

White Paper

Desktop-as-a-service (DaaS): Greater Operational Control, Reduced Costs, and Secure Workspaces

Meeting Desktop and Application Delivery Challenges Across Organizations

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Introduction

With the burgeoning workplace mobility trend, employees, contractors, and business partners require access anywhere, anytime, and from any device. Though many employees may no longer use the traditional corporate-owned laptop or PC, workers still rely on an organization's existing investment in applications and digital business processes to access business systems, collaboration platforms, and development environments. Given that, while workplace mobility offers a number of benefits, it has also presented IT with a number of daily and long-term strategy challenges, including:

- **Timely employee request fulfillment.** The rapid pace of business has resulted in an increasing barrage of employee requests, especially when it comes to downloading and accessing applications. This has many already-strained IT organizations scrambling. If IT cannot quickly provide what an employee needs to perform his job, the employee may use an outside, non-corporate solution or service to obtain what he needs—inadvertently placing the organization at risk.
- **Supporting contractors and temporary staff with a productive workspace.** Time-strapped IT departments must find a viable way to easily manage non-staff worker environments without introducing risk. With 40% of the U.S. workforce comprised of contingent workers, IT organizations need to modify systems so that they are nimble and can adapt to change without impacting employee productivity.¹
- **Merger and acquisition assistance.** In today's dynamic business environment, mergers and acquisitions are commonplace, so IT must be able to blend, consolidate, and integrate IT systems and services without impacting business goals or worker productivity.
- **Increased application development and engineering activity.** IT needs to provide application development and engineering teams with instant access to desktop and application resources as they click through their agile development models.
- **Providing and managing temporary desktops.** IT is charged with providing and managing temporary desktops to support a specific business activity for a predetermined period of time. The requirements might be simple or complicated for a small group or hundreds of workers. Regardless, IT must be able to deploy and manage these desktops seamlessly and without introducing risk.

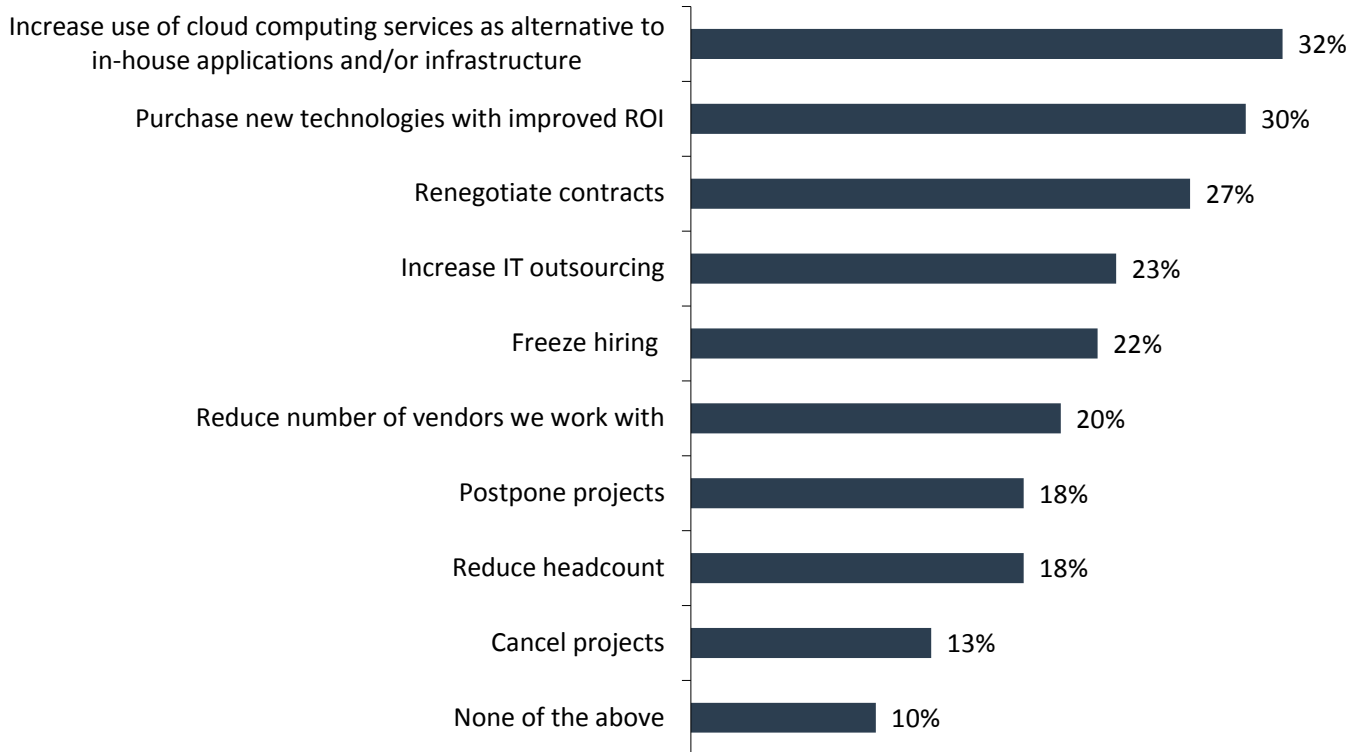
In addition to managing an increasingly fast-paced environment, ESG research discovered that IT organizations are taking a number of measures to reduce and contain IT expenditures as they solve their mounting challenges (see Figure 1).²

