

How Cloud Desktops Support Workforce Agility

WHITE PAPER

In our increasingly data-driven world, your employees want access to their data and applications from anywhere, and across any number of devices. To support legacy applications and multiple operating systems, many organizations are leveraging cloud-hosted virtual desktops and applications to support today's broad range of demands.

This white paper discusses the ways cloud-hosted desktops and apps help meet the needs of an increasing IT workload and offers guidance on how to utilize them across different deployment options.

Introduction: **The multi-device imperative**

How fast is the number of devices users employ growing? It has been more than four years since GSMA Intelligence proclaimed there are more mobile devices than humans on planet Earth.¹ Robust choices in form factor, functionality and operating system have brought on a device onslaught, with users increasingly relying on two, three or more devices to access business data and functions during the day.

Just as the number of devices is growing, so too is the network perimeter, which has evolved from a single place to the entire globe, thanks to the ubiquity of secure broadband connectivity. Once limited by concrete and physical firewalls, employees, customers and partners now expect access to data from wherever they happen to be. Thus, the need to deliver seamless access to data and business applications has gone from limited time and place to anytime, anywhere, from any device.

¹ GSMA Intelligence, www.gsmainelligence.com



Can IT meet the demand?

This increase in the demand for access is just part of the growing list of challenges facing IT. Supporting an organization's digital transformation requires attention to many new technologies, including big data analytics and artificial intelligence, and an ever-growing cyberthreat landscape. For many, understanding where the budget will come from is the biggest challenge of all, since a large number of IT organizations spend as much as 80% of their budgets just "keeping the lights on."²

From the user perspective, the consumerization of IT has created a demand for new applications for virtually every business function, and users want those applications to be supported on every computing platform and operating system they use, regardless of whether they are used in the office, at home or on the go.

The adoption of new applications, software as a service and modern operating systems brings another challenge to the surface: the need to support a broad range of legacy applications. And over time, the number of legacy applications has grown to include not just mainframe and Unix applications, but also a vast number of Windows applications that are no longer supported on Windows 10. This single benefit—the ability to support multiple OSES and versions on a single platform—has been one of the most powerful drivers of virtualization and will continue to be so.

Many approaches have been attempted, including using "develop once, deploy many" development tools, as well as forcing users to turn to HTML5 or web applications and hope for compatible browsers. Neither approach has worked well. What's needed is a new methodology to meet the growing demand and speed of deployment across the board.

² "CIO and Innovation: More Than Just Keeping the Lights On," theCsuite.co.uk, March 3, 2017

Rise of cloud-hosted virtual desktops and apps

Many enterprises have standardized on Windows desktops for their application platforms, and with Microsoft aiming for 1 billion devices running Windows 10 in the next two to three years, it's understandable that IT will continue to embrace this venerable client platform.

But how can IT deliver Windows applications and the Windows experience across a broad range of mobile devices and desktop platforms, including both PCs and Macs.

Just as businesses have adopted virtualization technology to abstract servers and storage from underlying hardware, many organizations have turned to virtual desktops to abstract Windows and its applications from the underlying client device hardware and OS.

And just like server virtualization, today's virtual desktops are not a new concept but an adaptation of the remote access and thin-client technology that has been used in a variety of ways for decades. Those primitive terminal and remote access offerings have likewise evolved for cloud implementation, becoming today's virtual desktop infrastructure (VDI), otherwise known as cloud-hosted virtual desktops.

With application virtualization, the application is separated from its underlying operating system and is streamed to an isolated environment on a target device. App virtualization makes it possible for businesses to support legacy applications on new operating systems such as Windows 10, and publish Windows applications to non-Windows devices running on Android, iOS and macOS.

A major enhancement with this generation of cloud desktops and apps is the choice of delivery and deployment options available. For example, enterprises that already have a relationship with Microsoft Azure can choose to deploy their desktops and apps in their public cloud with the VMware Horizon Cloud on Microsoft Azure solution, and organizations that want a fully managed VDI solution can opt for a service like VMware Horizon Cloud with Hosted Infrastructure, with desktops and apps hosted and managed by VMware.

Why cloud desktops and apps?

