A Beginner's Guide to

Desktop as a Service

willowbend
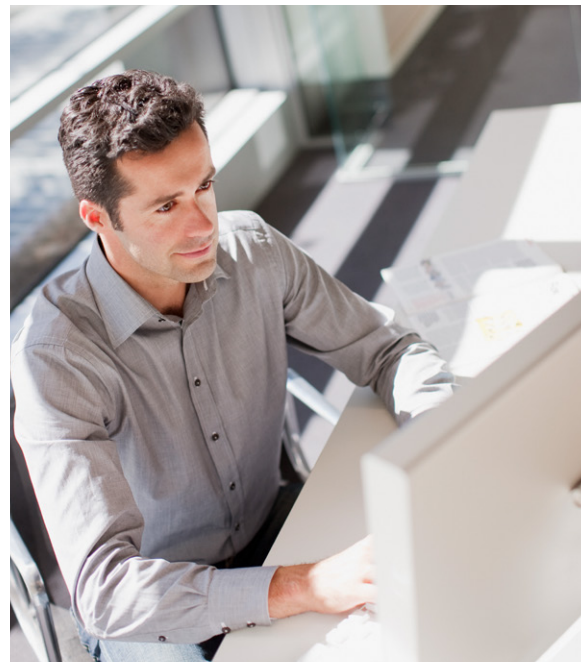S Y S T E M S

According to IT industry information resource Spiceworks' 2016 State of IT report, small to medium-sized businesses (SMBs) will spend 21 percent of IT hardware budgets on desktops in 2016. The biggest problem with this figure, besides its significant percentage of the whole, is the fact that it often fails to provide any significant competitive advantage for the business.

The fact of the matter is that traditional desktops for the workforce bring unpredictability in terms of cost, use, and uptime while shackling the workforce to physical locations. In addition, the endless application glitches, maintenance, and update cycles that slow and often stop productivity are constantly consuming time and manpower while negatively impacting profits.

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Today, there is an ideal alternative that is quickly becoming a productivity, cost-savings, and efficiency go-to solution for thousands of SMBs and enterprises. Known in IT industry parlance as a "hosted cloud desktop" or, more commonly, as "desktop as a service" (DaaS), this solution is quickly becoming a positive disrupter of how the workforce gets things done. As a business leader, you are just as likely to have heard of DaaS as to be hearing the term for the first time, so it's best to start with explaining exactly what it is and how it can help your business.

Known as DaaS, a cloud-hosted virtual desktop approach is the ideal alternative to having the operating system, applications, storage, email, and everything that your workforce uses enclosed in an on-site desktop. With a hosted cloud desktop, all of that is hosted off site at a provider's data center and delivered via Internet access.

With cloud-hosted desktops:

- Businesses have anytime/anywhere/any-device access to business applications, data, communications, and IT services.

- Businesses have the ability to scale up or down in order to meet workforce needs, as the provider can quickly spin up virtual desktops to users on any device.

- Rather than having to call in an IT expert who has to deal with all the technology going on in the background, it's all handled by the DaaS provider.

- Because everything is "hosted" off site by the provider, employees have true mobility that enables them to do any type of work at their desk and pick up wherever they left off on their laptop, tablet, or other mobile device anywhere at any time.

- All users have secure, single-click access to their desktop and their entire complement of mobile, software as a service (SaaS), and corporate business applications, including fully integrated email, file sharing and sync, and browser.

With a hosted cloud desktop, employees can have everything they would have with a brand-new on-premises desktop and much more. High-quality and glitch-free voice, video, and multimedia, the ability to plug in other USB devices, and the ability to work with pro graphics applications for business, among other things, can also be a part of the equation. All of this is made available via a set monthly subscription fee per user.

DaaS has been evolving and growing for only the last few years, so many business leaders are hearing about it for the first time. As a close cousin of SaaS, a far more mature cloud solution, it is certainly a business productivity and mobility solution whose time has come, with origins that go back further than its more recent emergence on the scene.