¹ Source: Forbes, [Shocker: 40% of Workers Now Have 'Contingent' Jobs, Says U.S. Government](#), May 2015.

² Source: ESG Research Report, [2016 IT Spending Intentions Survey](#), February 2016.

Figure 1. Cost Containment Measurements

Which of the following measures – if any – is your organization taking to reduce or otherwise contain IT expenditures over the next 12 months? (Percent of respondents, N=633, multiple responses accepted)



Source: Enterprise Strategy Group, 2016

Both the comfort level and experience with cloud computing services are rapidly increasing as businesses leverage the cloud to meet scale challenges, improve time to value, and lower the cost of running a traditional, capital-intensive IT infrastructure. It's not hard to see why the combination of business pressure and the benefits of adopting cloud computing services has created the perfect opportunity for IT organizations to explore consuming desktops and applications from the cloud. Given the current stress on IT and the constant business request to do more with less, consuming desktops and applications from the cloud unleashes the opportunity to improve ROI and enables IT to deliver services without taking any further drastic cost containment measurements.

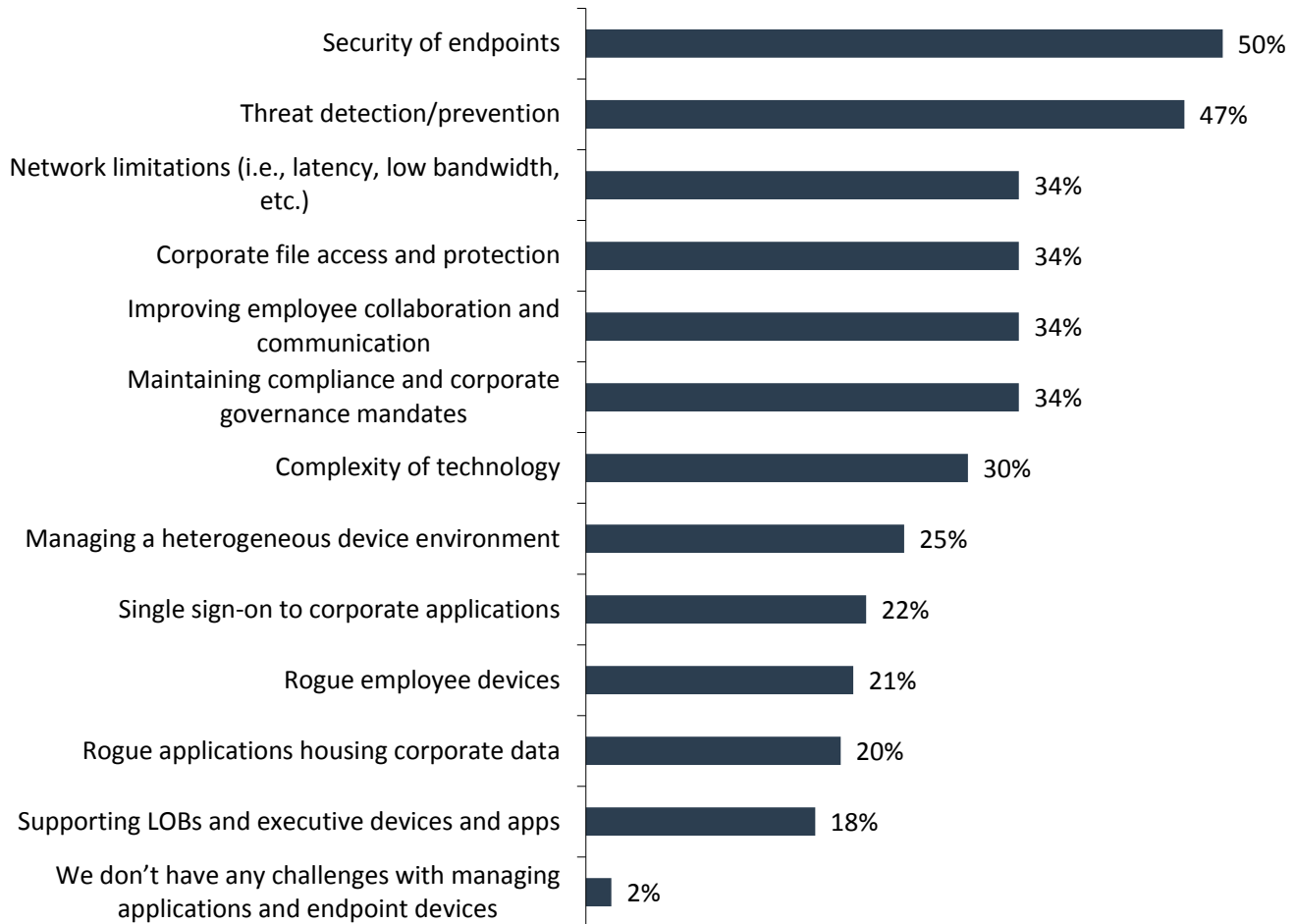
Desktop and Application Delivery Challenges Loom Across the Business

