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Insight

Blu5

Do you really need to virtualise a whole computer to virtualise a desktop?

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The legacy

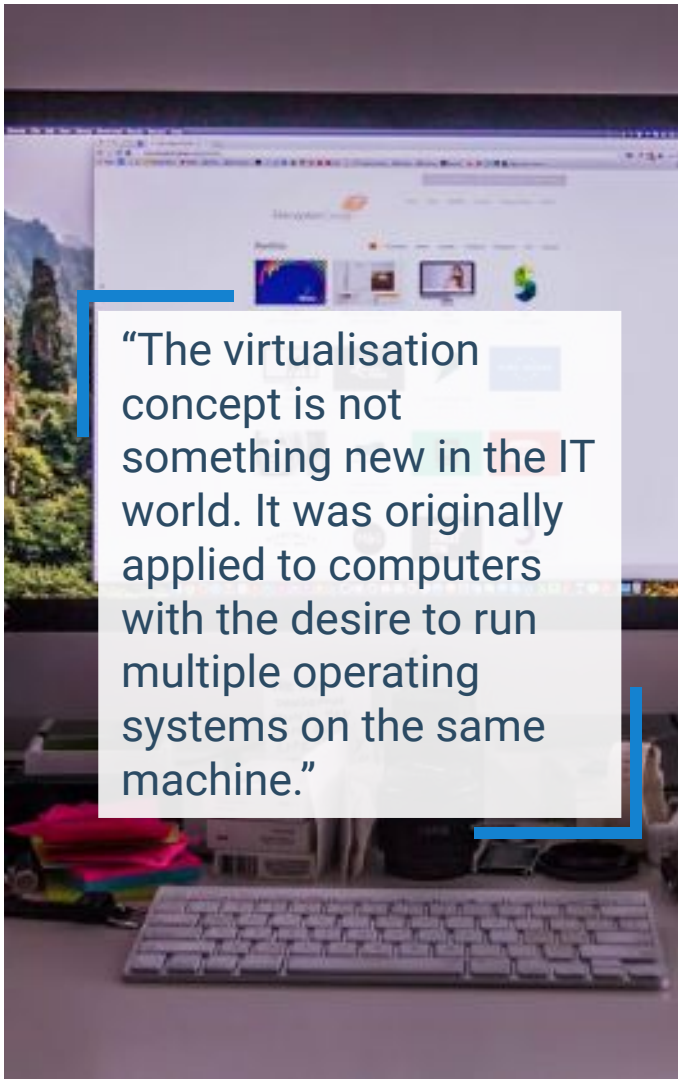
In recent years, many solutions have been populating the market promising seamless and fully managed unified workspaces, based on virtualisation, where people can easily use all the applications they need in their digital business day.

Nevertheless, there are always variations between conceptualised ideas and the reality!

The virtualisation concept is not something new in the IT world. It was originally applied to computers with the desire to run multiple operating systems on the same machine. This was the initial reason which brought Popek and Goldberg (1974) to the definition of a virtual machine as "an efficient, isolated duplicate of a real computer machine." [1]

Although this approach was pioneered by IBM in the late 60s, the first full virtualisation systems were introduced in 2005, when Intel and AMD started providing additional hardware to support virtualisation. And that's when platforms like KVM, VMware, Hyper-V, Parallels, Virtual Box and many others started populating the market with their virtualisation products [2].

It looks natural that such consolidated foundations have been considered - and they still are - the first choice to implement and deploy virtual desktop solutions.



Desktop Virtualisation can be inefficient and expensive

Many organisations consider Virtual Desktop solutions as the silver bullet to solve their software deployment challenges. The idea of using a Virtual Desktop solution looks very promising and tempting: neatly provide all applications and desktops through a single platform on any device.

As a matter of fact, Virtual Desktop solutions virtualise an environment familiar to the user, the desktop, centrally managed by the administrator, dynamically populated with applications and services fitting both the user and the company needs according to context-based access policies. But at what cost?

Desktop vitalisation solutions like Virtual Desktop, VDI, RDS rely on an infrastructure to provide services. The more applications you want to deliver, the more users you want to deliver the applications to, the greater level of infrastructure investment you'll need. This means more powerful hardware and servers to carry the load, more energy required, larger server rooms and overall a less sustainable business.

From a vendor perspective, going for a virtual machine strategy is pretty convenient since the technology is already there. Instead, for the customers, duplicating a physical machine with a full virtualisation approach doesn't seem very efficient, and definitively it is not cost-effective.

An alternative approach to Desktop Virtualisation

With applications migrating to the web due to the adoption of the Software-as-a-Service approach, duplicating a full physical infrastructure is unnecessary. Virtual desktops should be based on a more efficient virtualisation model.

At the end of the day, what every business needs is to deliver applications, reduce the complexity and cost of their network infrastructure, while delivering a great user experience with peace of mind.

Furthermore, security requires special attention as well. Although Virtual Desktop solutions can make it easier to centrally manage and protect data, one of its selling points is that it allows users to remotely access desktops from different locations and devices.

This makes it more complicated to protect the network and its underlying systems since it increases the surface of attack.

Therefore, before you make any step forward in the direction of adopting a Desktop virtualisation solution you should question a few fundamental assumptions:

1. Do I really need to replicate, even though virtually, another whole hardware layer?

2. Is another Operating System on top of that virtualised hardware layer even necessary?

Customers often ask for Virtual Desktops until they realise how a Unified Workspace delivering Apps Virtualisation can better meet their needs and save money.