While DaaS is still maturing as the latest entry in the evolution of the cloud, its origins actually go back to the birth of virtualization in the 1960s with its nascent development for use in IBM mainframe computers. Virtual-ization was essentially put on hold with the growth of the x86 servers and "distributed computing" in the 1980s when increasing costs of end-user maintenance and servers paved the way for an alternative. This is when VMware produced and marketed its own virtualization products that soon became widely available and adopted in the 1990s.

Beginning in the early 2000s, vendors began offering virtual desktop infra-structure (VDI) solutions that gave users remote access to corporate systems and then to the applications and files on their full desktops. As cloud and SaaS began to mature in the last decade, this paved the way for DaaS.

The new paradigm of the "consumer-ization of IT" prompted enterprises to look at different methods to manage desktops that were still costly and high-maintenance and that figuratively chained an increasingly mobile workforce to the desk and the office. It's no coincidence that DaaS emerged in the last few years as "bring your own device" (BYOD) began to grow. The "prosumers" (employees) began to demand access to their applications and the use of smartphones, tablets, and laptops to get their work done from anywhere.

As a consequence, DaaS was born out of the digitally disruptive force of virtualization and SaaS. These technologies had set the stage for freeing enterprises from high capital expense (CAPEX) with its in-house hardware and software cost-of-ownership needs, built in obsolescence/short lifecycle, and lack of agility and mobility. The benefits of DaaS were becoming clearer by the minute.

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The growth of DaaS is now reaching a tipping point, as evidenced by the 2015 Global DaaS Market Survey, which predicts a 71 percent growth in DaaS in 2016. This major growth is due to its wide number of benefits that impact every type and size of business that has adopted the technology. Some of the most obvious benefits are:

Device independence, in that authorized end users can work and access corporate applications and data from any device, without compromising data security, resource availability, or experience

Location independence, in that any employee with valid security credentials and permissions can access his or her desktop and application that he or she needs from anywhere

The ability for your business to choose from special deployment models depending on your needs

The ability to meet your changing business needs by scaling up or down and accommodating the growth of satellite offices and branches

This is really only the beginning of the potential benefits of DaaS. Let's take a closer look at some of the other key benefits that it can bring to businesses ranging from SMBs to global enterprises.

Cost-cutting benefits of DaaS

Your business likely relies on some form of desktop for employees in the office, so it's not only desired but is required. This is where one of the biggest benefits of DaaS comes into focus via the elimination of regular desktops (thick client) to a thin-client model.

A thin client is a stateless, fanless desktop terminal that has no hard drive. All features typically found on the desktop PC, including applications, sensitive data, and memory are stored "in the cloud." In non-IT marketing speak, that means that everything is stored off site in the DaaS provider's data center on servers when using a thin client.

As a result, companies no longer need to spend thousands of dollars per user for dedicated PC hardware. Thin clients can be had for as little as $99, while Chromebooks are $200, and most associates already own tablets or smartphones, which can also be used as a desktop client. This is why many companies using DaaS offer a BYOD program.

