

The Resurgence of **VDI**

Securely Delivering Windows Applications and Desktops to Any Device, Anywhere and Anytime - **Without Complexity**

Desktop virtualisation has become an irresistible option for businesses looking to optimise resources, provide home and mobile working solutions and deliver a secure and consistent user experience.



What is VDI?

Virtual desktop infrastructure (VDI) is a virtualisation solution that typically uses virtual machines (VMs) to facilitate and manage virtual desktops. VDI hosts desktop environments on a centralised compute environment and delivers them to end-users, accessed over a network with an endpoint device (thin-client, PC, laptop, tablet etc.).



Why adopt VDI?

With a VDI solution organisations can realise a number of benefits, including security, client (endpoint) flexibility, configuration management, high availability/resilient delivery, and rapid adoption of acquisitions.



Security

Because all data remains in the data centre, any loss of a client device limits data loss exposure because no corporate data is stored on the device itself. Access to the virtual desktop and all the users' associated applications and data can be secured with multi-factor authentication and geo-access controls (depending where an employee is, defines what they can access), thus reducing the surface area of a potential attack.



Client flexibility

As desktop computing takes place on the host resource location rather than at the endpoint device, the hardware requirements for the client device are both lower and more flexible. Almost any client (thin client, PC, laptop, smartphone) can be used to access a VDI environment, and these clients can be running Linux, Android, Windows or iOS, providing the VDI vendor client software supports these. As the client device can be sandboxed through effective configuration management, secure home working via both corporate and non-corporate bring-your-own-device (BYOD) strategies is possible.



Configuration management

A VDI instance offers the ability to implement strict controls to eliminate deviation from organisational standards. These controls can include things such as:

- Application and data access to ensure staff can only access the data and applications they need to perform their roles. Linked to geo-access this can be configured based on location (e.g. if working on a public WiFi, certain data/applications can be prohibited)
- Limiting or removing access to local resources such as USB ports or local storage devices, removing the ability to copy data from the core to a local device or from a local device into the core, adhering to data loss prevention policies
- Standardisation of applications so that multiple versions or issues with interoperability of applications do not exist within the estate
- Tighter control of application deployment removing the potential for unlicensed software
- Allow (or not) personalisation of the desktop in line with corporate standards



High availability and resilience

Because VDI hosts desktop environments on a centralised environment, it is the resilience of the core and connectivity to that core that drive availability. Therefore, the opportunity exists to place the VDI hosts in private, shared (community) or public cloud services, or a combination of these.



Rapid adoption of acquisitions

Probably one of the least recognised benefits of VDI is that acquisitions can rapidly adopt the corporate look, feel and standards making employees feel part of the business quicker. Generic services like email, intranet, and collaboration can be made available to existing clients simply by installing the VDI client with local applications added to their own corporate virtual desktop during the period of transition. In a similar vein, VDI allows for burst ability, catering for known or unknown surges in user demand, often aligned to organisations business cycles.

Selecting the right vendor

There are three predominant vendors in the VDI space, Microsoft, Citrix and VMware. Selecting the right vendor is vitally important and consideration must be given not only to the current requirement but also to the future needs of the organisation. Each vendor carries its own specific USPs and benefits.

Microsoft	Citrix	VMware
Microsoft's history goes back to TSM (Terminal Services) and RDS (Remote Desktop Services), and its most recent incarnation is Windows Virtual Desktop (WVD), a Microsoft desktop and app virtualisation service that runs in Azure.	Citrix has a deep-rooted history in VDI delivery and could be viewed as an overlay to Microsoft's offering. With the advent of Citrix Cloud, the Citrix Control (management) plane is now presented 'as a service'. Unlike WVD, Citrix supports hybrid and multi-cloud architectures that allow organisations to scale across public, community and private clouds such as on-premise, managed hosted, Daisy Flex and Microsoft Azure enabling the hosted desktop to be placed as close to the applications as required. Not all legacy applications work well in public cloud, therefore a hybrid model is required in such scenarios.	VMware is the newest vendor to the VDI marketplace with Horizon. Their latest version 7 has brought new features to market. Like Citrix, Horizon supports some hybrid and multi-cloud architectures that allows organisations to scale flexibly across public and private clouds, such as VMware Cloud on AWS and Microsoft Azure – now also with support for Google Cloud and VMware Cloud on Dell EMC, as well as Azure VMware Solution (currently in preview).

