

Connect

Manage360°
CRA's VDI & DaaS Solution

VDI vs. DaaS: Exploring the Benefits of Hosted Desktops

White Paper



Introduction

There is a significant hidden cost to many businesses that lies in their desktop computer infrastructure. While the initial cost of desktop hardware has plunged over the past two decades¹, a full accounting of the total costs of ownership (TCO) (including administration, training, support, and the cost of downtime) shows that maintaining a computer on every desk has remained expensive for many companies. Gartner, a leading industry research firm, estimates total annual costs for each desktop PC ranges between \$2680 and \$4400, depending on the degree of proactive IT (Information Technology) management.²

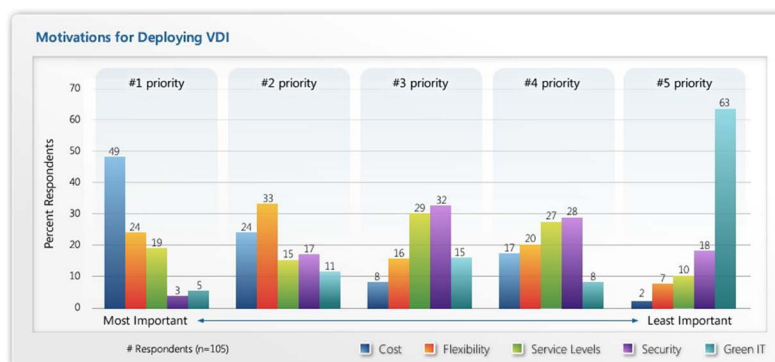
PCs are ubiquitous in today's business world. They offer tremendous value as well as critical services and productivity tools. Productivity gains, however, come with various hidden costs laced into a PC type infrastructure. There are other alternatives that exist, offering the same benefits, deliver identical services at significantly lower cost. Virtual Desktop Infrastructure (VDI) and Desktop as a Service (DaaS) solutions are two of these alternatives.

Virtual Desktop Infrastructure (VDI)

Virtual desktops allow businesses to cut their per-seat TCO by consolidating and centralizing computer hardware. The VDI model works as follow:

Robust and scalable server computers are provisioned with software designed to mimic defined numbers of individual desktop machines. Users access the "virtual" desktops through inexpensive terminals or remote desktop sessions using common software clients.

The benefits are compelling. Users enjoy quick and easy access to their work desktop from anywhere in the office or around the world. Users who work from home or the field have access to the exact same desktop and files no matter where they log in from.



Source: Microsoft: VDI TCO Analysis for Office Worker Environments Abstract

1 Troni, Federica, et. al. "Total Cost of Ownership Comparison of PC's With Hosted Virtual Desktops, 2011 Update." Gartner RAS Core Research Note G00209403 December 14, 2010: 1-8. Print.

2 Silver, Michael. "Desktop TCO Update, 2003." Gartner Research Note Decision Framework, DF-19-9687 September 9, 2003: 1-7. Print.

By combining the processing power for multiple desktops into a single server, hardware maintenance costs are reduced for VDI installations. Software installation and support costs are also lowered since the IT department can manage these functions on fewer physical machines. An IT technician's workload becomes more streamlined, instead of installing updates on every desktop, only a single instance of the desktop on the server needs to be updated. Since the server computers are centralized, IT technician response and travel time for remote users is eliminated, further cutting downtime and support costs. A common printer driver problem, for example, can be handled by a technician right at the data center instead of requiring a trip out to a field office. Gartner estimates that the benefits of implementing VDI for most businesses ranges between 2% and 13% per desktop per year.³

Desktop as a Service (DaaS)

With the advent of cloud-based providers and reliable, high-speed Internet access, traditional VDI now has a new variation: Desktop as a Service (DaaS).

DaaS is VDI where the servers are owned and operated by a third-party provider, delivering services from the cloud over the Internet. The need for a business to buy, install, or maintain any of the hardware infrastructure for hosting the virtual desktops is eliminated. The service provider abstracts both the costs and administration of the underlying hardware.