DaaS eliminates traditional desktop up-front CAPEX outlay and potentially three- to four-year depreciation schedules, because the enormous up-front costs of hardware and software are not needed. All of this translates into a majorly reduced desktop total cost of ownership, achieved at the beginning of a cloud-hosted desktop deployment with a much longer lifecycle. Your company can now budget for a set monthly fee without any hidden costs or surprises.
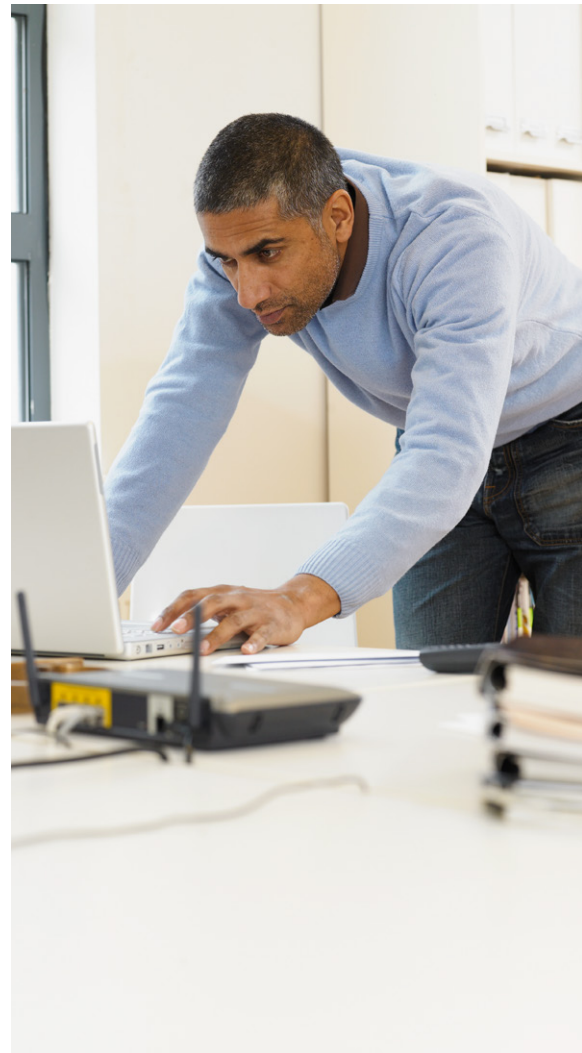
Shifting device procurement from CAPEX to the more manageable operating expense (OPEX) is a key reason why even a large firm with an in-place IT organization would consider DaaS. Instead of the high cost of purchasing PCs as part of CAPEX that you must depreciate, the as-a-service model lets your company shift the ongoing cost over to the OPEX side of the ledger. In addition, maintenance costs are virtually eliminated for on-site IT, as these are handled remotely by the DaaS provider under the ongoing subscription fee model's monthly contract.

Centralized Management Benefits

Because the operating system and work-related systems and applications are now centralized, your IT professionals or managed IT services provider (MSP)/DaaS provider can manage and upgrade technology assets from one location. The underlying infrastructure is much more easily scaled, so adding users, storage, and applications is a simple procedure done remotely.

In addition, the workforce can log into company systems such as ERP, CRM, and other enterprise applications so that they can collaborate remotely and pick up where they left off on any digital device. Your businesses can easily implement changes in IT policies and business processes in an integrated manner, with the effects taking place throughout the company.

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Data Security Benefits

DaaS allows for centralized desktop, data, and backup and disaster recovery (BDR). This all-encompassing security benefit ensures easier and more secure deployments when compared to investments in hardware capital.

One example of greater security controls with DaaS is that an unlocked lost or stolen tablet, smartphone, or laptop is a huge regulatory compliance and security danger when proprietary data are held on the device. By maintaining all the sensitive data in a central location, companies avoid the many risks involved in storing data on stationary desktops or mobile laptops, both of which are subject to data corruption, hacking attacks, loss, and theft.

DaaS provides greater security controls in these situations, as data are stored in the data center, not on a specific device. Furthermore, your company can immediately disable DaaS accounts as required when employees exit the company.

By being able to update, cleanse, duplicate, back up, and recover data at a single point via DaaS, you ensure common, consistent information for all users. User authentication for entry into the system allows secure connections with little risk of unauthorized use, no matter what device is being used. Additionally, these security measures enable companies in highly regulated industries like financial services and healthcare to easily comply with rules regarding data location and access.

The disaster recovery (DR) benefits of DaaS are another important point, as your company can be hit by a man-made or natural disaster at any time that stops the ability to do business. The reality is that desktop support is the weak link in many DR plans, covering servers and networks but not addressing desktops at all. DaaS ensures that all applications and data are secure and accessible from any location with any digital device that can access the Internet, which ensures business continuity.

