

WHITE PAPER

The Evolution of Traditional Desktops to VDI and DaaS

Overcoming Legacy Challenges and Enabling IT Productivity with Nutanix and Citrix

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Traditional Desktop Challenges Inspire Alternative VDI and DaaS Solutions

IT teams have been trying to break through traditional desktop delivery challenges for years. As shown in Figure 1, approximately one-third each of survey respondents identified software licensing inventory and compliance (36%) and the high cost of procurement (35%) as top challenges associated with managing traditional, full-featured desktop devices.¹ Additionally, other IT process tasks, such as keeping desktops up to date and handling user support tickets, can consume an enormous amount of IT time. Desktop delivery challenges have the potential to increase operational expense, create inconsistencies throughout the user deployment base, and impact user experience.

Virtual desktop infrastructure (VDI) and desktop-as-a-service (DaaS) offer alternatives to traditional desktop delivery and management approaches. VDI and DaaS help simplify:

- Digital workspace provisioning.
- Troubleshooting issues in a timely manner with minimal IT intervention.
- Patch management and updating through automation and proactive monitoring capabilities.
- Helpdesk requests and resolution with simplified IT operational management.

At the same time, VDI and DaaS can reduce downtime and eliminate routine and mundane IT tasks, while also:

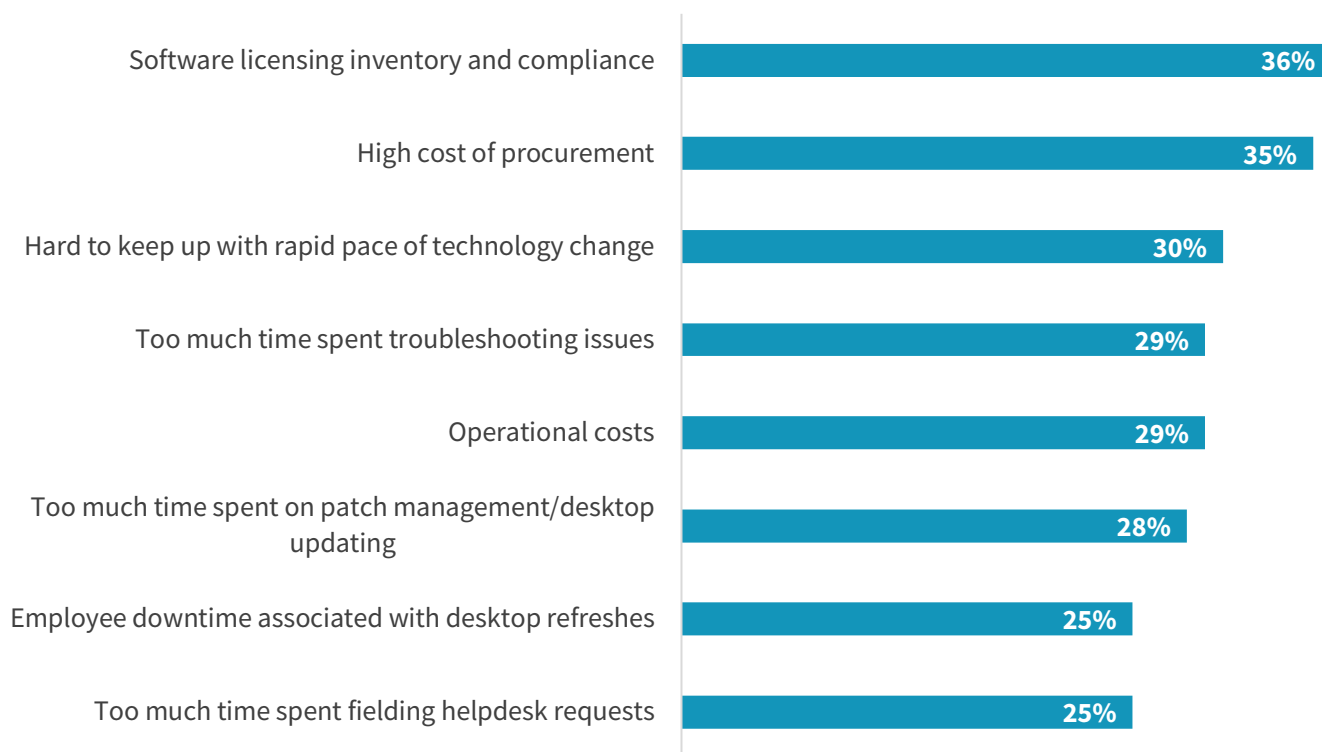
- Improving end-user experience with simplified login and access to applications and data.
- Reducing risk of cyber threats, privacy, and compliance.
- Lowering cost of endpoints and IT operations.

