

Windows Virtual Desktop: Quick Start Guide

The best virtual desktop experience, delivered on Azure



Who should read
this guide? 03

Windows Virtual
Desktop: an overview 03

Prerequisites 05

Cost you may incur 06

Supported remote
desktop clients 06

Glossary 07

Try it! 07

© 2019 Microsoft Corporation. All rights reserved. This document is provided "as is." Information and views expressed in this document, including URL and other internet website references, may change without notice. You bear the risk of using it. This document does not provide you with any legal rights to any intellectual property in any Microsoft product.



Who should read this guide?

This quick start guide is for Desktop Infrastructure Architects, Cloud Architects, Desktop Administrators, or System Administrators who want to participate in deploying Windows Virtual Desktop.

Windows Virtual Desktop: an overview

Traditionally, if you wanted to deliver a virtual desktop infrastructure, you had two choices. You could provide individual virtual machines for each user or require your users to work with a server-based desktop—foregoing valuable end-user desktop features like Microsoft Edge or Cortana—so that multiple people can sign in at the same time.

Now you have another choice. Windows Virtual Desktop enables you to deliver a great virtualized Windows and Microsoft Office 365 ProPlus experience while reducing IT overhead with built-in security and management features. In just minutes, you can deploy and scale large numbers of Windows desktops, which your users can access from almost any device. Windows Virtual Desktop is the only cloud-based service that's optimized for Microsoft Office 365 ProPlus. It allows you to migrate your existing Windows Server desktops and apps to Azure. And it's the only virtualization solution that delivers a multi-user session Windows 10 experience, so you can affordably deliver the Windows 10 features that delight your users—and do it at scale.

Windows Virtual Desktop scenarios

Companies implement virtualized desktops for different reasons—from meeting stringent security needs to providing remote workers easy access to corporate data. Built on the reliable backbone of Microsoft Azure, Windows Virtual Desktop lets you deliver a quality desktop and application experience that keeps both your IT teams and end users in mind—whatever your scenario.



Security and regulated environments

For organizations such as financial services companies, healthcare providers, and government agencies, virtual desktop infrastructure helps meet special security or regulatory compliance needs. With Windows Virtual Desktop, you can maintain an elevated level of control over how users access data and use applications. At the same time, you can provide broader access through a wide range of clients, since the applications run within the secured host environment and not on the client device.



Specialized workloads

With Windows Virtual Desktop, you can support your users with specialized workloads without having to provide with high-end desktop hardware. For example, you can provide access to desktop environments that deliver graphics-intensive applications, like 3D visualization (CAD/CAM), or processor-intensive workloads, such as machine learning or data analytics. Your users can even work from a mobile device like a tablet or phone.

Windows Virtual Desktop also helps you handle legacy apps that won't run on the latest client operating system or with creating development and testing environments. You can provide full desktops for these workloads, or simply provide a remote application that users connect to from their local desktop's Start menu.



Mobile workforce

Windows Virtual Desktop benefits organizations that have a mobile workforce. Whether you bring on seasonal employees to meet high demand, hire contractors regularly for short periods, or suddenly grow your workforce through a merger or acquisition, virtual desktop infrastructure solutions like Windows Virtual Desktop can help you scale quickly and affordably. Even for substantial workloads, you can use older PCs, affordable thin clients, or mobile devices like tablets. Windows Virtual Desktop allows you to manage support costs for these workloads by giving you control over the desktop environments and ensuring that your users have the same Windows 10 experience they have on their local PC.

With Windows Virtual Desktop, you also have the flexibility to deliver pooled and personal desktop experiences. Pooled desktops are commonly used in mobile workforce scenarios or to meet the identical configuration needs of specific employees, where remote desktop or app sessions can be assigned from currently available session hosts. Personal desktops serve the unique configuration requirements for specific employees and specialized workload scenarios, where users connect to dedicated virtual machines each time they connect.



Specific employees

Windows Virtual Desktop helps you meet the needs of not only large groups of users—but specific employees, too. For instance, you may have workers who require access from their personally owned mobile devices to on-premises resources or administrator access to their desktop environments. For branch employees in a satellite office, you might need to provide an application that depends on a low latency connection to a source database. Or you may want a locally installed app for your call-center employees, who don't need a complete remote desktop environment.

Prerequisites

Before starting your Windows Virtual Desktop deployment, you'll need to prepare your infrastructure for user access, authentication, as well as app and desktop virtualization.

Here are the steps to prepare your infrastructure:



Microsoft Azure account

To create a Windows Virtual Desktop tenant, first make sure you have an Azure account. You also need appropriate permissions to run Azure Resource Manager templates or select from Azure Marketplace offerings.

- [Create your Azure free account today](#) if you don't already have one.
- To learn more about Azure administrative roles, see [Classic subscription administrator roles, Azure RBAC roles, and Azure AD administrator roles](#).