Application Virtualisation through a Unified Workspace

Delivering and deploying software in a consistent way to any device is a priority to businesses but also an increasing challenge. Virtual Desktops should be reengineered on a different and more effective virtualisation concept.

Such new concept should premiere the benefit to selectively virtualise applications and services from any locations (on-premise, private cloud, public cloud) and presenting them on a true-desktop user experience without any virtual machine.

The impressive use of pervasive security based on the newest security paradigms like zero-trust approach and crypto agility without any dedicated piece of software shall also be made available in ensuring robust protection boost and increased resilience against cyber-attacks.

Ideally software vendors would have turned native applications into progressive web applications and business should have already completed their digital migration to Software-as-a-Service (SaaS) approach on Public and Private Cloud.

Analysts foresee that by 2024 most of the organisations will prevalently use SaaS and web applications [3].

But reality is often more complex and people are usually very conservative and resilient to changes.

For legacy applications (programs which need to run on an operating system) which do not yet have a Web/SaaS alternative, the solution is to create a virtual environment where they can run on top of a virtual operating system.

However, to publish some legacy applications, it is not necessary to create a virtual machine for each user. The virtualisation concept shall selectively be applied to the needed applications rather than virtualising the entire desktops or machines.

According to the usage context, you may want to deliver legacy applications either through a virtual machine or by adopting a multi-user server-based approach.

This said, however, businesses should start thinking of webifying legacy applications and publish them via SaaS.

Big vendors in fact are pushing towards web-based alternatives. For example, this document has been fully written on the web version of Microsoft Office 365, through SEdesk™ secure unified workspace.

SEdesk™ introduces a new approach to virtualisation: the digital workspace is not necessarily a virtual desktop deployed as a virtual machine, but a desktop for virtual applications.

Benefits of using a Unified Workspace for virtualised applications

Virtual applications are delivered in a secure confined digital workspace without the need for OS to go with it or a full virtual desktop infrastructure for deployment.

Applications are quickly and easily deployed to users centrally by admins. Zero configuration, manual installs, software upgrades or patches on the endpoints. These become a thing of the past.

Companies may begin to consider consolidating their hardware assets. This has the benefit of reducing both support costs for the hardware, and also recurring costs on new machines to ensure future-proofing and compatibility.

1. Reduce the need for support services to maintain a healthy computing environment
2. Manage software and updates centrally
3. Eliminate the need for a large, heavy backend infrastructure
4. Save on licensing
5. No need to virtualise entire desktops just to deliver applications
6. Deliver applications on demand

SEdesk™, it's simple, secure and smart.

References:

[1] Gerald J. Popek and Robert P. Goldberg (1974). "Formal Requirements for Virtualizable Third Generation Architectures". Communications of the ACM 17 (7)

[2] Wikipedia: Timeline of virtualization development.

[3] Gartner: Gartner Forecasts Worldwide Public Cloud End-User Spending to Grow 18% in 2021. Press Release STAMFORD, Conn. November 17, 2020.

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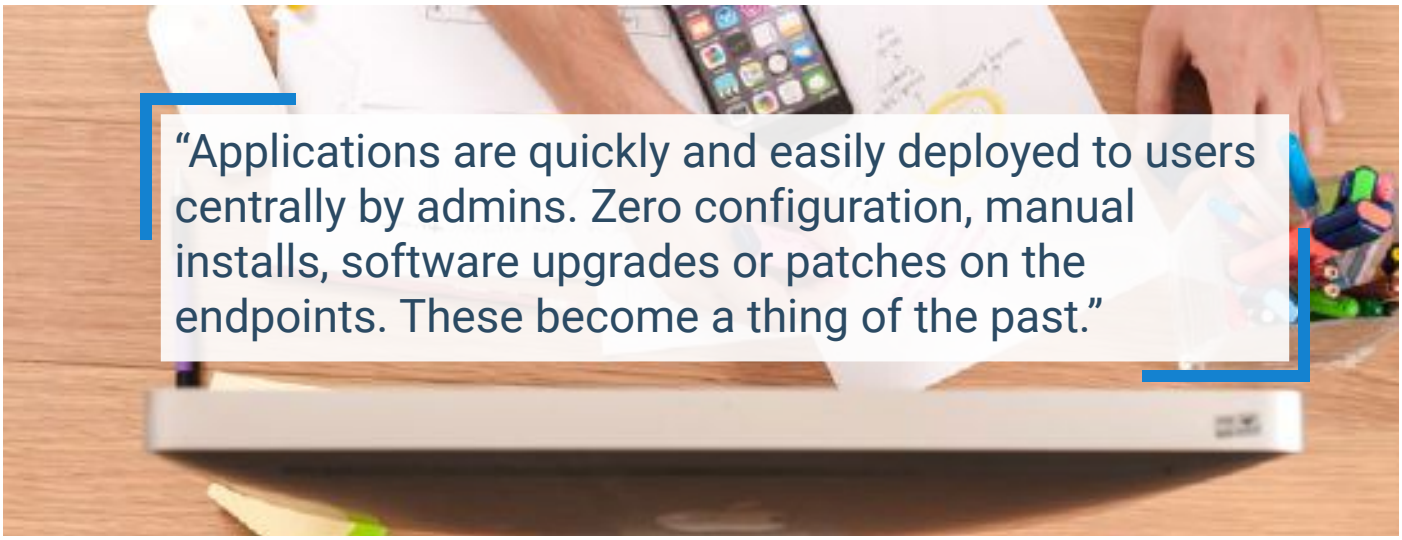

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