



Microsoft Virtual Desktop Infrastructure

Rich user experience at a great value



The challenges

- People want consistent access to corporate services wherever they are, on any device
- Organizations need to effectively manage the influx of consumer devices while continuing to deliver on operating efficiency without compromising compliance

Easy Access from BYO Devices



The Microsoft Remote Desktop App provides easy access to a variety of devices and platforms including Windows, Windows RT, iOS, Mac OS X and Android.

Microsoft VDI provides flexibility to users and IT by providing access to:

- User PCs (through RD Gateway*)
- Personal and pooled virtual machine (VM) based desktops
- Session-based desktops and
- RemoteApp programs

Users can get the Microsoft Remote Desktop App by visiting the application store on their devices.

Facts

- 29% of the global workforce are anytime, anywhere information workers -- those who use three or more devices, work from multiple locations, and use many apps.¹
- By 2017, 50% of employers will require employees to supply their own device for work purposes.²
- 46% of organizations report that data is growing at an annual rate of 20% or more³

* For Windows Professional versions or above

1 2013 Mobile Workforce Adoption Trends, Forrester Research, February 4, 2013

2 Bring Your Own Device: The Facts and the Future, Gartner, April 2013

3 ESG Research Report, Trends in Data Protection Modernization, August 2012

Microsoft Virtual Desktop Infrastructure (VDI) enables IT to deliver desktops and applications to users on a variety of devices. Centralizing and controlling applications and data through a virtual desktop enables your people to get their work done on the devices they choose while helping IT maintain compliance.

Rich user experience and efficient management at a great value

With Microsoft VDI, even organizations with tight resources now have a solution to embrace the bring-your-own-device (BYOD) trend without compromise. Microsoft VDI provides:

- **Efficient management** with the deployment wizard consolidated within Server Manager
- **Rich Windows experience** available on a variety of devices and platforms, including Windows, Windows RT, iOS, Mac OS X, and Android
- **Great value** with capabilities such as storage-tiering and online data deduplication to improve performance, scale, and solution economics

1 platform · 1 experience · 3 deployment choices

Microsoft offers IT pros flexibility in choosing the right mix of technologies to deliver a VDI solution so they can customize the implementation to meet their organization's needs. IT pros can deploy the appropriate type of VDI solution for their users, all from a single platform.

Microsoft VDI can host:

- Personal and pooled virtual machine desktops
- Session-based desktops
- RemoteApp programs

Microsoft VDI in Windows Server 2012 R2

Windows Server 2012 delivered significant enhancements to simplifying the deployment and management of a VDI environment as well as improving user's experience. Windows Server 2012 R2 and the Microsoft Remote Desktop app we continue to improve the user experience and management capabilities with key new features, including:

- **Storage tiering and online data deduplication:** Windows Server 2012 R2 supports online data deduplication, which reduces the amount of space on disk that is consumed by personal VMs. It also provides support for storage tiering, enabling IT to create storage volume that automatically optimizes locations of data across the disks and locates the most frequently accessed data blocks to the highest performing disks.
- **Enhanced user experience:** RemoteFX provides a consistent and rich user experience across all hosted desktops and devices. Windows Server 2012 R2 includes codec and media streaming improvements and delivers the best possible user experience under varying network conditions, trading off resolution of experience with bandwidth available when required. Furthermore, with the Microsoft Remote Desktop app, users can connect to their corporate data and applications from a variety of platforms including Windows, Windows RT, iOS, Mac OS X and Android.

- **Simplified administration:** With Microsoft VDI, you can manage your VDI architecture with a single integrated console. You can automate deployment and configuration of server roles, manage pooled and personal virtual machines, and use session shadowing to view and remotely control active user sessions. The deployment wizard automates configuration of various roles and accelerates deployment.

Efficient management

Unified administration	Provides one, integrated console for roles, servers, collections, users, and VMs. Simplifies management of pooled and personal VMs
Quick Deployment	Sets up a basic VM, a session-based VDI, a single server pilot, or a highly-available enterprise deployment in just a few clicks. The set-up wizard also easily enables the configuration of additional settings
RemoteApp	In addition to full desktops, publishes RemoteApp programs that run side by side with local applications.
Session Shadowing	Allows administrators to view and remotely control active user sessions on RD Session Host servers

Rich user experience

RemoteFX for WAN	Dynamically detects network conditions and tunes experience. Intelligently and dynamically selects the appropriate codecs to ensure that it provides the best experience possible even on low-bandwidth high-latency networks such as WAN. RemoteFX efficiently delivers high-quality audio and video performance as if played on a local PC device. Furthermore, it supports the UDP protocol as well as the TCPIP protocol, making it ideal for a variety of WAN environments.
Microsoft Remote Desktop App	Provides access to applications or full desktops from a variety of devices and platforms including Windows, Windows RT, iOS, Mac OS X and Android
GPU support	Includes a software GPU, which can emulate a physical GPU and provide a 3D experience to all VMs and sessions. A hardware GPU can be virtualized and shared across multiple VMs to provide a richer, accelerated experience for DirectX-enabled applications
Multi-touch remote	Supports multi-touch, new Windows experience, and Start menu/screen integration. Enables end users to use the latest devices to interact with their remote Windows 8 desktops. The touch experience is fully remote, supporting Windows 8 touch gestures such as pinch, zoom and rotate
RemoteApp programs	Behaves and appears like a local application in user's desktop with seamless desktop integration and transparent rendering behavior
User profile disk	Maintains user personalization in pooled deployments by storing all user settings and data in a VHD file which roams with the user across the collection

Great value with key storage enhancements

Online data deduplication	Enables storage volumes containing VHD files for a VDI collection to automatically identify redundant blocks on the storage and remove duplicate data to reduce storage consumed
Storage Tiering	Enables storage volumes that are a mix of multiple disks of different speeds. The operating system automatically optimizes the location of the data in the volume so that the most frequently accessed data is on the fastest disks
Multiple storage options	Supports direct-attached, network-attached, clustered, or SAN storage of VMs; utilizes online disk de-duplication to greatly reduce storage requirements
Fair Share	Dynamically distributes bandwidth, CPU, and disk use across other VMs and sessions, ensuring that no single VM or session monopolizes resources or degrades the experience for other users on the system
Powerful Hyper-V platform	Supports multiple active nodes to deliver scale and high availability; provides APIs to help partners
High availability	Supports load balancing for all Remote Desktop Components across multiple machines, enabling high availability, scalability, and Disaster Recovery