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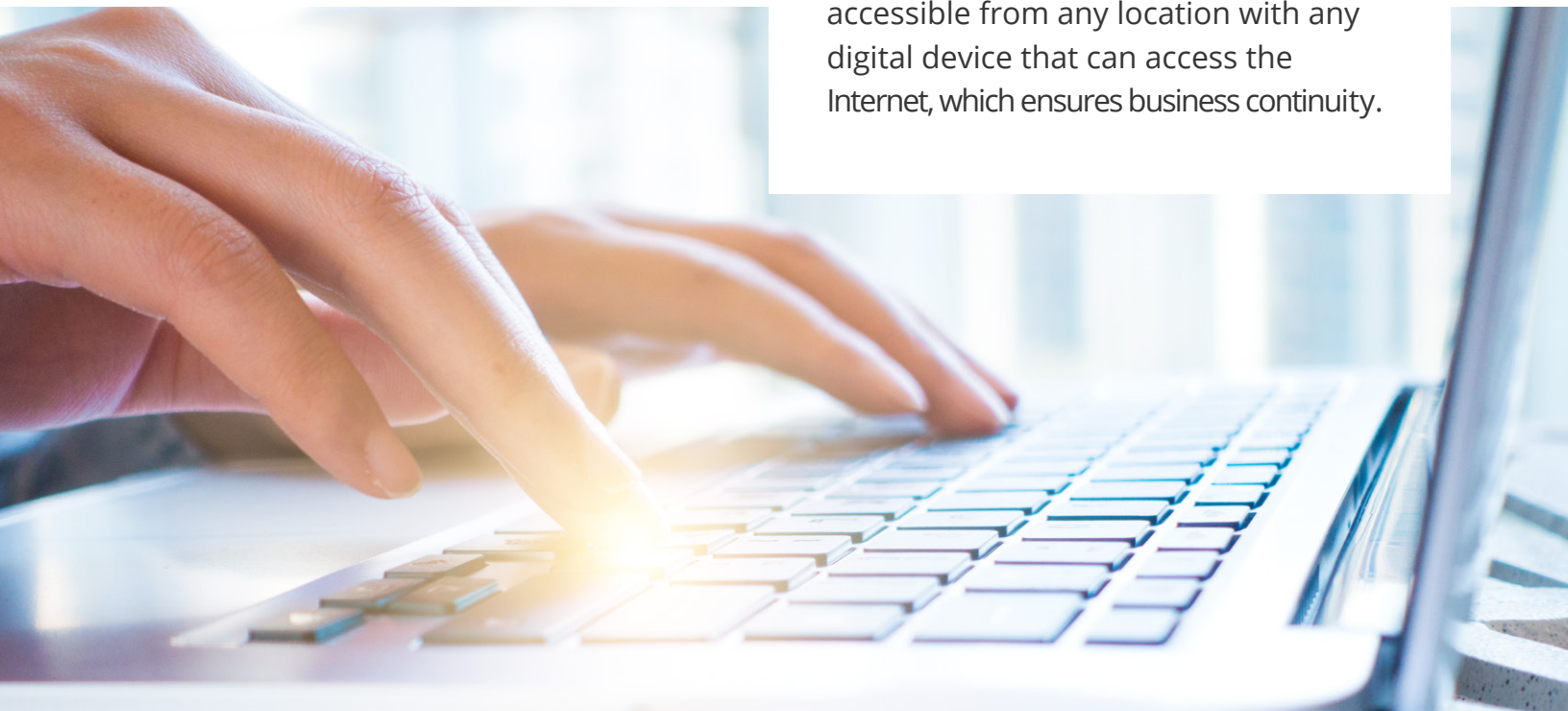