Due to COVID-19 and the shift to work-from-home models, businesses now need to support more remote workers and back-to-office plans even though IT resources are already struggling with desktop delivery challenges. This is an ideal time to explore workforce enablement strategies such as VDI and DaaS.

¹ Source: Enterprise Strategy Group Survey Results, [Enabling Digital Workspace Strategies with VDI and DaaS](#), August 2020. All Enterprise Strategy Group research references and charts in this white paper are from this survey results set.

Figure 1. Most Common Traditional Desktop Challenges

Which of the following challenges do you associate with managing traditional, full-featured desktop devices? (Percent of respondents, N=354, multiple responses accepted)



Source: Enterprise Strategy Group, a division of TechTarget, Inc.

VDI and DaaS Simplify IT Operations While Delivering an Optimal User Experience

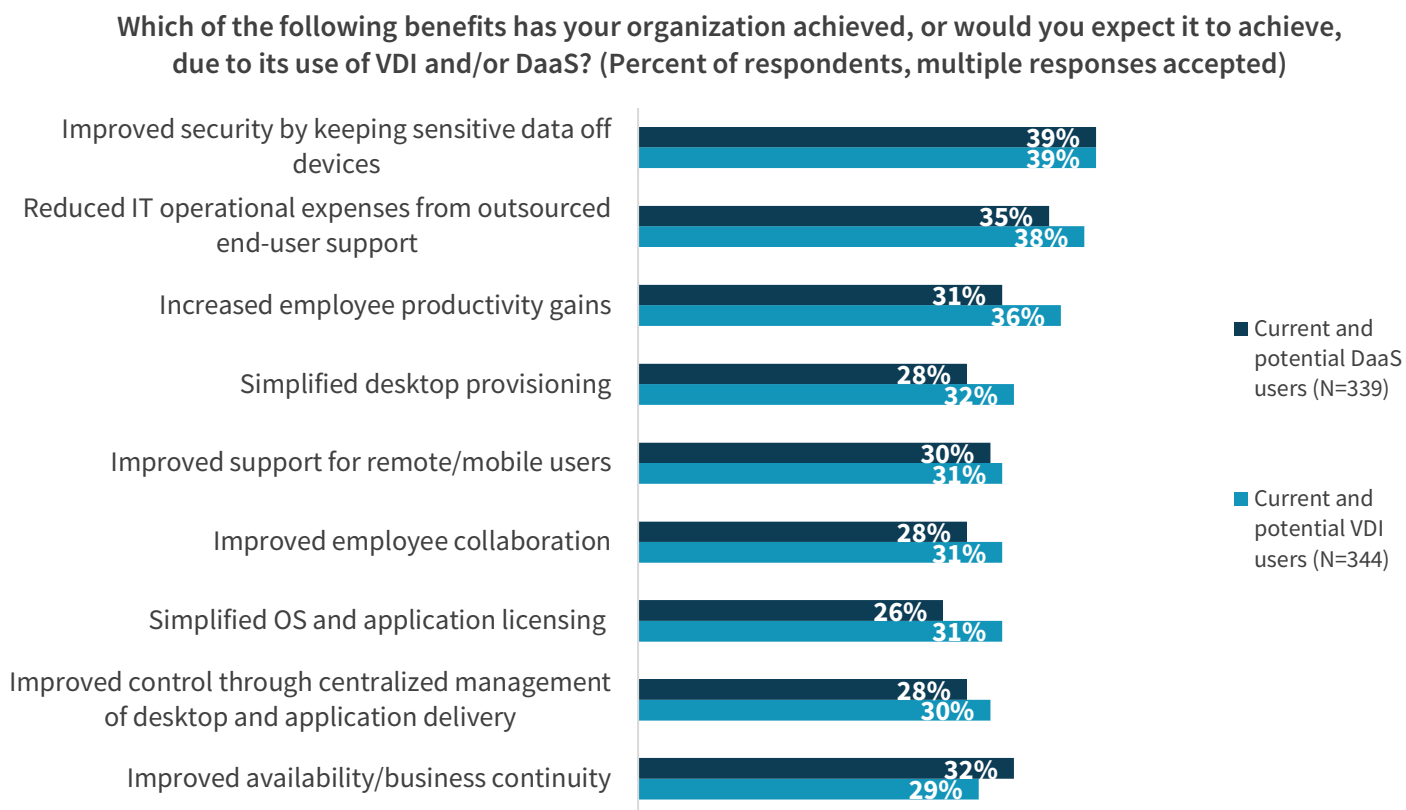
As shown in Figure 2, businesses are seeing the benefits of VDI and DaaS in areas such as remote/mobile worker support, security, productivity, and business continuity, all of which are top priorities as businesses react and rebuild remote work capabilities.

