opinion piece

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Desktop Virtualisation: Supporting the ‘Anytime, Anywhere Office’

With server virtualisation now well established in the world's data centres, IT leaders are turning their attention to client virtualisation to address their most pressing challenges – not least of which is the need to deliver a rich computing experience to an increasingly distributed and mobile workforce.

Whether it's to access new markets or tap into a lower cost base, most organisations today run operations across a number of locations. The Client Virtualisation Imperative, 2011, a commissioned study conducted by Forrester Consulting on behalf of Dimension Data, indicates that today the traditional 'nerve centre' of an organisation – its corporate headquarters – houses less than 40% of the workforce. When aggregated, the percentage of employees operating from branch or remote offices (27%), external worksites (7%), and home offices (5%) is substantial and today, 6% of workers may be described as 'mostly mobile'.

Indeed, the potential benefits of a 'virtual' business are compelling: If you're not constrained by the geographical location of resources, you can hire the best skills. Allowing employees to work from home means the cost of renting, leasing or owning physical property are lowered or altogether eliminated. Employees needn't spend time and energy battling through peak hour traffic, which in turn translates into a more satisfactory work-life balance and a lower carbon footprint for the business.

Implications on the desktop

The implications of the shifting mobility landscape on the desktop environment are significant. 'Desktop computing', as it has traditionally been known, has moved beyond the realm of the desktop PC and laptop. Today's desktop is an end-user environment comprising a host of applications, documents and configuration data. And as employees increasingly rely on mobile devices they need desktop environments that they can access anytime, anywhere. And more often than not, these devices won't be the standard, corporate-issue PC or laptop, but an independently purchased smartphone or tablet.

Meanwhile, IT organisations remain under increasing pressure to trim costs and increase productivity while strengthening security and tightening control over and access to corporate information assets. For IT leaders, clearly the mobility trend brings with it a myriad of new considerations and hurdles to overcome

According to Gerard Florian, Dimension Data's Chief Technology Officer in Australia, the dilemma is finding a way to accommodate both the needs of IT administrators and users using a common framework.

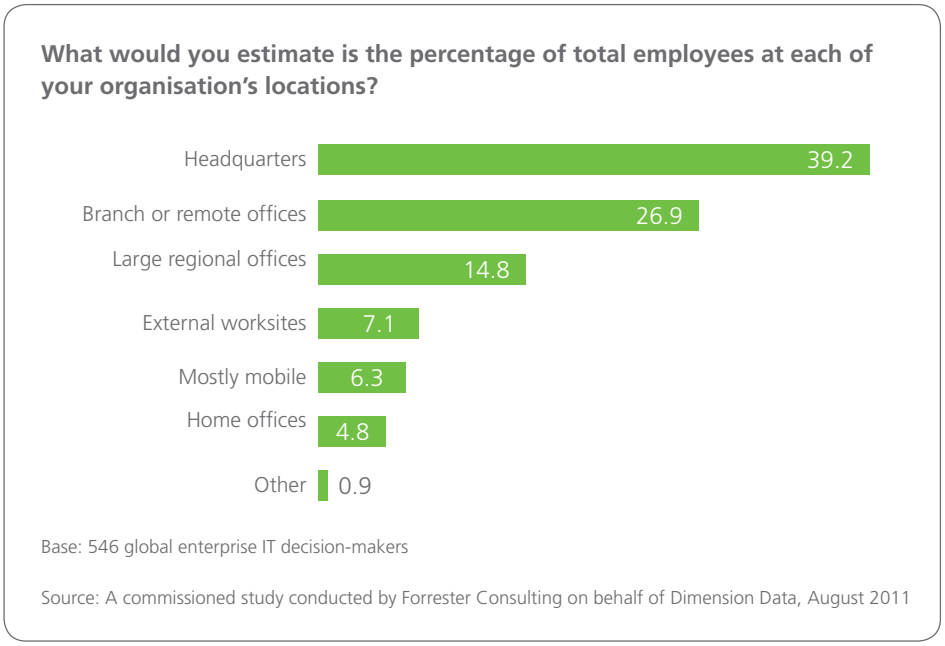
> "Ultimately, effectively controlling and managing end-user devices, whether they are fixed or mobile and whether they are owned by your organisation or by your employees, involves finding a means to abstract the user experience from the device, the underlying operating system, the applications involved, and the corporate data. The objective is to create a secure desktop environment that can 'float' between different devices and form factors, while delivering the same experience."

A new web workspace

Mayan Mathen, Dimension Data's Chief Technology Offer in the Middle East & Africa agrees. And he believes it's happening now.

> "The days of the traditional desktop are numbered. Desktops as we know them are set to give way to web-enabled 'workspaces'. Today, organisations' desktop environments typically comprise a set of fixed desktops for office-based workers and a separate fleet for mobile workers, who generally use laptops. But this scenario is changing fast. More and more, we're moving applications and data to the cloud"

Figure 1: The typical workforce is becoming increasing distributed and mobile



As figure 2 below illustrates, Mayan sees the future of the desktop as we know it is a fluid, cloud-based end user computing ecosystem, in which individuals communicate, collaborate, share and transact. Within these workspaces, users can perform business-related tasks, gain access to data and applications, at any time, from any device and from any location, without compromising security.