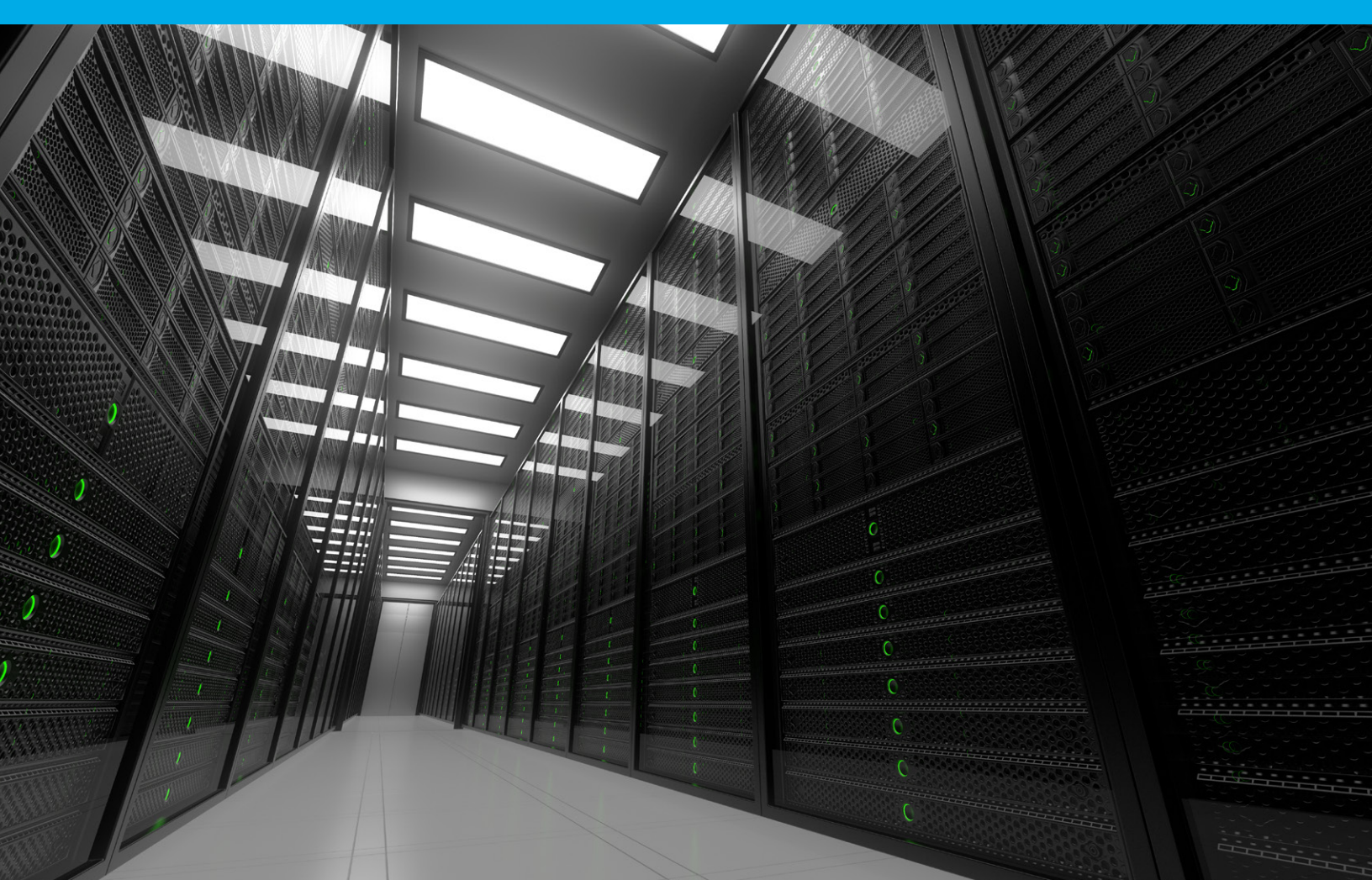
Maintenance Benefits

