS apps that can be accessed from anywhere, at any time, by any device is shifting expectations about what is possible.

Finally, problems surrounding device availability and sourcing are forcing IT teams to question former modes of delivery.

By comparison, virtual desktops offer the chance to provide a PC desktop experience to any user regardless of device, from a central location such as the cloud. Here all the compute resources needed can be managed (and quickly scaled), role-based app access can be set, security measures can be easily deployed, and data more comprehensively protected.

There's also the arrival of Windows 11 to consider. The focus of the new OS is security and to run it will require more powerful PCs. Microsoft's Desktop-as-a-service solutions are emerging as an attractive solution.

What is different about Azure Virtual Desktop?

Virtual desktops are nothing new. Many organisations have been using them for several years. However, slow uptake has been the result of less than favourable server to virtual desktop ratios and the levels of complexity involved to deliver a comparable user experience. This led to higher costs in physical host hardware and often complex and expensive licensing, especially because each virtual machine (VM) was sized for peak capacity despite the user rarely hitting these limits.

Microsoft has taken all the hard work and much of the cost away from choosing virtual desktops as a result of Azure Virtual Desktop. That doesn't mean they've scrimped on the opportunities to tune the environment, but if you simply want the benefits of virtual desktops without the headache, there's never been a quicker and easier way to get started.

At the heart of Azure Virtual Desktop is the ability to assign multiple users to a single virtual machine. Even better this uses a client OS and not a server OS, resulting in more than one user per VM which reduces resource usage, all while delivering a much better user experience. This changes the game on the economic proposition.

Use Case: Hybrid working

More businesses are adopting a hybrid working approach. To achieve this, your team needs to be properly enabled to work from home, when travelling, or in the office. They need the same user experience regardless of where they are working. Azure Virtual Desktop ensures a high-quality user experience is delivered no matter the device or location, all while securing access to company data and applications.

What about Windows 365 Cloud PC?

Windows 365 Cloud PC and Azure Virtual Desktop are both Desktop-as-a-Service solutions from Microsoft but there are several important differences between them.

Technically, Windows 365 uses existing Azure Virtual Desktop components but the focus of Windows 365 is on predictable pricing. Charged simply as a fixed cost per user, this fee remains the same regardless of usage. In this sense, it's not elastic and you are not benefiting from the potential fluctuations in cost due to user concurrency.

The big difference versus Azure Virtual Desktop is that Microsoft sets up Windows 365 Cloud PC for you, which means there's less for you to do to get started. You still control how you monitor performance and scale your PCs, but the steps to do this are much simpler.

Windows 365 Cloud PC isn't for everyone, however. When you assign a license to a user, you need to select one of several Cloud PC size options. Each has a different amount of CPUs, RAM, and storage, and is intended to support different usage scenarios. They are fixed and offer little flexibility.

The watchwords for Windows 365 Cloud PC are ease of use. If you just want vanilla PCs and are seeking ease of use, Windows 365 Cloud PC is probably the best option for you.

Which Virtual Desktop is right for me?

Azure Virtual Desktops vs Windows 365 at a glance

Windows 365 Cloud PC	Azure Virtual Desktop
• I'm looking for predictable pricing with minimal fuss.	• I want maximum control over how desktops are scaled.
• I only need to support a Windows 10 or 11 user experience.	• I require high levels of flexibility to create the most efficient infrastructure for concurrent use.
• I want simple options to scale and control desktops.	• I need options for Windows 7 support and remote apps as well as desktops.

The rest of this guide takes a closer look at Azure Virtual Desktop. ▶

The benefits of Azure Virtual Desktop

Good for users

The same PC experience

Moving to Azure Virtual Desktop won't mean your users suddenly have to deal with a sub-optimal experience from the cloud. Everything they're used to on Windows 10 and Windows 11 is available through Azure Virtual Desktop. It's a like-for-like experience.

Any device

Azure Virtual Desktop will work on Windows, iOS, MacOS, and Android devices. While it's unlikely anyone would want to run a Windows desktop on an Android smartphone it is possible. Perhaps the most interesting possibility however is the opportunity to easily run Windows PC on Mac. In mixed device estates, IT teams still have an opportunity to deliver a unified desktop experience to every user regardless of device. While this may go against the spirit of some users choosing a Mac it could prove a compromise for some organisations.

Use Case: Delay hardware refresh

One of the biggest challenges organisations have faced in recent times has been the difficulty acquiring user devices. Chip shortages, rare minerals and competition for lithium have all contributed to the device manufacturers struggling to keep up with demand. Businesses have naturally delayed plans for device refresh and continue to do so. By shifting the compute demand away from the desktop and into the cloud, it is possible to extend device lifecycles as apps no longer need to run locally.

Good for IT teams

Security

The good news about Azure Virtual Desktop is that IT teams don't have to worry about the security of the device. As long as the connection to the desktop environment is secure, users can get to work with company data without any fears over security. This is particularly useful in the context of hybrid working, where users are increasingly using their own devices for work as no data is stored on the connecting device.

Microsoft Defender for Azure Virtual Desktop provides an additional layer of security intelligence that detects unusual and potentially harmful attempts to access or exploit your Azure Virtual Desktop resources. This is included within Defender for Cloud, which is enabled for free on all your Azure subscriptions.