As with other cloud services, the cost of the service is amortized across a larger number of clients and so further reduced. A single DaaS provider can accommodate thousands of virtual clients, taking advantage of economies of scale to deliver virtual desktop services at prices lower than a company might achieve with an internal VDI deployment. By selecting the right DaaS provider, businesses can achieve better scalability, more predictable cost models, better reliability and increased mobility for remote staff.

DaaS services are relatively simple to provision, with a new desktop created and ready to use within minutes of enrollment. A system administrator has only to create a new account, provide the credentials to the end user, and their new desktop system is ready to go as soon as they log in. The costs are also predictable, with each desktop licensed at a fixed fee, typically over a one-year subscription period. Pricing by DaaS providers has tended to change slowly and, to date, has become lower over time as market competition increases.⁴

The DaaS subscription model is well-suited for businesses that look for

³ Silver, Michael. "Desktop TCO Update, 2003." Gartner Research Note Decision Framework, DF-19-9687 September 9, 2003: 1-7. Print.

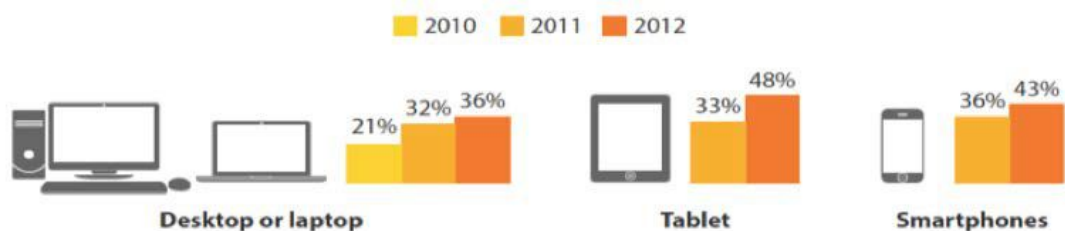
⁴ Madden, Brian. "VMware Beats Amazon, Launches Horizon DaaS for \$35 per User, including Persistent!" Brian Madden. Web. 04 Feb. 2016.

fast, flexible virtual desktop deployments. No infrastructure investment is required, and the service can be dropped just as quickly as it was adopted. Contracts with DaaS providers are typically executed as technology services contracts rather than software licenses. Upgrading desktop operating systems in a typical business environment can be problematic with issues ranging from hardware incompatibilities and problems validating licensing. In a DaaS scenario, those problems are all borne by the service provider, not the subscribing business.

DaaS may also be better suited than VDI for businesses which allow their staff to use their personal PCs for work. In traditional networked desktop environments, or even at businesses using VDI, allowing staff to bring their own devices in (a concept popularly known as BYOD, or Bring Your Own Device) was a recipe for a security nightmare. An employee might copy an important spreadsheet with customer data onto a laptop, then lose the laptop, exposing the company to a public-relations nightmare. In addition, BYOD users often fail to undertake basic security measures. A user with a virus logging in at the office could take down the whole network.

With DaaS, all corporate data is retained on secure servers. Users, even those on private devices, effectively access only a picture of the information. It is not stored nor corrupted by software on the device itself. The company can, therefore, take advantage of all the productivity and cost-saving virtues of BYOD⁵ without exposing itself to the risks.

