Desktops as a Service

Everything you need to know about
DaaS & Hosted VDI

2014 Edition

...and Microsoft licensing still sucks!

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5. Advantages of DaaS

Let's take a quick look back at what we've established so far in this book. We talked about how DaaS is just VDI that you pay someone else for. We covered the myths and realities of VDI, as well as how you can be successful with it. And finally, we introduced the concept of DaaS and discussed how DaaS can be used to move your legacy Windows desktops and applications to the cloud.

So now let's get into the meat of this book. In this chapter, we're going to look at the advantages of DaaS. What's important here is that we're not going to cover the advantages of VDI, since we covered that back in Chapter 3. Rather, we're going to cover the additional advantages of VDI you get when you pay someone else to host it in a DaaS form.

We believe the further advantages DaaS has over VDI are:

- You don't have to know how to build or run VDI.
- There are no super-expensive up-front startup costs.
- Migration times are faster.

- Scaling is incremental.
- The costs of DaaS are known.
- DaaS is easy to test and pilot.
- DaaS providers have a better relationship with vendors than you.
- DaaS can have real savings with extended device lifecycles.
- DaaS environments are most likely cheaper, more secure, and more reliable than what you could build on your own.

Let's take a look at each of these.

You don't have to know how to run VDI

We covered this a bit already, but it's worth reinforcing. Since DaaS is the same thing as VDI except you're paying someone else to manage it, DaaS provides a nice VDI environment without you having to design, build, tune, or operate it. Remember, we've written a bunch of articles and books on VDI, so you can flip through those for more details about all the stuff you get to skip if you use DaaS. Here's a quick rundown:

- You don't need someone who knows all about VDI storage. You don't have to know what block-level single instance versus in-line deduping is. You don't have to know how to maximize the IOPS per desktop.
- You don't have to read white papers about which hypervisor is best or techniques for enabling performance caching.
- You don't need to sell the remote access concept to you security team.
- You don't need to coordinate lots of other IT resources and bribe them with pizza and beer to agree with you.

- You don't have to have deep technical knowledge of the VDI platform. Actually, you don't even have to decide between VDI platforms!
- The as yet undiscovered intricacies of the infrastructure can remain just that—undiscovered!
- You don't have to worry about scale, bottlenecks, or building out for high availability.

DaaS means no huge startup costs

A lot of people say "no capex" when they talk about the advantages of DaaS. (Capex is short for capital expenditures, which refers to the initial one-time costs for something. It's usually used in conjunction with opex, or operational expenditures, which are the recurring expenses associated with something.) So with DaaS, there's no capex because you don't have to buy huge amounts of hardware and licenses up front.

Compare that with traditional VDI, where you might have to spend tens or hundreds of thousands of dollars on server hardware, storage, and VDI product licenses—all before you bring a single user into production. With DaaS, that's all stuff the provider has invested in ahead of time, so you don't have to worry about it. (Not that there aren't any migration costs, but they pale in comparison to what it would cost to design and build your own VDI. We'll look at that later.)

Migrations are faster

When you use DaaS, you're paying for VDI on someone else's platform, which is already up and running. Compare that with how long it would take you to evaluate, design, buy, build, test, buy more, learn about, test, design, fix, and deploy.

Seriously, it can take months and months of work and thousands of work hours to design VDI to be used internally. When you choose DaaS, the core design is done. You cut literally months out of your migration project when you choose DaaS versus designing VDI yourself.

Scaling is incremental (and instant)

When you run your own VDI environment, you have to plan not only for the number of users you have, but also for future growth and excess capacity to handle outages. All this means your overbuilding your VDI and spending money on unused resources. Then whenever you want to add a few users, you have to go through this whole exercise again!

It's even worse when you need to add a few users when the environment is operating at 100% net efficiency (with the appropriate balance of consumed and redundant resources). You can't just shoehorn new users into your current environment because that would throw off the balance. Instead, you have to buy more hardware and software, plus spend time configuring it all, just for a few users. If you have to add additional servers or storage capacity, you could be forced to spend thousands or even tens of thousands of dollars, all to add capacity for just a few users.

Compare that with using DaaS, where you can incrementally scale your environment up one user at a time. Figuring out how to make that happen is up to the provider. (After all, that's what you're paying for!) Whether it's three people or 300, your level of effort during the expansion amounts to a phone call or a few mouse clicks.

This level of granularity also applies to when you're scaling down. If you spent $200,000 to build a VDI environment for 300 users and you later decide you want to use VDI for only 200 users, well, guess what? You still have a $200,000 VDI environment! But if you're using DaaS, you can just dial back what you're paying for and instantly get the savings. This single-user granularity is great because it makes it quick and efficient to scale up and down. So you have 50 interns coming in for the summer? Tell them to bring their own laptops (whatever they want) and pay a DaaS provider for 50 desktops. When they leave three months later, you stop paying. It's simple and only possible with DaaS.

The costs of DaaS are known

One of the challenges of in-house VDI deployments is that no one really knows what the costs are going to be before the project starts. Sure, you can use some cost calculators and online designers to get an idea, but like any other huge IT project (and VDI is huge!), there's always a string of things you forgot that you'll have to add to the project.

Compare that with DaaS, which has a cost model like this:

[Number of users] × [cost per user] = [cost of DaaS]

Pretty easy! Sure, you've got to consider things like licensing and migration costs and bandwidth and stuff like that, but in terms of the actual costs you're going to incur each month, VDI desktops are a lot more predictable with DaaS as opposed to an in-house VDI project. (We have a chapter about the costs of DaaS later in this book where we'll dig into all the nitty-gritty details.)