Management

With desktops being managed centrally, patching and updating physical devices becomes a thing of the past. The entire experience is managed from within the Azure Portal alongside other Azure services you may be using. From here, you have complete control of the VMs and how they can be scaled for the most efficient concurrent use, plus tools to deploy new apps, change network settings, and adjust security settings.

Azure Virtual Desktop eliminates issues of device compatibility and could even open the door to allowing users to choose or use their own devices to access corporate desktops. The levels of freedom offered are powerful as now the desktop is available anywhere there is an internet connection.

Helpfully, Azure Virtual Desktop offers enhanced support for Azure Active Directory, enabling Azure Virtual Desktop VMs to join directly to Azure AD and connect to VMs from any device with a username and password.

If you're already using Microsoft Endpoint Manager (MEM) to manage your physical clients, you can automatically enrol VMs and use it to apply your existing Windows 10 configurations (including app deployment) directly to the Azure Virtual Desktop session hosts.

Efficiency

Microsoft has made deploying the environment even easier using Host Pools. This is the only permitted way to run multi-user Windows 10. Host Pools can be configured in one of two ways – either to optimise desktops for cost (Breadth Mode) or to optimise for performance (Depth Mode).

As Azure Virtual Desktop is closely tied to Microsoft 365 there are other subscription benefits that can be tied together to create even greater efficiencies. One such advantage is the ability to capitalise on the 1TB of storage which is included in each Microsoft 365 user license which helps to save on centralised storage costs.

Continuity

Azure Virtual Desktop helps with continuity as Azure has many in-built measures to keep services functioning. If a major disaster strikes, Azure Virtual Desktop will keep your business running by enabling business operations to run from an alternative location. At a user level, if device problems are encountered, the virtual desktop will stay intact with no interruption in the event of physical damage. To keep the user working, all that is needed is an alternative device.

Windows 7 desktops

Despite the move to Windows 10 and 11, there are still many organisations that need to run Windows 7 desktops. Putting these in Azure Virtual Desktop entitles businesses to free security updates for another two years and breathing space to figure out their next move. The only trade-off is these machines can only be hosted as a single session desktop as opposed to the multi-session variants possible with Windows 10 and 11.

Licensing

Azure Virtual Desktop is available through the Microsoft Azure Portal. For current subscribers to Microsoft 365 and enterprise versions of Windows, desktop instances are available for each user at no extra charge. So, there's a good chance you already have what you need to get started.

Non-subscribers will have to pay a subscription fee determined by the specifications of the virtual machines used for each desktop instance.

Use Case: An unpredictable need for PCs

Don't waste time and resources on setting up physical machines if all your people don't need a dedicated PC. Similarly, if you have seasonal or unpredictable workforces Azure Virtual Desktop makes it possible to deploy virtual PCs as when you need them and importantly provide controlled and secure access to your data and applications. As your needs change, you can add or remove virtual desktops as your business demands.

Print

Azure Virtual Desktop and Windows 365 Cloud PC now include Universal Print. This liberates IT teams from having to manage Windows Server print servers on-premises. The Universal Print service uses the Internet Print Protocol (IPP) standard from the Printer Working Group and so no device-specific print drivers need to be installed, updated, or maintained. Multiple printer hardware vendors already support Universal Print in their new products.

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Things to consider

Connecting to the cloud

The biggest consideration as to whether to deploy Azure Virtual Desktop is the quality of network connections available. No matter how well you plan and design your virtual desktop environment, if the user's ability to effectively reach the cloud is challenged, your hard work will be in vain. Slow or unreliable internet connections will put at risk the gains you seek.

How much employee training is needed?

Tech-savvy employees will be more than able to connect with Azure and launch their virtual desktop, but some employees may need instruction to be able to operate it. Who will provide that help and ensure staff are enabled to work with it and troubleshoot their problems when needed?

How will users request more resources?

Like a physical PC, there will be times when users need an upgrade – either in hardware or software. Typically, this might lead to a new PC or new software being installed. In the virtual world, additional resources like memory or compute will need to be assigned to the user, or access to new apps granted. Who will decide and action these requests?

How will you manage Azure Virtual Desktop?

While Azure Virtual Desktop does a lot of the work for you, you'll still need to think about how you will build the environment, scale it, secure it, and then operate it efficiently.

GET STARTED

Before you get your teeth into Azure Virtual Desktop, it's worth looking at the Microsoft Cloud Adoption Framework. If you're completely new to that too, then take a look at our guide
- Get started with Microsoft Azure: What IT teams need to know.

CALL ON AN EXPERT

Whether you consider yourself an Azure Pro or a cloud rookie, sense checking your plans with an expert might be a worthwhile step. Servium's cloud practice is on hand to assist in choosing and then delivering the best virtual desktop experience for your business. We're a Microsoft Gold partner and have a comprehensive knowledge of Azure and the solutions it powers.

To talk to a Microsoft expert, contact your Servium Account Manager or visit **www.servium.com**.

[1] Better Cloud, 2020 State of SaaSOps. The Impact and Implications of the SaaS Revolution.

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