Because the provider handles all updates and maintenance remotely and it can enable business applications like Microsoft Office 365 as a delivered cloud service as part of a monthly subscription fee, glitches, downtime, and waiting for updates becomes a thing of the past. Consequently, the workforce can be more productive, and your internal IT team is freed to work on other more critical projects. For SMBs without an in-house IT presence, the benefits are even more magnified.

Because every business is different and has different needs and uses for DaaS, cost savings cannot be quantified in any blanket percentages other than anecdotally as being very significant. That being said, as a business leader, you want to know what the ROI will be with DaaS, which has countless repeatable eventualities, depending on the business.

There are numerous real-world examples of the ROI of DaaS within SMBs. These examples span every industry, vertical, and business type. Although they may differentiate in the way in which they customize and apply DaaS, they are still using the same general building blocks that bring greater access, mobility, security, and productivity to the business.

As one general example, businesses often scale up the workforce at particular times of the year with seasonal workers or have need of contractors for special or annual project fulfillment. With DaaS, this is a simple and highly cost-effective means of quick, efficient, and secure onboarding and offboarding with only the access that they need and no security issues for data.

While mobile workforce access via any device has been mentioned, some of the real-world ROI would be a sales team that can complete sales contracts in the field or fulfill orders, saving valuable time and money. Field technicians can easily check inventory, complete and fulfill orders, make changes, and collaborate with in-house or other remote service providers on a job site.

When a workforce is closing a big deal that has members working on different aspects in different regions of the country or abroad, they can collaborate in real time on documents, spreadsheets, and contracts while also having video conferencing abilities to see products, facilities, and people who have important visual bearing on the project's completion.

Healthcare is a big winner, as providers can view radiology images, fulfill orders, and complete other vital aspects of patient care via telemedicine that keeps them in touch with hospitals, practices, and specialists for collaboration on patient clinical care. Because the data are secure and never held on the device, HIPAA privacy rules can be adhered to.

A similar scenario can be seen for financial institutions where client finances are substituted for client healthcare. Lawyers at law firms do most of their work away from the office, so having complete and secure access to applications and work products is vital to efficiency and productivity.

Reduce costs

Create infinite mobility for the workforce

Make IT management more efficient

Boost employee productivity

Create and improve end-to-end security

Support new business capabilities

Armed with this evidence, you can begin the process of taking a more detailed and serious look at DaaS for your business. The first step in that endeavor is deciding if DaaS is right for you.

Even with this understanding of what DaaS is, how it works, and the many benefits that it can bring, you will still need to make determinations on whether or not DaaS is right for your particular business. You can start with performing an internal assessment of your business environment, processes, technology, and workforce habits in order to make the determination of whether or not DaaS is right for your company.

- Is your IT team spending too much time on desktop updates, maintenance, and provisioning?

- Are you experiencing too much workforce downtime due to slow desktop performance?

- Are some or all of these scenarios costing you too much money?

Initial Assessment

There are a number of questions that you as a business owner can ask to determine if DaaS is right for your organization, including:

- Do you regularly need to provide desktop environments for contractors or outsourced or seasonal workers?

- Does your workforce need to be able to do work remotely as in sales, service, working from home, or due to regular travel needs?

- Do you have geographically dispersed branch offices?

- Does your business operate without internal IT support?

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Detailed Assessment

Once you have identified that you're a good candidate for DaaS, it's time to look at DaaS providers and what to expect from them. Today, the most skilled and versatile managed IT services providers are also DaaS solution providers that can help businesses assess their needs, choose the right solutions, and then implement and migrate the workforce seamlessly, quickly, and painlessly to the DaaS platform. They will first help you identify what you need from the project by assessing the needs of your existing employees, applications, and systems, which includes:

• Creating individual user profiles by counting your end users and categorizing them by roles, responsibilities, and geographical locations

• Understanding application profiles to determine which applications are being used, by whom, and how much, as well as usage times for each application on a daily, weekly, and monthly basis to determine consistent peak periods

• Performing a thorough IT assessment to determine all IT infrastructure from current computers, printers, and servers to LAN/WAN and Internet connection

• Storage needs are also assessed, as well as performance in terms of data and application access

Meeting the specialized infrastructure requirements to support virtual desktops is the key to providing an optimal user experience. This will, in turn, impact adoption, scalability, and ongoing management.