As companies embrace bring-your-own-device (BYOD) initiatives, explore alternative means to deliver applications and desktops, and simplify the management of user workspaces, they're encountering a number of challenges that need to be considered. In fact, according to ESG research, security and threat detection are top requirements for a robust strategy. That said, challenges abound as companies face networking, data access, and collaboration issues, while trying to maintain governance mandates in potentially complex environments,³ with employees seeking alternatives beyond those currently offered to them through traditional IT means.

³ Source: ESG Research Report, [Security, Productivity, and Collaboration: Trends in Workforce Mobility](#), May 2016.

Figure 2. Greatest Challenges Managing Applications and Endpoint Devices

**What are the greatest challenges your organization faces when it comes to managing the applications and endpoint devices your employees use to perform their daily job functions?
(Percent of respondents, N=395, five responses accepted)**



Source: Enterprise Strategy Group, 2016

Traditional Desktop and Application Delivery Is Not Working

Many organizations are struggling to find viable alternatives to their existing systems, which are fraught with increasing risk as well as rife with problems that are impacting the end-user experience and productivity, creating inefficiencies in IT operations, potentially draining limited resources, and causing organizations to over-spend on legacy IT infrastructure. For many years, IT organizations have been challenged daily to support desktops and applications in environments that undergo constant change driven by new application requirements, updates, patches, security risks, and OS upgrades. Traditional PC environments are burdened with IT management challenges as simple as employee password resets and as difficult as troubleshooting exercises that impact user productivity. An alternative is needed.

Companies have recognized these complexities and challenges, and some have tried turning to alternative delivery models like virtual desktop infrastructure (VDI) to solve their application and desktop delivery challenges. With VDI, IT can run virtual desktops that are hosted on centralized servers, allowing users to remotely log in to their desktops from anywhere.

The Upside (and Downside) of VDI

VDI provides organizations with a number of benefits including:

- Simplified desktop management by which desktops are centrally hosted, executed, and managed, allowing IT admins to manage them without having to travel to endpoints for maintenance and support.
- Efficient desktop provisioning and de-provisioning through the use of standardized images that can be replicated to many users as part of an IT workflow, allowing IT to revoke access with a few mouse clicks when needed.
- Centralized secure image management that enables constant monitoring, proactive detection, and rapid quarantine of suspicious behavior.
- Simplified patching and upgrades into standard images that can be replicated out to many users without the heavy lifting of having to visit (physically or through automation) every device.

While VDI can provide many organizations with a means of simplified and secure desktop management, VDI has also experienced false starts and failed proofs of concept, and has left some organizations with painful lessons learned. The promise of VDI has also been hindered by the following challenges:

- Complex infrastructure that is difficult for IT to plan, configure, manage, and maintain.
- Unfavorable economics that tip the ROI equation in the wrong direction with unutilized capacity, heavily weighted upfront invest costs, and cumbersome IT operations.
- Unpredictable global access based on the proximity of users due to low network bandwidth and unacceptable latency.
- Time-consuming implementations that involve multiple IT disciplines and months of planning, testing, and staging of infrastructure.
- Difficult root cause analysis and troubleshooting among multiple IT teams (e.g., server, storage, networking, endpoint, and security) leading to prolonged troubleshooting and unproductive users.

