

# Desktop Scalability Made Simple

Accelerate Growth by Migrating Desktop  
Resources to the Cloud

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#### GROWING IMPACT OF INVESTMENT

With the latest worldwide forecasts from Gartner projecting that organizations will spend \$3.88 trillion on IT in 2020 (3.7% YoY growth),<sup>1</sup> businesses must decide whether their technology investments are likely to support or hinder their future growth plans.

#### Executive Summary

Business growth presents both an opportunity and challenge for technology leaders. While geographic expansion or new acquisitions can drive revenue, these changes can also result in a significant uptick in IT spending.

Investment in virtual desktop infrastructure (VDI) can facilitate expansion, while improving productivity, cost savings and scalability, particularly when delivered across a hybrid cloud. VDI enables end users to log in to better secured, ready-to-use desktops at scale, from anywhere and on any device—a necessity for rapid expansion.

Discover the different approaches to managing VDI and how the right tools and infrastructure can help enterprises scale with ease to meet spikes in demand, operate seamlessly through unexpected outages, and accelerate growth in new markets.

#### The Benefits of Traditional VDI

Business success can hinge on the ability to provide users with fast and secure access to the data and resources they need, when they need them—no matter how market conditions change.

VDI facilitates this responsiveness and scalability. It enables simple, centralized management of desktops and applications, while delivering these resources directly to mobile, remote and contingent workers.

Applications can be easily added, patched and upgraded, and administrators can better manage security and compliance. The end result is a solution that allows you to deliver secure, compliant, personalized workspaces, on demand—all while reducing hardware TCO.

But IT management can become more complex as businesses grow. Those managing VDI on-premises can become locked in to ever-growing data centers and the costs and inefficiencies that come with them.

#### A New Level of VDI Agility with Hybrid Cloud

By moving desktop resources to the cloud, organizations can respond to changing business conditions with improved agility.

Pay-as-you-go models enable responsive, economical cost management, while near-unlimited infrastructure capacity provides the ability to quickly deploy desktops and applications to multiple geographic locations.

For the majority of organizations, a hybrid-cloud VDI solution with consistent infrastructure and operations across private cloud, public cloud and the edge is the best approach to managing desktops at scale and delivering business outcomes.

This allows organizations to house resources both on-premises to meet regulation requirements, while also enabling key cloud use cases, such as:

- Leveraging cloud resources for effective capacity planning
- Scaling desktop resources with speed, simplicity and cost-effectiveness
- Simplifying and reducing the cost of disaster recovery (DR)
- Improving performance and security

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<sup>1</sup> Gartner Press Release. “*Gartner Says Global IT Spending to Grow 0.6% in 2019.*” July 10, 2019.

#### WASTED CAPACITY

35% of data center capacity goes unused as a result of overprovisioning.<sup>2</sup>

### Leveraging Cloud Resources for Effective Capacity Planning

Every industry struggles to optimize infrastructure capacity, with up to 35 percent of data center capacity going unused as businesses plan for spikes in demand while trying to avoid wasteful overprovisioning.<sup>2</sup>

These challenges are compounded during growth periods. Organizations must continually add and remove programs, scale to new locations, and facilitate new staff, requiring costly hardware purchases and maintenance updates.

To optimize data capacity spend, organizations need a flexible hybrid solution that rapidly scales capacity up when needed, and down as demand subsides. Solutions must also ensure businesses can maintain the intrinsic security and consistent policies across environments and deliver fast, effective disaster recovery and minimize downtime across multiple locations, desktops and applications.

### Scaling Desktop Resources with Speed, Simplicity and Cost-Effectiveness

Expansion often means an increase in end users. To enable availability and reduce latency, virtual desktops need to be hosted in infrastructure that is physically close to these new users. However, building new data centers requires time, planning, capital and management resources, especially in new geographies.

Hybrid cloud solutions provide a centralized service to easily add and extend desktop services to an extensive range of regional availability zones, without investing time or capital in additional data center resources.

This approach allows IT operations to simplify user management, enabling real-time, one-to-many application provisioning and zero-downtime updates. These capabilities allow IT to deliver the speed and efficiencies users and business demand, deploying published applications five to ten times faster, at the push of a button.

End users experience significant benefits too. Remote storage of application and user data allows users to enjoy a consistent experience, regardless of where they sign in.

Plus, with flexible, consumption-based billing, organizations can optimize infrastructure costs, avoiding upfront expenses, and pay only for resources they use as they grow.

When building VDI systems, consider hyperconverged infrastructure (HCI) for greater flexibility and security. As the basic IT building block for the software-defined data center (SDDC), HCI natively integrates data center functions—compute, storage and networking—onto a virtualized platform with a unified management console.

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<sup>2</sup> RightScale, Inc. "RightScale 2018 State of the Cloud Report Uncovers Cloud Adoption Trends." January 2018.

### THE PREVALENCE OF DISASTER

In the CloudEndure Disaster Recovery Report, 71% of respondents reported a DR event in the past year. Approximately a third of respondents said one day of downtime costs them more than \$1 million in lost productivity.<sup>3</sup>

### Simplifying and Reducing the Cost of Disaster Recovery

Whether the cause is a power outage, network issue, human error or an unforeseen natural disaster, all businesses experience service interruptions and downtime at some stage. According to the CloudEndure Disaster Recovery Report, 71 percent of respondents reported a DR event in the past year. Approximately a third of enterprises estimate that just one day of downtime costs them more than \$1 million in lost productivity, revenue and customer value.<sup>3</sup> These stoppages pose a particular challenge across a distributed workforce, where devices can be out of order for weeks or months waiting for IT support.