Trend of BYOD is continuously increasing over the years:



Source: Forrsights Workforce Employee Survey, Q4 2012, Q4 2011, Q4 2012. Sample size = 3284 (2012)

Combining Solutions

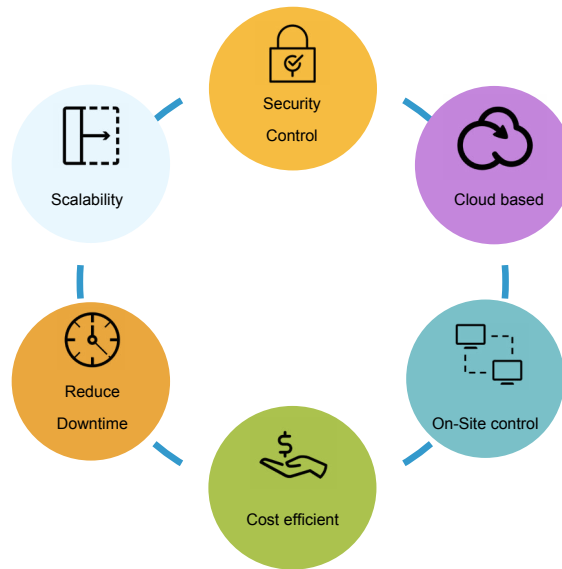
DaaS, despite its many benefits, is not a universal solution. Some organizations prefer the increased security control offered by running VDI. VDI also allows greater customization of individual desktops and may be the preferred solution when running specialized industry software that a DaaS provider might not support. A healthcare business, for example, might use specialized billing software which only runs under a certain version of Windows. VDI allows them to continue using that version, while a DaaS provider would probably require them to upgrade at some point.

5 Loucks, Jeff, et. al. "The Financial Impact of BYOD: A Model of BYOD's Benefits to Global Companies." CISCO IBSG Horizons. 2013: 1-26. Print.

VDI vs. DaaS: Exploring the Benefits of Hosted Desktops

VDI allows the business to decide specifically what software is installed to each virtual desktop image. With certain specialized industry software, this is vital to prevent compatibility problems. DaaS providers may force upgrades or patch levels on customers which can incur unexpected training costs for end users. Additionally, some software licensing terms may implicitly or explicitly prevent installation to a DaaS environment. This can result in scenarios where some desktop software is unusable or unsupported on DaaS platforms.

VDI circumvents many of these problems, since control remains within the business. Since that control requires corporate IT resources, however, VDI may not offer TCO saving as great as DaaS. The business is at risk for absorbing unforeseen expenses related to troubleshooting or hardware failure. Staffing expenses are also higher.



Benefits of VDI & DaaS Combined

Benefits of Hosted Desktops

There are many benefits that apply equally to both VDI solutions and DaaS solutions. However, by abstracting the machinery and particulars of software installation and maintenance, the company can better focus on its core business. IT departments can be scaled down and focused more precisely on supporting line-of-business functions instead of spending time dealing with low-level, generic PC troubleshooting and support. Instead of trying to figure out why Word won't start on a particular PC, a system administrator could spend their time designing a new workflow policy to expedite client billing, for example.

The advantages for a company's remote workforce also should not be understated. Since all desktop services are delivered over the network,

there is no logistical difference between a user operating at his or her office desk and one sitting on a beach in Hawaii. Moreover, that same user, should they happen to travel between those two points, would nonetheless be using the exact same desktop in both locations. This provides a sort of continuity and familiarity for remote users that are not available in traditional desktop environments.

Solution

Transition to a VDI or DaaS environment can be leveraged on the company's existing toolset. PCs still in use, which are too old for modern operating systems can be used as perfectly adequate thin clients for VDI deployments, effectively extending the hardware lifecycle.

Choosing between VDI and DaaS can be a difficult proposition for business executives. They share the same broad advantages, but deciding on the best solution requires an in-depth consideration of business strategy, goals, and available resources.

Luckily, business executives do not have to make these decisions on their own. CRA has a team of experts and solutions architects that can provide a business needs analysis with recommendations on the correct solution, specific to their business goals and requirements.

CRA has also developed a solution that integrates the best of both VDI and DaaS. **Connect** was created based on CRA's 25 years' experience helping support and managed clients technology. Taking into account the needs and requirements of their clients, CRA has created a service offering that makes their life easier. **Connect** offers simplified management, scalability, and enhanced data security with minimum administrative maintenance.



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