Application assessment identifies which applications can be moved to the cloud. During this time, the DaaS provider/MSP will determine the level of service availability, security, privacy, and compliance requirements.

Before the detailed assessment, business owners will have to make a decision on whom to choose as their DaaS solution provider partner. The information contained in this eBook thus far will form the foundation of the knowledge that is needed to do further research on DaaS, but it also enables the business to gather the list of questions to ask as part of the process of selecting the right DaaS partner.

If you're thinking about moving your business workforce to DaaS, one of your first decisions is finding the right DaaS provider partner. Following are some data points to collect when researching DaaS provider partners:

- Where is the DaaS solution hosted?

- What is its migration and support methodology?

- What are its data center storage methodologies (as this can affect DaaS access performance depending on several factors)? As one primary example, it's imperative to choose a DaaS partner that utilizes flash storage in order to ensure uninterrupted performance. This is because application access-use spikes can make DaaS run sluggishly and less responsively for users with providers that utilize hard disk drives in their storage data centers.

- Which platforms are supported (Android, iOS, Chromebook, Windows, Linux, etc.), and what kinds of desktops can be accessed? For instance, Windows is the most common operating system to provide, but it's also possible to host Linux, Android, and Chrome.

- How are applications such as Windows and Microsoft Office supported?

- How much does the solution cost, and what margins are available?

- Who manages the desktop disk images for individual user desktop data? This is a function of the backup and access of data for each virtual desktop.

- Who provisions applications?

- How are updates handled?

- What support does it provide in terms of mobile device management and a mobility plan (BYOD)?

- What are its security and regulatory compliance measures?

Clearly, this is a lot to take in for a business owner. At this point, it can be helpful to just look at the most important facts to begin building a knowledge base for making the decision about moving to DaaS. The primary points learned in this eBook are:

DaaS delivers the operating system, enterprise apps, and data from a secured and customized cloud desktop to any tablet, smartphone, laptop, or other digital device with Internet access via the cloud for any authorized user, wherever he or she may be.

DaaS eliminates the huge up-front (CAPEX) costs of traditional desktops and software by replacing them with a monthly subscription fee (OPEX), making it a much more predictable and smaller financial outlay.

DaaS systems can quickly add or remove users as businesses grow, transform, or expand in new locations.

DaaS reduces IT department workloads and reduces the cost of software maintenance—even software and hardware upgrades cease to be an in-house problem.

DaaS eliminates hardware-based data loss or data theft, because all data and proprietary information are kept in the secure data center rather than on the individual user's digital device.

DaaS implementation delivers a built-in backup and disaster recovery solution, because all data and applications are always stored and available in the cloud from any digital device. This means that businesses can continue to operate even after a man-made or natural disaster.

DaaS provides the ability to maintain highly effective, simple, and efficient data audits, secure file-and-sync services, and mobile device management (MDM) solutions, as well as meeting all regulatory compliance needs like HIPAA, SOX, and PCI.

All of this can be had at a predictable monthly price via a subscription fee per user.

Conclusion

DaaS is one of the fastest-growing cloud services delivery models. The growing demand is making DaaS a truly disruptive technology for businesses that can be equally beneficial to each of their specific needs. SMBs and enterprises want to be able to reduce operating costs, enable mobility, utilize the current infrastructure, have much more robust backup and disaster recovery systems, and secure data in their infrastructure.

They also want to make sure that their data are secure and that their DaaS solution provider is maintaining the infrastructure related to their DaaS deployment. This can be a paradigm shift for your business that leads to greater efficiency, innovation, productivity, and growth today and tomorrow.

Interested in learning more? Speak to a Willow Bend rep to see how we can help you evaluate DaaS solutions that fit the needs of your business.

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