The rise in remote workers using traditional desktops expands the attack surface, heightening the risk of cyber threats. Because desktops are hosted centrally, VDI and DaaS help keep sensitive data off devices that can be lost, stolen, or compromised. Remote access to sensitive data not only reduces risk but also allows IT to regain control and respond to incidents efficiently.

Exposure to cyber threats and other security risks can be further reduced by enabling remote and mobile end-users to stay connected without the need for dedicated devices with local applications and data. In this model, users access their workspaces through VDI and DaaS delivery models designed to support any device or network.

Additionally, VDI and DaaS offer productivity gains. Users access the applications and data they need to perform their jobs with less need for IT intervention and support. For IT, single-pane-of-glass management and network visualization speed troubleshooting and resolution.

Figure 2. Top Actual or Expected Benefits of VDI and DaaS



Source: Enterprise Strategy Group, a division of TechTarget, Inc.

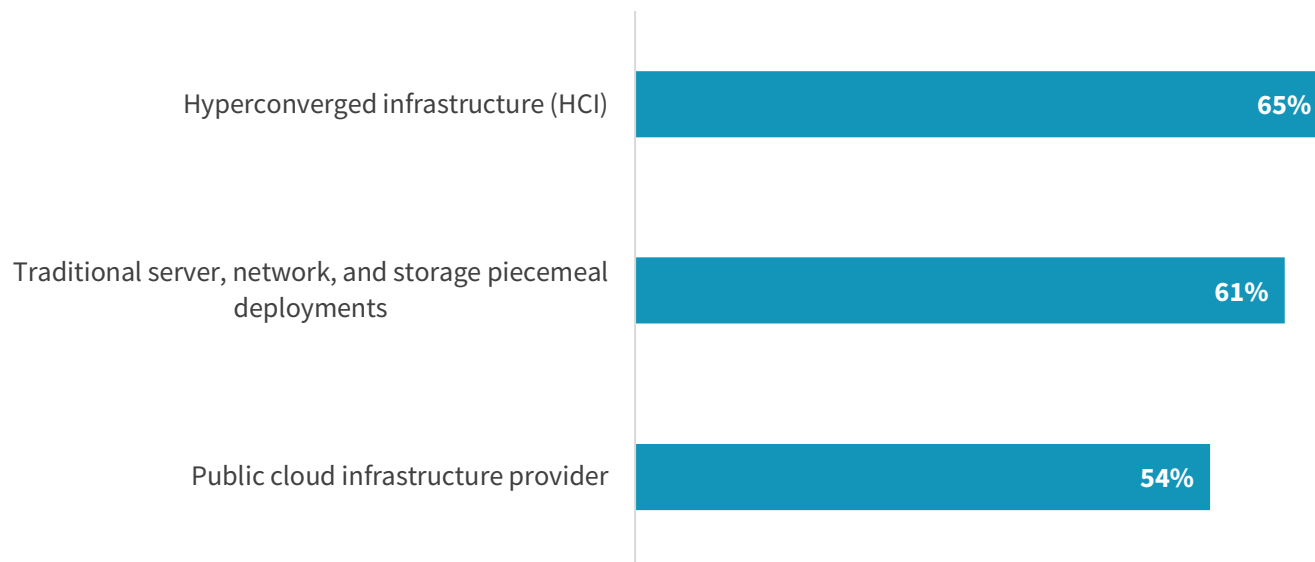
Choosing the right infrastructure for VDI is important, as it can impact user performance and the ability to scale and consume cycles from the IT team. The infrastructure should be one of the initial decision criteria for VDI deployments as businesses think of their short-term and long-term goals. One such option to consider is hyperconverged infrastructure (HCI), since it is another aspect of VDI that simplifies IT operations and improves user experience. HCI is the most common underlying infrastructure for VDI, as indicated by 65% of respondents to TechTarget’s Enterprise Strategy Group (ESG) research who were asked about the type of infrastructure used to support their VDI implementation (see Figure 3).

By converging computing, storage, storage networking, and virtualization, HCI can solve VDI concerns such as unpredictable availability and time-consuming updates and help simplify remediation of security vulnerabilities with minimal interruptions to operations. Integrated backup and disaster recovery capabilities help keep businesses and users running smoothly. Compared to legacy infrastructures, HCI offers a simplified means of managing, scaling, and procuring an infrastructure that eliminates performance, reliability, and configuration challenges.

The simplified means of VDI as a delivery model go hand in hand with the simplicity that hyperconverged infrastructure offers—and this approach has seen success in many organizations that deploy VDI.

Figure 3. Nearly Two-thirds of Current Users Support VDI Implementations with HCI

What type of infrastructure has your organization deployed to support its VDI implementation? (Percent of respondents, N=189, current VDI users, multiple responses accepted)



Source: Enterprise Strategy Group, a division of TechTarget, Inc.