Vendor summary

Microsoft's WVD is an ideal choice for many businesses and is especially popular with small businesses. For larger enterprises, Citrix extends Microsoft's WVD, offering a management layer that increases flexibility and security and optimises costs.

The combination of WVD and Citrix offers advantages such as:

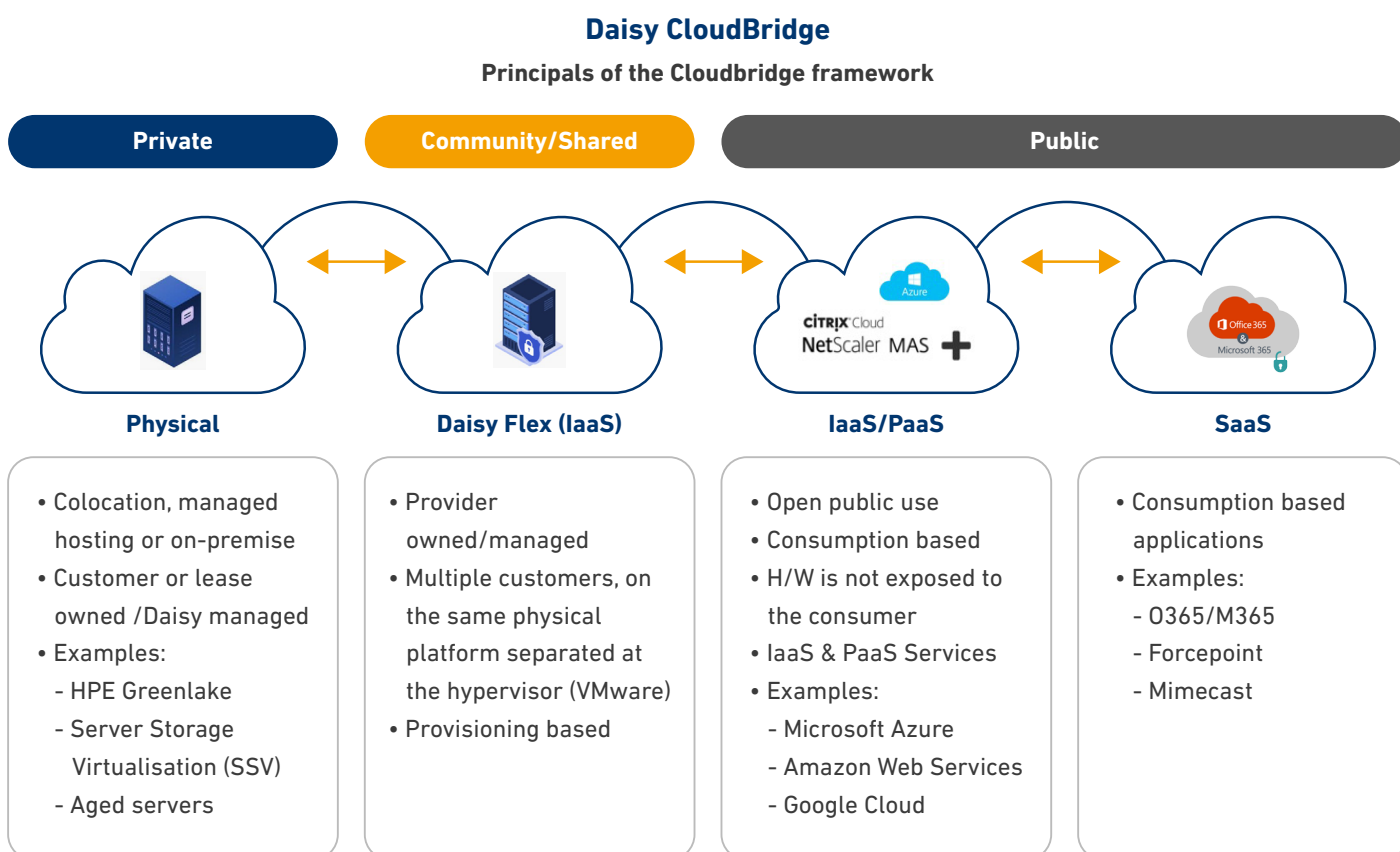
- **Optimisation packs for Microsoft Teams** — provides a good audio-visual experience for Microsoft Teams (and Skype for Business)
- **Hybrid cloud model** — WVD can only run Windows 10 workloads in multiple sessions on Azure. Citrix provides the ability to also run existing workloads either on-premise, in Azure, or on any other cloud service
- **Citrix HDX technology** — provides an improved remoting protocol. A high-definition application and desktop experience with crystal-clear voice and video to WVD plus other Windows and Linux workloads, even over challenging or long-distance network connections. Graphics-intensive apps are delivered with pixel-perfect renderings, and transitions between mobile and stationary workplaces are seamless
- **Citrix Workspace app** — provides secure access for end-users from personal or managed devices and platforms, including Windows, MacOS, Linux, iOS, Android and HTML5
- **Citrix Machine Creation Services (MCS)** — provides a hypervisor API that enables quick generation of VMs with minimal infrastructure utilisation
- **AutoScale** — quickly adds or removes additional resources to the environment on demand with "vertical load balancing", which balances the number of user sessions on a single machine until optimal performance is reached, improving utilisation and reducing the number of workloads needed
- **App layering** — this Citrix capability significantly reduces management time for Windows images and applications. It separates the applications from the management infrastructure and the operating system. It lets you install each application and operating system patch only once, then update the appropriate template and reload the image
- **App protection** — this Citrix feature improves security when using public resources on virtual desktops and Citrix applications
- **Session recording** — lets users record screen activity during VDA-hosted user sessions for any connection type, in accordance with company policies
- **Citrix analytics** — security and performance analysis leveraging AI can help identify and resolve issues and anomalies
- **Multi-factor authentication (MFA)** — Citrix integrates with third-party MFA providers, including Microsoft MFA and Okta

