WHITE PAPER

The Business Impact of Workspace Virtualization

Sponsored by: RES Software

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SITUATION OVERVIEW

Enterprises' IT goals in 2013 fall into four main categories: cutting the cost of IT, aligning IT with business requirements, improving service levels, and using IT to make the organization more cost effective. A recent IDC CIO survey clearly showed that cost remains king, with 31% of enterprises surveyed "using IT to make the organization more cost effective" and a further 17% aiming to reduce the costs of IT. Cost, one way or another, still represents pretty much half of organizations' strategic IT priority. The other half is split between improving IT service levels to the business (31%) and improving the alignment of IT with the business (21%).

While surveys across regions show variations, the broad parameters that CIOs must work within remain the same: following 5 years of tough economic conditions, the pressure on the CIO and IT in general is relentless. Organizations expect more for less, end users are more demanding, the infrastructure itself is more complex, and the plethora of devices now connecting to the network all conspire to make the role of the CIO — making sure IT allows business productivity within a constrained budget — more difficult.

Since the bursting of the dot.com bubble, the focus of IT buyers as well as enterprises has been on datacenter services, storage, networking, virtualization and, more recently, cloud. Desktop and workspace technologies, although an important part of overall IT spending, were perceived from a budget perspective as less important than datacenter investment. Paradoxically, the area still represents a significant proportion of the IT budget today, without necessarily being perceived as providing good value.

Although the workspace area presents challenges, it also offers significant opportunities due to changing work practices that are starting to appear, fueled by:

- ☑ Powerful new generations of hardware devices (such as smartphones and tablets) and software (such as file sharing)

- ☑ "Web 2.0" services, particularly social media such as such as Facebook, Twitter, LinkedIn, YouTube

- ☑ The emergence and adoption of technologies such as virtualization and cloud computing

The bottom line is that the desktop infrastructure as we know it no longer exists. The desktop is not dead, but we are entering the multidevice era in which desktop and laptop computers are being joined by powerful new devices that consumers want to use within their corporate life. The workspace now is much more personal; so much so that IDC believes personal computing is beginning to be replaced by the concept of "personal cloud" where users carry with them their preferred applications and devices, using them both for work and in their personal lives. Their "personal cloud" is

following them, on a daily basis — but also in their business lives, from one job to the next.

The pressure from consumerization in today's enterprises is very real and was summed up by the CIO of a multinational bank at a recent IDC end-user conference; "understanding the concept is not the issue — what we need is help on how to handle this pressure and turn consumerization to our advantage!"

The effect of this market shift on organizations is significant as new workspace technologies and services are transforming the way employees work and interact with colleagues, suppliers and (perhaps most importantly) customers or citizens. The organization cannot stand idle in the face of this change: both business and technology managers are struggling to understand, control and reap the benefits of these waves of change. Both business and technology managers need to embrace change.

The collective impact of this is reflected in the way requirements for managing workspaces are shifting from:

☑ Technical need to functional requirement — from servicing "devices" to servicing end-user requirements

☑ Fixed to mobile — allowing secure access on multiple devices, from any location

☑ High-touch technical support to "no touch" throwaway or personal device

☑ Technology approach to business approach

The changing attributes of all of these services can be addressed through workspace virtualization, which, if implemented correctly, can increase business value for the organization.

FUTURE OUTLOOK

IDC believes that workspace virtualization can deliver real practical benefits to the enterprise within a short time. As a concept, workspace virtualization is increasingly understood by IT buyers and IT departments worldwide — the issue is how to get from aspiration to reality.