> "All devices will synch with the cloud, where your applications, data and desktop workspace state will live as a unified, hosted service. Your desktop will appear on whatever device you login to, just as you left it wherever you last accessed it. It's a bit like changing television channels – you can switch between devices but still enjoy the same user experience. Meanwhile, corporate data resides safely in the data centre at all times," says Mathen.

How desktop virtualisation can help

As mobile devices continue to cross the corporate threshold, as IT leaders move forward with their desktop transformation journeys and as web-enabled workspaces begin to become accepted as the 'new' way of working, desktop virtualisation is increasingly being recognised as a powerful and enabling tool for change.

Mathen explains:

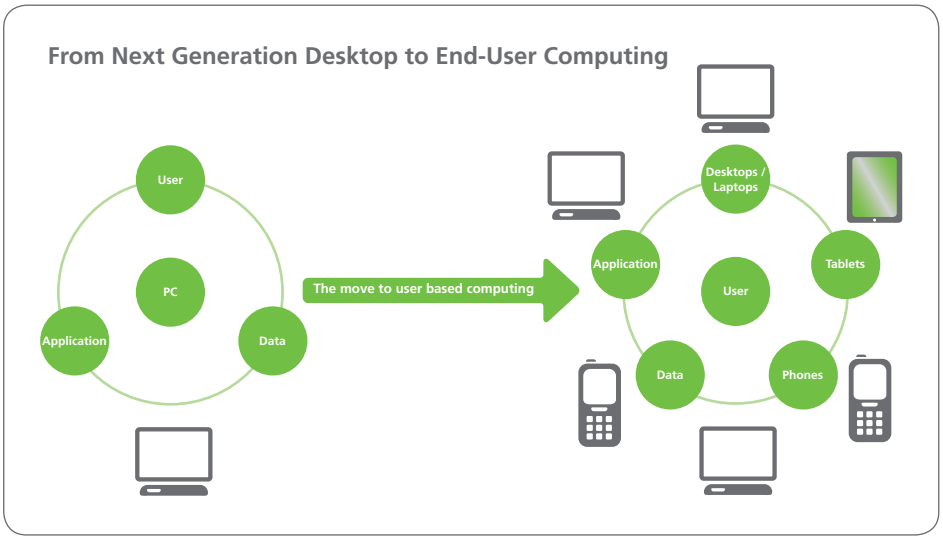
> "With the traditional 'monolithic' desktop, the applications, operating system and user data are all tied to a specific piece of hardware. Virtualisation breaks the bonds between these elements into isolated layers, enabling IT administrators to change, update and deploy each component independently for greater business agility and improved response time. End users enjoy the same rich desktop experience, but with the added ability to access that computing environment from multitude of devices and access points in the office, from an internet kiosk, at home or on the road."

Desktop virtualisation disengages the user experience and application functionality from operating systems, hardware, and software. By doing so, it removes the need for organisations to favour specific mobile devices above others and it means that organisations don't have to rely on specific vendors to gain control of their IT environments.

Similarly, supporting remote branch offices, mobile workers and home workers is now suddenly less of an obstacle, given the location independency of desktop virtualisation. Businesses are able to side-step many of the drawbacks of dispersion while reaping its benefits.

With desktop virtualisation, extending access to corporate resources to temporary and unmanaged workers and third-party contractors and suppliers in a controlled manner is also much more feasible and secure. Administrators can assign rights and profiles based on users' unique roles within the organisation and their respective task requirements.

