

Virtual desktop infrastructure (VDI) and desktop as a service (DaaS) put programs in the data centre and let workers choose which endpoint devices they use to run them. Similar to how a browser accesses a Web server over a network, VDI clients access desktops over a network. IT shops must decide whether to host desktops in their own data centres through VDI or in a service provider's data centre through DaaS. To make that decision, you need to know how VDI and DaaS are different, as well as how they are similar. It is also worth knowing why organisations choose one over the other.

In VDI, a screen and keyboard remain on the user's desk, connected to a client, but his or her applications run in the data centre. Most often, user desktops each run in their own virtual machines (VMs) on a hypervisor, allowing many users to share a single physical host. Other options include a dedicated physical workstation in the data centre for each user and Windows Remote Desktop Session Host servers that are shared by multiple users. Once users' virtualized desktops run in the data centre, they may use a VDI client on nearly any device to access them. Note that VDI usually requires its own access infrastructure and a virtualization platform. Managing a complete VDI environment can be complex, and the effects of mistakes can be drastic because every user can be immediately affected.

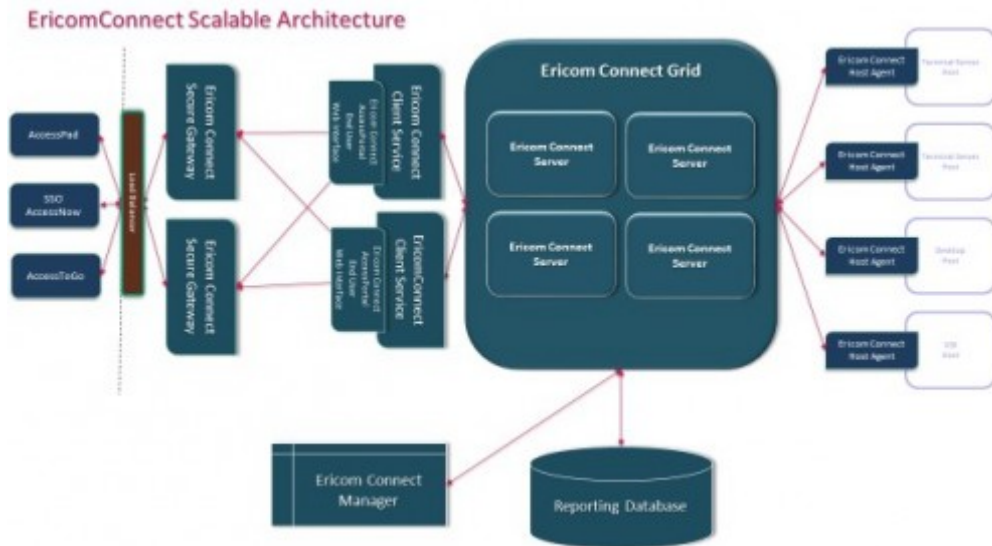
Desktop as a service moves the user's desktop onto virtualization hosts in a service provider's data centre. Essentially, a DaaS provider builds a huge VDI environment and rents virtual desktops out to customers.



You can also think of DaaS as a desktop in the cloud, where the NIST cloud definitions apply: self-service, elastic, pooled and customers pay only for usage, not necessarily potential processing capacity. Customers choose how many desktops they want in a particular month, and they are only billed for this number of desktops.

VDI IS THE TIP OF THE ICEBERG

A VDI deployment has been described as an iceberg of complexity. Poking up above the water, we see the connection broker, the VDI client and a few desktop VMs. Hiding below the surface are the many layers, such as the hypervisor, storage array, network, user accounts, user persona, file sharing, application deployment, VM provisioning and patching. This long list is a combination of the entire virtualization infrastructure and all the components you need for well-managed physical desktops. At anything but the very smallest scale, VDI requires specialized skills to design, deploy and operate well.



Managing poorly isn't an option here. A storage array that doesn't deliver the required performance, for instance, could result in multiple staff complaints about how long it takes to log in. Connection brokers that are unexpectedly offline for patching will prevent anyone from logging on. While VDI is "only a desktop," it's mission-critical because it involves every desktop.

IN DAAS, INFRASTRUCTURE IS NOT YOUR PROBLEM

One of the big value propositions for DaaS is that the infrastructure is not your problem. The service provider has the headache of building and operating VMs and the virtualization infrastructure. Its VDI environment will be many times larger than yours would be, and service providers can spread the costs across far more desktops than you could. These economies of scale pay off when dozens or hundreds of customers use a single DaaS provider. All that customers need is a reliable, secure network connection to the DaaS provider.



This could be over the Internet or it could be a dedicated link. DaaS customers do not need to manage virtualization or VDI. Vendor marketing claims that DaaS desktops cost as little as \$30 per user per month, and on-premises desktops cost a whole lot more. The reality is that the cost to have a DaaS desktop is likely to be similar to the cost to have a VDI desktop. The benefit is in not having to manage the virtual infrastructure and instead being able to focus on users and applications.

ACHIEVING THE AGILE DESKTOP



The simple answer is that DaaS and VDI allow much more flexibility and agility than the standalone laptops and desktops that they usually replace. Employees can access VDI desktops from different locations, while a desktop sits on a desk and can only be used from there. Staffers can access the same desktop environment with the same applications and data access as they go about their day.



Workers can use thin clients at their desks, move to tablets in a meeting and access the same desktop from their home PCs to finish off a report after the kids have gone to bed. A new VDI desktop can usually be provisioned in minutes, rather than the days it takes to get a new PC. In addition, a VDI desktop is very connected; it is in the same data centre as all the servers, unlike a laptop, which must access a lot of data and services remotely. VDI and DaaS also help make a user's client device expendable; it has no data and minimal configuration. If one access device fails, is lost, or is left at home, then there are a few other devices that can be used. A VDI or DaaS desktop lets staff members work in different ways and from different places, potentially making the staff more productive and valuable.