Create an Azure Active Directory tenant

Next, create an Azure Active Directory tenant for managing user access to your Windows Virtual Desktop solution. Check that your on-premises users can access Azure Active Directory and that you've synced your on-premises Active Directory identities to Azure Active Directory.

- Learn how to [create a new tenant in Azure Active Directory](#).
- See how to use [Azure AD Connect](#) to synchronize your cloud and on-premises identities.



Allow client connections over port 443

Your clients will connect to Windows Virtual Desktop using WebSocket over port 443. Azure AD Connect also uses this port for identity synchronization (hybrid identity). In preparing your infrastructure, make sure that the port is also open for remote desktop client connections to Windows Virtual Desktop.

- For information on ports and protocols required by Azure for hybrid identity, see [Hybrid Identity Required Ports and Protocols](#).

Windows 7 Extended Security Updates

Do you have a legacy app that can only run on Windows 7? Windows Virtual Desktop provides extended security updates for Windows 7 until 2023—for free!

Windows Virtual Desktop licensing

Your users will need to have one of the following subscriptions to access Windows Virtual Desktop desktops:

- Microsoft 365 E3, E5, A3, A5, or F1
- Microsoft 365 Business
- Windows E3,¹ E5, A3, A5

¹ Access to FSLogix technology—including Office Containers, Profile Containers, and App Masking—are included in Windows E3+, Microsoft 365 E3+, and RDS CALs.

Costs you may incur

While creating a Windows Virtual Desktop tenant is free, there are charges for the compute and storage options you choose for your Windows Virtual Desktop host virtual machines.

Here are some pricing options that can help you save on these costs:

- [Reserved VM Instances](#)
- [Azure Hybrid Benefit](#)
- [Dev/Test pricing](#)

Use the [Pricing calculator](#) to help you configure and estimate the costs for your Azure virtual machines.

Supported remote desktop clients

Windows Virtual Desktop supports the following client applications:

- Windows Remote Desktop Connection client
- [Remote Desktop web client](#)
- Universal Remote Desktop client for Windows
- Remote Desktop client for Android
- Remote Desktop client for iOS

Glossary

Whether you're new to virtual desktop infrastructure or an expert at desktop virtualization, there may be terms you're not familiar with. The following are new terms introduced by Windows Virtual Desktop and relevant concepts:

Windows Virtual Desktop services: A Windows Virtual Desktop service consists of one or more host pools that each contain one or more desktop session host virtual machines.

Azure Active Directory tenant: An instance of the Microsoft cloud-based identity and access management service. Each Windows Virtual Desktop tenant can trust one Azure Active Directory tenant.

Host pool: Host pools contain one or more session-host virtual machines. In turn, each session host in the pool can have one or more app groups installed on it.

App group: An app group is a group of applications installed on the session host virtual machine in the host pool. There are two types of app groups:

- A desktop app group publishes the full desktop and provides access to all the applications installed on the session hosts in the host pool.
- A remote app app group publishes one or more remote apps that display as within an application windows on the client device.

Session host: Virtual machines running either Windows 7, Windows 10, or Windows Server 2012 R2 and above. Each session host has a Windows Virtual Desktop host agent installed and registered with the service.

User session: When a user signs into a Windows Virtual Desktop session host desktop or remote app, a session starts for the user. Each session has a unique session ID. Each remote desktop client receives a separate session ID, so that the user experience is like being signed into multiple computers at the same time.

Persistent desktop: See personal desktop.

Personal desktop: A single-user session desktop. User settings and files are available from user session to user session. Users can have administrative access to the desktop.

Pooled desktop: A multiple-user session desktop. User settings and files are not available from session to session and users can't have administrative access to the desktop.

App streaming: When an app is streamed, it's downloaded as needed and runs on the local device.

App remoting: Also called remote apps, this is an application running on a remote device while appearing to run on the local device.

App layering: Similar to app streaming, this is when an application runs in a layer that separates it from the local device operating system, but interacts with local applications and the operating system as if installed locally.

Remote Desktop Broker: The Remote Desktop Broker is the primary role that interacts with the database where all tenant configurations are stored, including role configurations, user assignments, and session host health.

Remote Desktop Diagnostics: An event-based aggregator that marks each user action in Windows Virtual Desktop (end user or administrator) as a success or failure. In the future, administrators will be able to query the aggregation of events to identify failing components.

Remote Desktop Gateway: This gateway securely connects users to their sessions over the internet. Besides the session hosts themselves, Remote Desktop Gateway is the only other role used throughout the lifespan of a session.

Remote Desktop Web: This lists the apps and resources assigned to users. Remote Desktop clients query the Remote Desktop Web to find which apps users have been assigned and then launch those apps in the client itself. Remote Desktop Web has built-in caching capabilities to reduce the chance of throttling the Remote Desktop Broker and the database.

Try it!

Once you've completed the prerequisites, you can [get started](#) and create your first Windows Virtual Desktop tenant.