Figure 2: From desktops to web workspaces



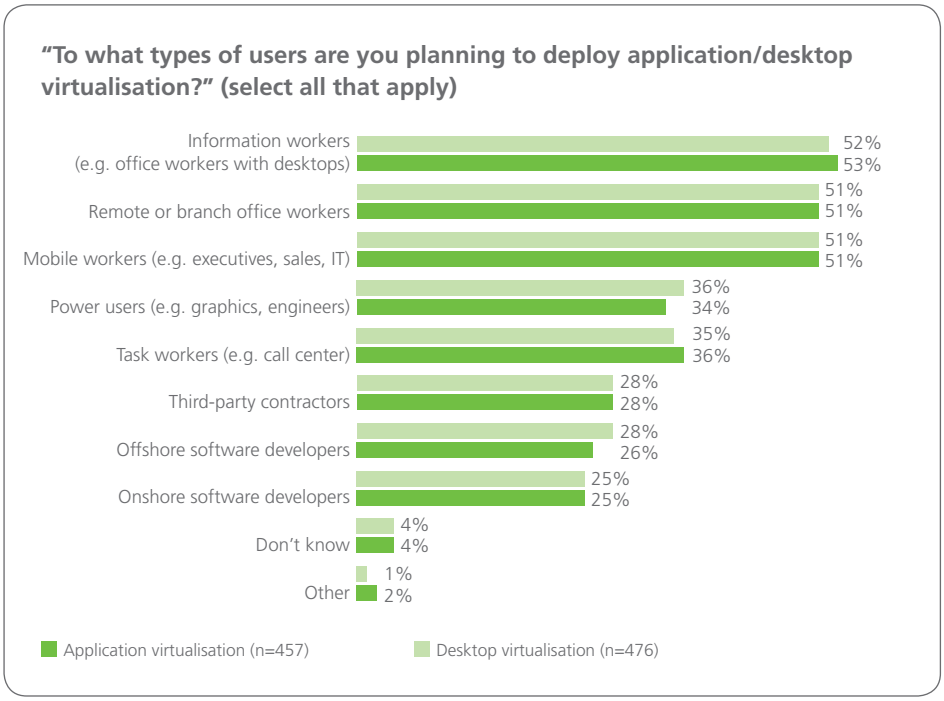
As an example, this capability recently delivered significant value to one of Dimension Data's Australian clients. The organisation frequently engages the services of ad hoc field contractors to assist in identifying and remediating electrical faults. Each contractor has his own laptop, yet needs access to corporate information relating to the physical location of underground cables. The contractors' remit includes visiting sites, taking photographs of faulty cabling, which are uploaded to a central server for diagnostic review. Naturally, the need to ensure integrity and security of confidential corporate data represented a concern.

Desktop virtualisation provided the answer to their dilemma. Today, the organisation simply issues contractors with secure access to a virtualised application that can interact with local devices such as cameras and measurement equipment, from their own laptops. As the application is hosted in the company data centre, there is no resident data left on the contractor's device once they complete the work. In this way, the organisation has found a way to strike a balance between enablement and control, thanks to the power of desktop virtualisation.

The results of the Forrester study indicate a growing awareness on the part of CIOs of the potential inherent in desktop virtualisation to simplify and streamline support for mobile and remote workers, as illustrated in Figure 2 below:

While desktop virtualisation looks good on paper, you need to ensure that such an initiative is carefully planned. Your mobility strategy needs to ensure that your back-end infrastructure is appropriately geared to support the way in which you abstract the user experience. Organisations should also put policies in place to govern the way in which user technologies could come into the system, based on the technology involved, the associated bandwidth requirements, and the security and authorisation levels that can be accorded to the various types of technologies.

Figure 3: Most virtualisation initiatives will be implemented for information, remote and mobile workers



Florian believes it's helpful to use a desktop assessment tool that caters for a hybrid environment that consists of any combination of traditional and virtualised desktops and computing devices.

> "The ideal assessment would assemble the various desktop components (operating system, applications, user data and settings) in the right combination to produce an accessible desktop that meets business and user needs. It should cater for employees who work remotely, are mobile and connect from different locations or who have role-based user classifications, for example, task, general and power users. User segmentation is critical to the success of desktop virtualisation initiatives."

The results of the Forrester study support this view:

> "IT managers traditionally segment their workforce into three rudimentary profiles: task workers, information workers and power users. However, these categories aren't granular enough to successfully map to client virtualisation strategies.
>
> Organisations should conduct a workforce segmentation project prior to defining their next-generation client computing strategies. The lines of business or end-user segments more commonly identified with client virtualisation include call centre workers; administrative professionals within a finance, legal, or HR department; internal software developers; third-party contractors; and offshore and remote developers. Following the success of these initial pilots, IT often extends its implementations to a much broader set of users, including information workers, executive managers, temporary employees and even primarily mobile workers. Each brings its own unique set of requirements and challenges to deliver against."

Organisations should also bear in mind that they need to approach their desktop environment with an eye on the future. Any initiative should provide for the seamless introduction of other technologies that will enhance the core infrastructure, mobility and security while reducing operational costs, as the business matures.

Managing mobile proliferation

Clearly, today's computing environment requires IT departments to address more device- management challenges than they did just a few years ago. The mobility boom has left many IT leaders scratching their heads as to how to provide users to the right level of desktop experience, in a secure manner, given the fact that most users are want and need to access corporate resources not from the traditional desktop PC or laptop, but from any number of handheld devices.

All the signs indicate that desktop virtualisation can go a long way to assisting organisations seeking to manage the proliferation of mobile technologies within their businesses – in a structured and coherent way.

About the The Client Virtualisation Imperative Report, 2011:

The Client Virtualisation Imperative, 2011, is a commissioned study conducted by Forrester Consulting on behalf of Dimension Data. In this study, Forrester conducted an online survey of 546 organisations, across all industries in Australia, Belgium and Luxembourg, Brazil, China, Czech Republic, Germany, Hong Kong, India, Kenya, Netherlands, New Zealand, Singapore, South Africa, the United Kingdom and the United States evaluate the adoption of desktop and application virtualisation and the desktop transformation journey on which organisations are embarking. Survey participants included decision-makers in managerial roles and above for enterprise companies (1,000+ employees in developed economies and 500+ employees in developing economies). The study commenced in July 2011 and was completed in August 2011.

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