Nutanix and Citrix Help Businesses Optimize the Success of VDI and DaaS

Nutanix and Citrix have been helping businesses successfully deploy VDI for years. Some VDI proofs of concept fail due to complex configuration and infrastructure, but Nutanix and Citrix have been able to quickly demonstrate time to value as well as performance at scale for their customers.

Nutanix and Citrix have partnered for both VDI and DaaS. This partnership supports both on-premises VDI with Citrix DaaS (formerly known as Citrix Virtual Apps and Desktops) and hosted desktops with Citrix Cloud. Nutanix and Citrix together can meet many organization's hybrid workforce goals through the use of a comprehensive, cloud-based management control plane that can maintain workloads wherever they happen to be—on-premises, in the cloud, or both.

The Nutanix AHV hypervisor, combined with the Prism management console, powers Citrix deployments with a full-stack virtualization solution that ultimately delivers simplicity and security. Nutanix AHV supports Citrix solutions natively and integrates management and provisioning. Nutanix and Citrix are partnered to codevelop integrations and plugins, including integration testing and verification, Citrix PVS and MCS management, Citrix DaaS, Citrix Cloud, Citrix Director, and Citrix Studio, just to name a few. Additionally, as a virtualization solution, Nutanix AHV enables organizations to eliminate the licensing costs and overhead they incur when virtualization is a separate layer of the IT stack.

As businesses work through these operational challenges, they consider and choose Nutanix and Citrix for:

- **Ease of management.** Nutanix Prism and Prism Pro allow IT to oversee virtualization, HCI, virtual networking, security, automation, and orchestration from a single point. Organizations can monitor and manage the entire stack in an integrated manner regardless of geographic considerations. Built-in analytics provide full-stack visibility and help IT teams identify, diagnose, and fix issues.

- **Security.** For regulatory and compliance reasons, the limiting of local access by a VDI or DaaS solution is often considered critical. Additionally, zero-trust principles, such as network micro-segmentation, network visibility, and compliance, are built in. Organizations can set up controls that simplify audits and remediation.
- **Operational cost efficiency.** IT teams don't have to change the way they operate, shortening time to value during design, planning, and deployment activities. For example, rapid setup and provisioning reduce delivery time. Upgrades can be completed with a single click. New users, applications, or services can be added in minutes. Role-based access controls, which integrate with Active Directory (AD) and Lightweight Directory Access Protocol (LDAP), allow IT staff to manage users and resources.
- **Performance.** Linear scalability and data locality help support a consistent user experience—each node adds a proportionate amount of storage and server capacity. This modular approach balances resources and helps ensure predictable scaling and performance for deployments of all sizes. For data locality, VDI read-only golden images are replicated intelligently to each node, preventing single source hot spots and bottlenecks. This process is invisible to the administrator and requires only enabling the feature with no additional operations overhead. Data locality enables linear scale from hundreds to tens of thousands of users. Lastly, the platform's high availability and self-healing capabilities minimize unplanned downtime.
- **Per-user License Model.** VDI and DaaS solutions are licensed on a per-user basis. The underlying infrastructure historically was procured on a capacity basis (cores, GBs, etc.). Nutanix offers VDI/DaaS-specific procurement models at a predictable per-user cost, including infrastructure. This model greatly simplifies cost modeling and capacity planning for dedicated environments.
- **Location Optionality.** With Nutanix Clusters, Citrix Virtual Apps and Desktops workloads, as well as the control plane, can reside on-premises, in the public cloud, or a mixture of both, with the option to change as business needs change. New scenarios for VDI can now be accomplished quickly and seamlessly such as on-demand elasticity, lift and shift, swing migrations, and business continuity/disaster recovery in the public cloud.

The Bigger Truth

Traditional desktop delivery can bog down IT teams, drive up costs, and affect user experience. COVID-19 has made a heavy lift even heavier as home-based workers use an array of devices—many not configured to company standards. These remote work environments complicate traditional desktop delivery with new, diverse technical and user issues that amplify support requirements. The larger attack surface and lack of standardization increase organizational risks related to security and compliance.

An organization's success depends on enabling the workforce, regardless of location, to be as productive as possible. The most productive and cost-effective strategy ticks the boxes of manageability, security, reliability, efficiency, scalability, and business continuity. IT decision-makers who want to refresh and improve their operations can begin by evaluating their existing deployments and comparing them to VDI and DaaS alternatives.

By design, the VDI and DaaS solutions from Nutanix and Citrix simplify IT operations and optimize user experience. These solutions are worth investigating because they fulfill an essential business objective: take out cost while adopting technology that improves outcomes.

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