Why use VDI delivered by Daisy?

We can give users anytime, anywhere access to digital workspaces with a virtual desktop solution.

Daisy's capability in the VDI marketplace extends into WVD and Citrix Cloud to deliver to both medium and enterprise business. Through the Citrix Cloud control plane, Daisy can provision a true hybrid cloud virtual desktop, hosting application workloads via the most appropriate delivery method that places the virtual desktop servers nearest to those application workloads.

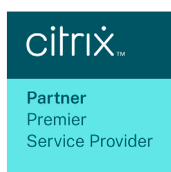
During peak periods, Citrix AutoScale can be configured to deliver resources as and when they are needed and reduced when they are not.



With the drive to promote the most appropriate work/life balance through remote and mobile working, Daisy provides access to the corporate virtual desktop over secure connections with MFA and geo controls applied. End-users can utilise corporate or personal devices to access information, while Daisy ensures that corporate governance and security controls are applied to avoid data leakage or malware ingress through cross-contamination. Keeping people productive and connected regardless of their location, Citrix HDX implementation delivers crystal-clear voice and video over Microsoft Teams ensuring that all end users can operate from a single workspace.

**Microsoft
Partner**

Gold Cloud Platform
Gold Datacenter
Gold Cloud Productivity
Gold Enterprise Mobility Management
Gold Windows and Devices



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For more information about how Daisy Corporate Services can help you to empower employees with virtual desktop – from anywhere on any device, contact us on **0344 863 3000**