



Desktops in the Cloud

Your Silver Bullet for Windows XP End of Life

WHITE PAPER

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Executive Summary

April 8, 2014 doesn't sound like a historical red letter date, but it was. It was the day Microsoft officially ended support for Windows XP. Hardware manufacturers also stopped supporting chipsets that are XP-compatible at that time, adding to the impact of discontinued support. This means, if you haven't already done so, you'll need to migrate all your desktop computers off Windows XP and put them onto Windows 7 or Windows 8. But the problem is larger than simply migrating desktops from one operating system to another, which is complex enough in itself, because you will also have to upgrade or replace a lot of your desktop hardware along the way. However, there are other options for migrating your desktops that don't require replacing each piece of hardware, every operating system and upgrading all of your software at the same time. What if, instead, you could move your end-user computing to a platform that is centrally managed, provides a high-performance Windows desktop, and is both future- and past-proof. You can.

One of the options for doing this is to build your own virtual desktop infrastructure or VDI. This entails using virtual machines as desktops located in your data center. However, companies that have tried to create VDI environments discover how difficult it is to cost, build, maintain, and support the line of business SLAs. There is a way, however, to gain all the benefits of VDI without the deep investment in hardware capital and technical expertise, and enjoy carrier-class SLAs in your business. This other option is to migrate your desktops and applications to a cloud-hosted model. Cloud-hosted virtual desktops are virtual machine desktop systems that are always on, available from any location, and accessible from any computing device that supports remote desktop client software. We call this solution Desktops as a Service, or DaaS.

Incremental Desktop Migration

One of the fundamental benefits of DaaS is the ability to consume the desktop (or workspace) as a service. This means that the "view" of that desktop can be scoped to the right size view for the consumer. As part of the migration away from Windows XP, it might be appropriate to migrate a user to a Windows 7 operating system, while still providing them access to the applications that continue to be hosted on a Windows XP desktop. This has a number of benefits. For instance, you avoid the time-consuming process of validating all the applications on the newer operating system, and can quickly begin the process of familiarizing users with the newer OS environment. In fact, this ability to deliver just the applications from Windows XP can be essential for circumstances where the application is only supported in the older operating system. This iterative and incremental adoption can ease the transition for the end-user base, and enable you to focus on the business service rather than the operating system or applications themselves.

Use Cases for DaaS

There's no single right answer for every situation and, similarly, there's no single right desktop answer for all users. Not every user in your company requires a full desktop operating system installed on a computer. Task, seasonal and remote workers may only require access to a single application. There are users, however, that do need to have a traditional system. These users, who are often in the majority, need specific or custom applications, the ability to install/uninstall and modify applications, or require compute-intensive workloads, such as graphics design or application development. Most of these users can benefit from a thin-client or low-cost hardware system with a cloud-hosted Windows desktop.

The figure below gives examples of user types to illustrate the desktop system requirements for each. Note that some knowledge workers and technical workers can also benefit from DaaS. Most users use a limited number of applications such as a word processor, a spreadsheet program, an email client, a PDF reader, a compression tool for archiving files for easy transfer, and a web browser. Users who use a standard set of applications, who need mobility, who need to access a consistent desktop from any device, or who want an extra level of security, will benefit most from cloud-hosted desktops. Since many applications are web-based and more are transitioning every day, the continued need for full desktop systems is decreasing.

Don't worry about being pressed into a one-size-fits-all mold just because your desktops happen to be cloud-hosted. You have choices with DaaS. You can mix and match desktops for your users and select from Windows XP, Windows 7, Windows 8 and Linux. Yes, we did list Windows XP as one of your virtual device options. When you virtualize your WinXP desktops, you will not have to worry about future hardware incompatibilities as device and component makers move on to support newer Windows versions.