Projecting desktops and applications to end-users has multiple advantages. While some companies have recognized the value of VDI, the complexity and cost of VDI has limited the usage and full potential of a centralized desktop and application management solution. What, then, is the alternative?

DaaS: A Viable Alternative to VDI

Desktop-as-a-service (DaaS) is a viable alternative to VDI. Also referred to as a hosted desktop service, and often delivered as a cloud service by a third-party cloud service provider, DaaS offers a multitude of advantages to IT, security teams, developers, the business, and the workforce, while also simplifying IT operations and meeting business demands. DaaS is delivered on a pay-as-you-grow consumption and billing model, enabling business to essentially only pay for the time desktops and applications are used by employees. The desktops, applications, and data reside at the cloud service provider on an architecture that is secure and redundant by design.

Compelling reasons to explore DaaS include the following:**Employee Benefits:**

DaaS gives end-users the flexibility to work from anywhere, anytime, and on any device without the cost and complexity of traditional VDI infrastructure.

- Workers are no longer tethered to traditional desktops or laptops; remote and seasonal employees, and contractors are able to access the necessary applications and services they need to perform their job functions.
- Employees can avoid navigating through cumbersome VPN connections that impair access and lengthen login times.
- Collaboration and communication are simplified with virtual workspaces as employees have access to the tools and resources they need to work together and interact in a productive team setting.
- Younger end-users entering the workforce are able to communicate in ways that mimic their personal communication experiences, enabling greater productivity and providing an enhanced user experience on the devices they are already comfortable using.

Business Benefits:

DaaS offers organizations the agility to quickly adapt to new business opportunities, with favorable economics.

- Organizations are able to rapidly scale up or down depending on specific requirements, new employees, mergers and acquisitions, and global growth.
- IT can more easily integrate, consolidate, and deliver services and applications when and where they are needed, in a predictable and orderly fashion and without having to directly touch every endpoint.
- Businesses are able to reduce capital expenditures, as well as operational costs, while at the same time streamlining IT maintenance and infrastructure management.

IT and Security Benefits:

With data breaches occurring more often than ever before, security is top of mind for nearly every IT initiative. The BYOD trend is feeding the proliferation of non-corporate devices used in the workplace—presenting an increased attack surface for potential security breaches. DaaS:

- Helps organizations meet security policy requirements and compliance standards by using protocols to compress, encrypt, and encode data so that only images are transmitted and data no longer resides on local devices.
- Enables the creation of developer-style environments, granting developers quick and secure access to end-user environments for seamless development and testing, without impeding user productivity.
- Allows developers to move fast and fail fast with access to desktop resources when they need them.
- Keeps business data secure, centrally managed, and accessible to users.

- Places a productive workspace in the hands of end-users near instantaneously, while supporting secure access from multiple device types.
- Manages applications centrally with the ability to securely package, deploy, and maintain a productive user environment.

Hosting and consuming desktops, applications, and data in the cloud while securely delivering workspaces to users enables IT to quickly react to new requests. IT organizations can confidently and swiftly deliver a productive environment for users without the cumbersome task of manually configuring a desktop asset. Additionally, IT simplifies the tasks associated with desktop maintenance and management without the complexity of additional IT infrastructure.

The Bigger Truth

The rapid pace of change in today's business environment is creating additional pressure points for IT organizations and is, frankly, making life difficult for IT administrators at the same time. The surface area of desktop and application delivery is expanding, along with the potential for security risks. Some companies have embarked upon a VDI strategy and have experienced some initial success—but have also experienced its shortfalls.

DaaS delivers many of the same benefits of VDI, while further simplifying desktop and application delivery in a less complex, more cost-effective manner. The benefits of DaaS empower IT with an enhanced delivery model that coincides with company-wide initiatives to embrace strategic cloud computing initiatives. End-users benefit as well, with productive workspaces and the ability to access the applications they need across a variety of devices.

The path to hosted desktops is simple for IT to begin exploring without any major upfront costs—and the benefits can quickly be discovered. IT can create workspaces and become familiar with the simplicity of initial configuration and the management experience. Administrators can then log in to the workspaces and get a sense of the usability and applicability to their businesses.

ESG has witnessed many companies that have gone from a quick test to finding multiple opportunities inside the business where they can embrace hosted desktops, while drastically streamlining ongoing management tasks. The way in which workspaces are configured, managed, and maintained is rapidly evolving. Now is an opportune time to discover, plan, and embrace the multiple ways a cloud delivery model can simplify the daily life of an IT administrator, while satisfying the demands of business users.

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