We define workspace virtualization as the model whereby the user's desktop/laptop, data, applications, and productivity tools are separate from the underlying device and OS. We believe the development of this market is significant, as exemplified by the following key statistics and data points:
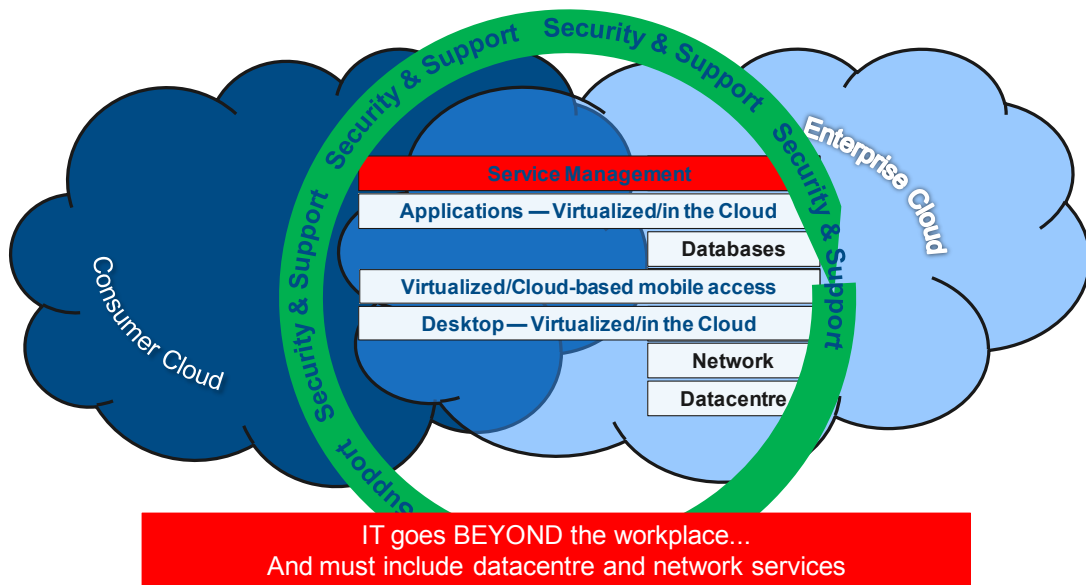
☑ A recent global IDC study forecast that virtualization services around the desktop will grow at 8.9% CAGR between 2011 and 2016 — from $3.9 billion to $6.1 billion.

☑ Regardless of the actual market size, perhaps a more telling statistic is that all vendors surveyed in our 2012 desktop virtualization services IDC MarketScape disclosed a doubling pipeline from 2011 to 2012. In other words, twice as many customers were actively looking at desktop virtualization in 2012 compared to the previous year.

⊡ Within our 2012 services predictions, we also estimated desktop virtualization would represent 10% of the total desktop services market in 2012/2013.

Adding the fact that mobile and tablet shipment and adoption within enterprises far outstrips traditional desktop makes for an explosive situation — virtualization is the answer, and it must take into account all devices within the workspace environment, as shown in Figure 1.

F I G U R E 1

Workspace of the Future

Source: IDC, 2013

As Figure 1 shows, we believe that the workspace of the future will be virtualized, and will encompass desktop (or traditional devices) as well as mobile devices such as smartphones and tablets. More importantly, it will allow end users to bridge the gap between their "consumer" cloud and their "enterprise" cloud through their devices and applications of choice. This will have to incorporate a significant service management layer, as well as security and support processes, in order to be adopted by the market.

So what drives the market for workspace virtualization? Why is it so compelling for enterprises? Why does it address the key issues CIOs face today?

Workspace Virtualization Drivers and Inhibitors

Although specific circumstances vary from one organization to the next, we note seven key drivers and six key inhibitors within the workspace virtualization market.

Seven Key Drivers Pushing Adoption of Workspace Virtualization Globally

☑ **Potential cost reduction and ease of management.** The first major driver — one that grabs CIOs' and CxOs' attention — is cost, as stated in the introduction to this report. As workspace virtualization is a centralized model of management, with flexible, secure delivery to the end device, costs are reduced. In addition, management is simplified — to an extent — as it is centralized and automated. Furthermore, scaling up and down and provisioning new desktop instances to end users becomes simpler than having to go through the process of physically providing a device with the right OS and applications to the end user; i.e., ordering, configuring, testing.

☑ **Flexibility leading to productivity.** With workspaces no longer tied to a device or OS, keeping up with the pace of change requests is made much easier. From an end-user perspective, accessing their "workspace" from any device allows them to be less device-dependent — they can securely access their data while on the move, from multiple devices. This increased flexibility leads to increased productivity as users can perform their tasks to the full in any circumstances.

☑ **Enhanced corporate security.** As the amount of data held locally on a laptop is reduced dramatically, losing the device becomes less of a problem in terms of client confidentiality or intellectual property: whoever finds the lost device will not be able to access any data as administrators can enforce automatic encryption as well as on-air device/data lock and wipe. This is not possible with a traditional workspace set up.

☑ **SLA improvements.** The centralized management and administration delivered through a virtualized workspace allows for a much more rapid deployment of new applications, patches, updates, OS upgrades, etc. Provided the right processes are in place, end-user SLAs are potentially easier to meet.

☑ **Business continuity.** A virtualized workspace environment allows enterprises to find and implement a workaround solution much quicker than in a traditional environment. In the case of an end user being unable to work from their normal device (lost, stolen or broken), the ability to apply a user's workspace to another device reduces the amount of time lost in trying to get a replacement device, hence the business continuity element of a workspace virtualization solution.