Type of User	Description	Desktop Option	Why
Task Worker	Data entry, call center, admin, etc.	Shared Session	Typically 1-2 app access Possible shared workstations
Occasional User	Libraries, Kiosks, Labs, etc.	Shared Session	Typically 1-2 app access Shared workstations
Knowledge Worker	Marketing, Finance, HR, etc.	Full Desktop Shared Session	Multiple applications Require customization
Technical Worker	Developers, Graphics Design, Research, etc.	Full Desktop Shared Session	Require high powered machines due to high compute consumption

Desktop Migration Options: Hardware and Software Upgrade

Surveys show that approximately 40 percent of companies are still using Windows XP and 75 percent of currently used desktop hardware isn't compatible with Windows 7 or Windows 8. The cost of replacing or upgrading hardware is high. You have to factor in the hardware cost, the labor to perform the upgrades, the labor to transfer any data residing on the old computer, and the cost to upgrade your applications, such as Microsoft Office.

Your first option is to move from full Windows XP systems to full Windows 7 or Windows 8 systems. This is a one-to-one migration. However, there is a problem. Windows XP has very different hardware requirements than Windows 7 and Windows 8. Table 1 describes the differences in a hardware matrix.

Hardware	Windows XP	Windows 7/8
CPU	Pentium 300MHz or higher	1GHz*
Memory	128MB	2GB
Disk	1.5GB+	20GB+
Video	800x600 or higher	DirectX 9+ with WDDM driver
Other	CD or DVD drive	

Table 1

It's a surprise to many of the people we talk to that replacing incompatible hardware and upgrading the operating system costs more than VDI and 24 percent more than DaaS. According to our cost analysis, a traditional desktop or laptop computer costs you just over US \$1,100 per year. Building your own VDI brings you in at just under \$1,000 per desktop, whereas DaaS brings you in under \$800 per desktop at \$754. See Table 2 for the complete annualized cost analysis. By comparison, you can see that both on-premise VDI and DaaS save you a significant amount of money over replacing your traditional desktop systems with refreshed hardware and new operating systems.