There are many reasons to consider cloud desktops instead of traditional desktop or application virtualization solutions, including:

- **Speed.** You can spin up virtual desktops in a matter of hours, so users quickly get access to the desktops and apps when they need them.
- **Multicloud support.** You can use a unified cloud control plane to seamlessly provision and manage virtual desktops and applications regardless of which cloud they are hosted in.
- **Latest updates.** Users don't need to perform local OS and application updates, since they are delivered from the cloud. This translates to less security risk compared with relying on end users to apply the latest patches.
- **Increased agility.** Users can be simply moved between clouds and managed infrastructure as needed, and subscription pricing means you pay as you go without upfront software purchases.
- **No more lost data.** With cloud desktops, data never resides on the device. Lost, stolen or broken devices are an inconvenience, but users will find their data right where they left it when they sign in from another device.

Additionally, a cloud desktop strategy supports a broad range of use cases, including mergers and acquisitions, rapidly spinning up development teams (and spinning them down on completion) and supporting a variable workforce that includes seasonal or contract workers.

From a bottom-line perspective, cloud desktop adoption allows an organization to get out of the infrastructure business altogether, and leverage cloud providers and managed infrastructure for everything from servers and storage to desktops and applications.

Summary

Business users are the ultimate change agents in IT, increasingly demanding the instant provisioning of applications and desktops, regardless of location or device, so they can be more productive. Many CIOs have seen their organizations evolve from providers of technology to service brokers, and have embraced a multicloud IT environment to deliver on line-of-business needs and demands.

Additionally, users, whether employees or customers, have high expectations for enterprise applications, demanding the same collaborative and immersive experiences their consumer apps deliver.

Regardless of where apps reside—cloud or on premises—IT needs to continually drive workforce efficiencies. As the number of devices we use daily to conduct business continues to grow, that need for efficiency extends to mobile devices as well as traditional PCs, Macs, and laptops. For many organizations, adopting cloud desktops will ease the burden of delivering applications and desktops to this growing list of users and devices.

Next steps

Recognized as a leader by Gartner and others, the VMware Horizon® Cloud Service™ delivers on the promise of cloud-hosted desktops and applications, by enabling feature-rich virtual desktops and applications in today's multicloud environments.

Employing a purpose-built, scalable cloud platform, VMware Horizon Cloud Service supports multiple simultaneous deployment options, including fully managed infrastructure from VMware and bring-your-own infrastructure from Microsoft Azure, managed through a cloud control plane. The result? Simplified delivery of virtualized Windows desktops and applications to any device, anywhere.

Horizon Cloud includes the VMware Just-in-Time Management Platform (JMP), which enables organizations to deliver just-in-time virtual desktops and apps in a rapid, flexible and personalized manner. It enables IT admins to focus on defining outcomes based on business needs instead of maintaining and troubleshooting environments.

JMP leverages VMware Instant Clone, App Volumes, and User Environment Manager technologies to untangle the operating system, applications and user personalization. By doing so, all the component pieces can be automatically assembled together on demand to deliver just-in-time desktops and apps to any device. JMP lets you deliver Windows as a service.

With JMP, since virtual machines can be cloned in seconds, they no longer need to persist when the user logs out, apps can be attached to a VM when a user logs in, and user preferences are applied when a user launches an application. The JMP approach delivers simplified desktop and app management,

as well as faster delivery and maintenance of applications, and eliminates the need to manage “full persistent” desktops. Leveraging JMP, organizations can rapidly scale virtual desktops and apps to drive down costs without compromising user experience.

Horizon Cloud also integrates with VMware Workspace ONE, allowing you to build a **digital workspace** that gives workers a single place to access their cloud desktops as well as all their native, web, cloud and legacy applications. Workspace ONE boosts user productivity and satisfaction with consistent app discovery and simple single-sign-on access across platforms, including Windows 10, macOS, iOS, Android and Chrome.

However, easy access to apps means little without the ability for IT to control and secure corporate data. With Workspace ONE, IT can ensure that

only the right users and the right devices (in safe states) get access. If anything goes wrong with user authentication or device state, Workspace ONE can automatically fix the problem with an appropriate response, such as an email to the end user, a multifactor authentication check, loss of access to an app, or an enterprise wipe of all the work data from a risky device. Workspace ONE and Horizon Cloud make the digital workspace simple and enterprise-secure: Employees get one place for simple, seamless access to all their applications, including cloud desktops, and IT integrates access and device management to cut administration costs and increase data security.

Ultimately, organizations select VMware Horizon Cloud because the solution helps them reduce the time required to deliver virtual desktops and applications, radically transforming traditional VDI with simplicity, flexibility, speed and scale—all at a lower cost.

To learn more about Horizon Cloud, visit
www.vmware.com/go/horizoncloud