☑ **Enterprise drive towards the cloud.** Workspace virtualization is an integral part of the organization's drive towards cloud computing. As more and more CxOs are consulting and transitioning their IT and enterprises towards cloud delivery, the workspace is but one component of this transformation. The appeal of a coherent "cloud" vision between application, infrastructure and workspace areas is clear.

☑ **Simplification of support.** With workspace virtualization, the need to provide desk-side support is greatly reduced as the ability to access the end-user data does not rely 100% on the endpoint device. This allows the IT department to

focus more on end-user requirements (what they need to access to do their work), as opposed to the actual device they use.

Overall, virtualization gives much more control to the IT department in all aspects of the infrastructure: a more secure workspace, managed centrally, with the ability to get around bottlenecks much quicker. Better control is a very potent message to give CIOs who are investigating virtualization as a way forward.

Six Key Inhibitors to Virtualization Remain to be Addressed

Although many drivers are making workspace virtualization an attractive proposition, some inhibitors remain and must be addressed by vendors as well as CIOs.

- ☑ **Lack of demonstrated cost reduction.** The case for cost reduction has not been comprehensively proven. Clear-cut data showing a net reduction in spending is hard to come by since the move to virtualization shifts spending from the end point device to the datacenter. In fact, upfront investment is required to set up the added infrastructure required to manage virtual desktop. IDC believes that workspace virtualization should not be sold solely on cost, but on the added security, flexibility, and control it provides. The necessary upfront investment (shifting management from the end point to central management) needed for workspace virtualization is an inhibitor, and the market needs more business cases.

- ☑ **Virtual complexity.** Even when virtualized, a mess remains a mess unless the client takes a close look at the management and processes surrounding the workspace environment. Virtualization can also bring its own set of problems — by being successful! This is the "sprawl" effect which IT must keep under control by adopting appropriate procedures to keep a dynamic picture of the number of virtual machines in place at any time, especially with each end user having more than one device. Failing to do so will only bring complexity back into the IT infrastructure.

- ☑ **Lack of strategy.** Virtualization efforts in 2010 and 2011 tended to remain siloed, with few enterprises proactively embarking on an end-to-end "virtualization" strategy. End users need a clear roadmap for enterprisewide virtualization (from the datacenter to the workspace) in order to make the right choice. The current lack of roadmap is slowing market growth.

- ☑ **Cultural reticence.** Although not as marked as it once was, cultural reticence to the virtual workspace model remains to a certain extent: personalization within a hosted virtual desktop model is a key part of the value proposition for some forward thinking vendors, but there is still a perception that central management leaves users with less ability to customize their environment.

- ☑ **Skills required.** While IT is increasingly warming to the idea of managing a virtual desktop environment — as surveys show – they need to change their skill set to be able to manage it in the long run. This requires investment (which takes time to be approved) and the ability to get key staff accredited.

- ☑ **Disruption fears.** Finally, there is an element of unease about the potential disruption that workspace virtualization can bring to an organization. How is the transition going to be handled? IDC and vendors would recommend a small pilot to get the IT department used to the new delivery model, followed by phased transition by user type.

RES SOFTWARE

RES Software has provided workspace virtualization solutions since 1999, with the stated aim to "make IT organizations 10x more productive at delivering IT services and managing user workspaces."

RES Workspace Virtualization goes beyond traditional client (desktop) virtualization by providing a context aware workspace. It works by enabling IT to centrally deliver, manage, and automate key elements of a user's computing experience, independent of the device or a user's workstyle. This is done securely and dynamically.

☑ RES Automation Manager ensures that most tasks required are done automatically, and delivers the relevant software, tools, and security patches to the workspace. This allows for a more repeatable, more reliable delivery.

☑ RES Workspace Manager controls the end-user workspace in a dynamic fashion — configuring applications as well as personal settings while at the same time securing the data and synching it to the central repository. This plugs into existing Citrix, Microsoft, VMware, and other traditional platforms.

☑ Combined, these two technologies enable an IT store that provides a combination of self-servicing and automatic delivery of all IT services in a familiar app-store style interface.

RES Software allows the enterprise IT function to manage the various user profiles, putting them into context based on device, location, identity, time of day, and more.

Challenges RES Software Will Have to Face

RES Software will need to focus its efforts on the following areas to maximize its value for customers within a buoyant global workspace virtualization market.

☑ Workspace virtualization is as much about delivering service and business value to the client as it is about technology. RES Software will need to engage the market not only at a technical level, but also a business level.