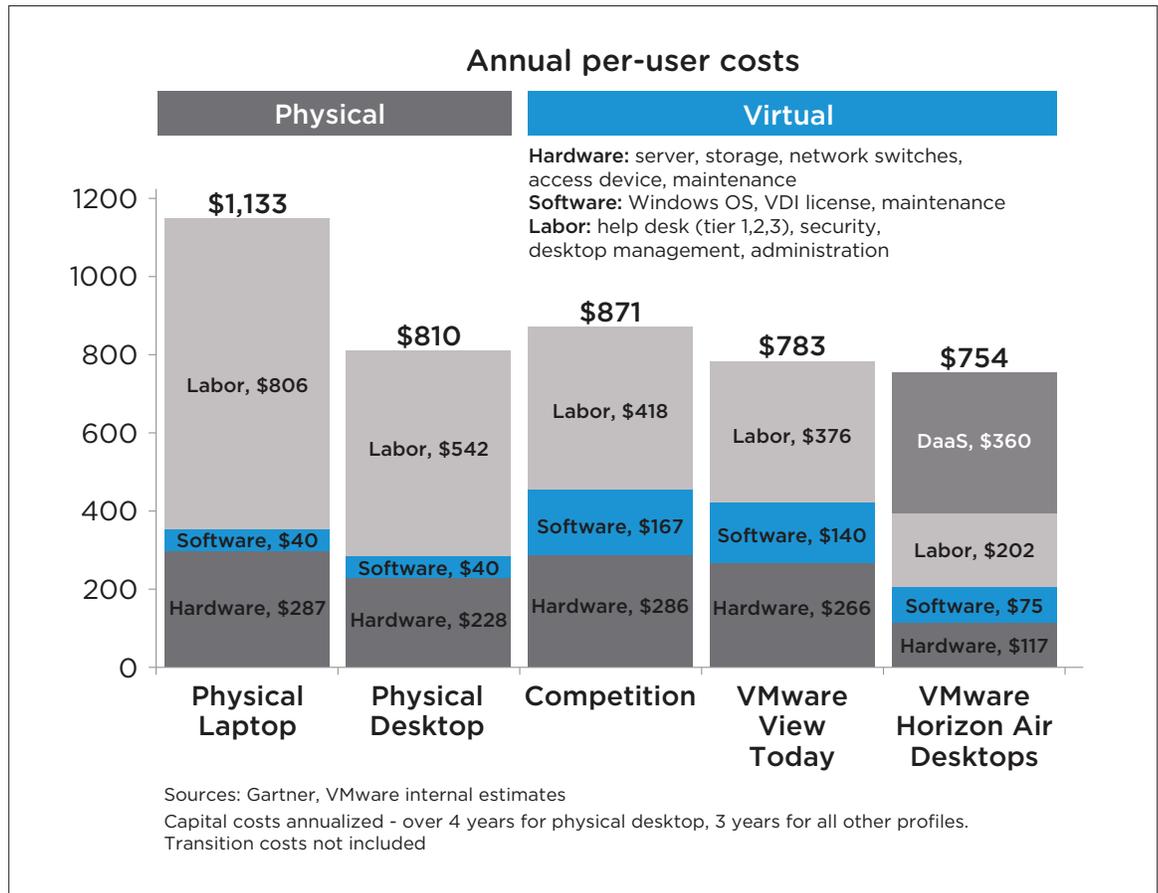


Table 2

The Challenges of VDI?

You might be asking yourself, “What’s wrong with VDI?” The cost difference between traditional VDI and DaaS, according to our calculations, is approximately \$100.00 per desktop. That per-desktop difference seems small, but multiply that \$100.00 by 500 users over three years and the difference becomes clearer: \$150,000.

But it isn’t just a pure cost difference, though most of that cost is upfront capital expense to acquire the hardware necessary to build that infrastructure. It’s also the complexity, something that you can’t easily place a monetary value on. It turns out that VDI can be quite complex to design, to build, to maintain and to manage, which can be a barrier to entry for many businesses interested in moving to a virtual desktop model.

The VMware Difference

Sure, DaaS is the least expensive alternative, but what is there about the VMware Horizon® Air™ Desktops and Apps (formerly Horizon® DaaS®) offering that makes it so compelling? First, it’s a matter of focus. If you aren’t in the IT business, why be in the IT business? DaaS leverages excellent data center facilities, which means multiple locations across the globe for unbreakable service, physical security, hardware maintenance, network infrastructure, storage and support—all maintained by the cloud provider. In fact, VMware has an unparalleled global network of service provider partners including Dell, Fujitsu, NEC, Dimension Data, NaviSite (a Time Warner Cable Company) and Quest, etc., who will deliver and managed your DaaS solution.

What does leveraging cloud provider data center infrastructure mean as a DaaS customer? It means you'll be able to focus on running your business more effectively without worrying about maintaining the overhead of a large IT department.

Additional DaaS Benefits:

- Centralized Management – all desktops are managed from single console with 100% availability
- Rapid Desktop Deployment – scale up and down as needed, desktops and apps on-demand
- Increased Security – data remains in the datacenter, not on the endpoint
- Higher Availability Service – world-class service provider
- Better Desktop Experience – superior end-user experience over traditional VDI from distributed data centers
- Endpoint and Support Cost Savings – repurpose existing hardware, or utilize cost-effective thin clients
- Client Platform Independence – iPad, iPhone, PC, Mac, virtual machine, Android, Chromebook, Kindle, etc.

End users can access their virtual desktop from a variety of client types and from almost any device, so that no matter where you are or which type of computer or mobile device you carry, you can access your desktop, work with your applications, communicate with coworkers, and enjoy full global mobility.

How Easy is it to Move to DaaS Desktops and Away from Windows XP?

If you consider all three options, DaaS is not only the least expensive in terms of money, it's also the least expensive in terms of time and effort. If your organization is running Windows XP desktops this morning, you could be running Windows 7 by this afternoon from almost any computing device that you own, including your current desktop hardware and Android-based devices, Apple products, Windows-based systems, Linux-based systems, and thin client hardware.

You only need three things to get started using your cloud-hosted desktop today:

1. A cloud-hosted desktop subscription.
2. A hardware device (Computer, smart phone, tablet) – which you already have
3. Remote desktop client software – which you also already have or can easily download for free!

Horizon Air Desktops and Apps provide you with a rapid, cost-effective, drop-in solution for moving away from Windows XP and onto modern desktop operating systems.

To get started migrating your desktops and applications to a desktop as a service model, contact your VMware sales representative, or go to <http://www.vmware.com/products/daas>.



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