By running VDI in a hybrid cloud, organizations can extend backup desktop images remotely, improving the control, delivery and protection of end-user compute resources. In the event of a disaster, end-user virtual desktops can be rapidly restored from the remote location, allowing work to continue as normal, saving time, resources and reputation. Hybrid cloud VDI also enables IT teams to remediate software issues without physical access to devices.

Technology leaders also need to consider the cost of over-investing in disaster recovery that sits idle. On-premises DR solutions require a significant CapEx investment and the limitations of this approach can leave businesses with slow, outdated and mismatched tools and reduced protection for remote offices.

Transitioning to the cloud enables a more cost-effective model—disaster recovery as a service (DRaaS). A cloud-based solution better accommodates growth, enabling businesses to only pay for DR when and if services need to be restored, while avoiding the cost of image storage.

### Improved Performance and Security

If you've moved workloads to the cloud, it makes sense for your desktops to follow. Hosting workloads and desktops in separate environments can cause latency issues, while co-location improves performance, which is particularly important for mission-critical or dependent apps.

Virtual desktops also enable users to access high-performance compute and graphics-intensive applications such as CAE, CAM and CAD, from any device, not just from high-end workstations—reducing the overall cost of compute resources.

Placing desktops and hosted app servers in the cloud also improves your security posture, by abstracting these resources from user endpoints, providing IT with greater visibility and control. In addition to enabling organizations to manage security from a central location, organizations can utilize non-persistent desktops and applications. A fresh desktop can be created in just a few seconds and destroyed as soon as the user logs out, reducing hidden malware or threats. This also frees up capacity, further reducing costs.

It is important, however, to implement a VDI solution with security measures specifically designed to support virtual machines. Using security designed for physical desktops can degrade performance and lower VM densities.

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<sup>3</sup> CloudEndure. "Cloud Disaster Recovery Survey Report." March 2019.

“All of our employees’ livelihoods are based on what we do here, and it’s critical to protect our clients’ legal data. The next time a hurricane is whirling down and Mr. George Sink asks what we’re doing to prepare, I can say ‘Nothing. It’s already done.’ Being able to know that, and say that honestly, is tremendous.”

TIM MULLEN  
GEORGE SINK, P.A., CIO

## George Sink Future-Proofs Its Expansion Plans with VMware Cloud on AWS

George Sink, P.A. Injury Lawyers is one of the largest personal-injury law firms in the southeastern U.S. It was preparing to add 250 employees and open new offices, but with headquarters located in a hurricane-prone coastal city, the firm’s IT team knew they needed an alternative to expanding their physical data center. On-premises costs were continuing to rise and the firm didn’t have the staff necessary to maintain the resources they would need going forward, or the confidence that the data center would be safe from the widespread effects of future storms.

George Sink, P.A. now uses six nodes in VMware Cloud on AWS as their primary production data center, with full disaster recovery backups maintained on-premises, enabling greater flexibility to self-manage, control costs and plan for future expansions. With VMware Horizon® on VMware Cloud™ on AWS, George Sink, P.A. also virtualized all of its company apps, from Google Chrome to case management and accounting software. The firm is increasing its usage of virtual desktops and also using Instant Clones to deliver ultra-fast provisioning of highly customized user profiles and zero-downtime updates in conjunction with UEM and VMware App Volumes™.

## VMware Horizon VDI on VMware Cloud on AWS

VMware is dedicated to helping organizations build a flexible, long-term cloud strategy that makes the most of existing investments. If you want a VDI that extends your desktop workloads between on-premises and cloud and supports burst capacity and disaster recovery, look no further than Horizon on VMware Cloud on AWS.

Horizon is a robust, feature-rich cloud platform that combines the enterprise capabilities of the VMware SDDC, delivered as a service on AWS, with the market-leading capabilities of VMware Horizon for a more simple, secure and scalable solution.

The Horizon Cloud Management Console provides a single unified dashboard for health monitoring and help desk services. With Cloud Pod Architecture, it connects pods in the cloud with pods on-premises to form a seamless entitlement layer for business continuity, disaster recovery, and burst capacity.

Scale to over 50,000 desktops across 50+ sites with improved failover characteristics—a fraction of the time of traditional desktop virtualization models. Access desktop and application services—including RDS-hosted apps, packaged apps with VMware ThinApp®, SaaS apps, and even virtualized apps from Citrix—from one unified workspace.

The VMware JMP or Just-in Time Management Platform provides you with enterprise-level tools and features to deliver new personalized desktops and published applications instantly to end users every time they log in. Instant clone technology coupled with VMware App Volumes also dramatically reduces infrastructure requirements, pooling required infrastructure to drive down storage costs by up to 30 percent, while enhancing security.

Optimize infrastructure costs with flexible, consumption-based billing, achieve rapid time-to-value automatic host scaling in minutes, and spin up an entire VMware SDDC in under a couple of hours.

## VMware Cloud on AWS and Intel

VMware and Intel provide IT organizations a path to digital transformation, delivering consistent infrastructure and consistent operations across data centers and public clouds to accelerate application speed and agility for business innovation and growth.

Combining the VMware SDDC with Intel architecture enables IT organizations to manage workloads for increased agility, capacity, transparency, visibility and resilience. The result is optimal VDI performance and a better experience for end users using remote desktops.

Together, Intel and VMware Cloud on AWS help customers scale and extend their organizational reach while addressing current and future application and infrastructure needs.

**Test VMware Horizon on VMware Cloud on AWS in just a few minutes—no installation required—with our [Hands-On Lab](#).**

Learn more about the architecture of Horizon on [VMware Cloud on AWS](#).



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companies. Item No: FY21-6124-DESKTOP-SCALABILITY-WP-USLET-WEB-20201117 11/20.