DaaS makes for an easy pilot

Since DaaS offers incremental scalability, it makes sense that running a pilot on DaaS is much simpler than setting up an in-house VDI environment for testing. A DaaS pilot is cheap and likely better performing than any old server you have lying around in your lab. You know it works, and you don't have to learn or design anything just to get started. Actually, even if you're thinking about doing in-house VDI, setting up a few users on DaaS is a super-quick and simple way to see if they like the concept of VDI. If they do and it works as you expect it to, you can then figure out whether you should buy more DaaS desktops or start designing and building your own VDI environment.

DaaS providers have better relationships with vendors than you do

One of the very real benefits of DaaS that a lot of people don't talk about is that providers most likely have better relationships with the key hardware and software vendors than you do.

If you use a large DaaS provider that's hosting hundreds of thousands of desktops, you can bet they have a "Bat Phone" connection to Citrix, VMware, Microsoft, Dell, HP, Cisco, and every other vendor they use. Compare that with your own environment, where you have to pay extra for 24/7 support and wait hours just to get your problem escalated to someone who knows what the heck you're talking about. ("Yes, it's plugged in. That's why I'm calling!")

These cozy relationships affect the support DaaS providers are able to get, the costs they pay for their hardware and software, and ultimately the quality of product they're able to offer you.

DaaS extends device lifecycles

One of the advantages of DaaS and VDI is that since your desktops run at full speed in a data center, your users can use any computer—even an older desktop or laptop—and still get decent performance.

The reason we didn't list this back in the section on the advantages of VDI is because if you're building VDI yourself, the cost of the VDI deployment far outweighs the cost savings of reusing an old desktop. In other words, you can't really say "VDI can save me money because I don't have to buy a new $600 desktop PC" if you have to spend $600 per user on your back-end VDI infrastructure!

But when it comes to DaaS, it's a bit more interesting, since DaaS doesn't have the up-front costs. For example, if you're paying $35 per month for DaaS instead of buying a new $600 desktop PC, that's almost two years of DaaS for "free" simply by not buying a new computer. Not bad! (There's a lot more that goes into this calculation, which we'll get into in our chapter on DaaS costs.)

DaaS environments are better than what you can build on your own

The bottom line is that DaaS providers are in the business of providing Windows desktops to customers. That is their product. Your company's product may be laundry soap or financial services or car

parts. If you're designing a VDI platform from the IT department of your company, you're just overhead. DaaS providers design VDI environments to be their core product.

In most cases the scale and expertise of a DaaS provider means that they can build and sell you access to a VDI platform that is cheaper, more secure, more reliable, on better hardware, and from more locations than what you can build on your own. Providers have more experts on staff who know more about the VDI platforms, and they have stronger relationships with Citrix, VMware, and Microsoft. In the end, they're just better.

Now this of course doesn't mean that all VDI in the world has to be DaaS, and it doesn't mean that it's foolish to build VDI on your own. You may have security or regulatory requirements that prevent you from moving to DaaS. You may have specific needs and situations that DaaS providers' cookie-cutter approaches can't address. You may want to know your environment is running well and not have to rely on critical support from some low-end engineer on the late shift. Those are all perfectly fine reasons not to move to DaaS. But don't fool yourself into thinking that you can run VDI better than a DaaS provider, because there's a pretty good chance that you can't.

BS Claims from DaaS Providers

Since this is a chapter about the advantages of DaaS, we figured that we should at least mention some of the claims that DaaS providers make in their marketing material that we don't necessarily agree with. We won't go into too much detail on these here, since we cover each of them in other parts of the book, but we want to have a list of them all in one place.

Also, note that several of these BS "advantages" of DaaS are the same BS advantages of VDI we mentioned in the first two chapters. (This makes sense of course, since DaaS is VDI.)

So when you're shopping around for DaaS, here are some of the claims you're going to hear that we don't necessarily agree with:

- **DaaS is cheaper.** Cheaper than what? We agree that DaaS is probably cheaper than building VDI on your own, but it is certainly not cheaper than just buying a $300 desktop for your users. Remember that's okay, though, because DaaS gives you a lot more features than desktop PCs do, so it might be worth the money. It's not cheaper though.
- **DaaS is easier to manage.** Again, easier than what? Sure, DaaS is easier than managing your own VDI environment, since the provider does that for you. But it's not any easier than managing Windows, since you still have to do that with DaaS.
- **DaaS is fully managed.** This is a variation of the "easier management" selling point above. DaaS is fully managed VDI, not fully managed desktops.
- **DaaS is more secure.** As we've mentioned already, it's possible to build a DaaS environment that's more secure than traditional desktop PCs, but it's far from automatic. You don't get better security just because you're moving to DaaS.
- **DaaS provides an optimized user experience.** What does this even mean? Seriously! Several DaaS providers mention it. We guess it means they're using a high-quality remoting protocol like Citrix HDX or Teradici PC-over-IP? That's all well and good, but we would rather just have our desktops running in a nice, fast, thin, light laptop.

So there you have it! A full list of the advantages of DaaS, which we admit look pretty great! Of course it's not all roses, so in our next chapter we're going to look at some of the disadvantages and challenges you'll have to overcome if you want to make DaaS work in your environment.