☑ As it is competing with very large software companies focused on virtualization, RES Software will need to continue to work with the channel for services delivery. This is as much about mindshare as it is about GTM strategy — to ensure RES is represented as part of the de-facto workspace virtualization solutions.

☑ Like any vendor in the market, RES Software must not only focus on the cost cutting aspect but also on the added flexibility, control and security brought about by its solution.

☑ RES Software must build and communicate around real life case studies. Demonstrating the ROI achieved (cost savings as well as productivity improvements) through a RES Software solution will go a long way towards convincing customers to adopt their solution over that of the competition. It also helps educate channel partners' sales forces, which is also key.

Above all, RES Software must keep focusing on delivering excellence. As the economy has proved challenging over the past five years, and given the importance of costs in tough trading conditions, vendors must not cut corners, drop service levels,

or allow customer satisfaction to dip. This will not only maintain client satisfaction, but more importantly will keep the competition at bay, ensuring success in difficult times.

ESSENTIAL GUIDANCE FOR POTENTIAL CUSTOMERS

Clearly, the workspace environment is changing fast with the rise of cloud technologies, new devices, and consumerization. Conversely, CIOs and enterprises must adapt to those shifts in order to reap the benefits they offer.

The first action item on the CIO's list should be to think of the workspace as a whole — strategically. Consumerization of IT and bring your own device (BYOD) must be discussed at the top level. CIOs must ensure they put these discussions on the CxO agenda and prepare to explain the consequences of BYOD and consumerization within their own organizations.

The second recommendation would be for enterprises to focus on their specific needs and strategic goals — without being pushed into workspace virtualization on the back of attractive headlines or promises. In other words, potential clients should ask themselves — will my business benefit? If the answer is yes, enterprises must choose which service provider and solution will work best for them. We recommend they manage their workspace solution across the physical and virtual estates (avoiding silos), across different form factors (e.g., desktop/laptop + tablets + mobile devices), as well as across the corporate and consumer devices (for those implementing BYOD policies).

Our third recommendation would be for enterprises considering workspace virtualization to take advantage of a competitive market and most importantly time the transition right. The most natural time to consider large scale workspace virtualization implementation is at the point of their desktop refresh cycle, particularly if they consider also upgrading OS to windows 7 or 8.

CIOs must also segment their own (current) desktop estate to establish the shape of the workspace solution required. This will not only save money but also increase employee satisfaction by providing a service that is more closely mapped to their needs. They must also develop a BYOD strategy in parallel with workspace virtualization, and in doing so, map their available internal skills to determine which workspace solution model to adopt — do it yourself (buying and implementing software themselves), seeking external consulting and integration on the subject, or a fully managed solution model.

We suggest enterprises request and study multiple case studies in detail. Finally, although no new security risk will arise from virtualization of the workspace, assessing the security impact on their infrastructure must also form a key part of the business plan underpinning the transition to a virtualized workspace environment. A key change within the enterprise will be the role of the chief information security officer (CISO), who will increasingly have to balance control over IT infrastructure and access with the need to open up the end-user environment to enable employees to be more productive.

CONCLUSION

So what will the future workspace solutions market look like?

The Desktop is Not Dead... Virtualization Can Help

The desktop is not dead, but it is changing fast. Today's IT departments need to be able to handle heterogeneity and device proliferation. Given the historical investment in desktop hardware and software, a complete rip and replace is not an option (in the short term) because of cost, complexity, and end-user resistance.

The next-generation workspace — in the multi-device era — will be one that balances the needs of end users with visibility and control. Workspace virtualization — encompassing traditional desktop devices, but also extending some features to smartphones and tablets — can help in enabling this change, allowing IT to remain in control, and be secure while at the same time allowing users some form of device choice(s).

The next-generation workspace will be one that is virtual, with end users accessing their corporate applications from any device, and through a single interface.

Mobility is a Disrupting Force (For Good) in the Workspace Environment

Consumers' rapid adoption and use of mobile devices for corporate application access can overwhelm the IT department's ability to track who uses what, and their ability to provide support to end users. CIOs must "ride the wave" of consumerization by starting to say yes to their end users. Failing to do so will only alienate them and potentially lead the IT department to be consumed by consumerization.

Beyond saying yes to end users, practical solutions for securing the mobile end of the IT infrastructure — whether personal or corporate devices — are needed to unlock personal productivity securely. The key, however, is knowing where to start, and looking at the mobility side holistically: what are the HR implications? What happens if a personal device is lost or stolen? What can you delete remotely from a personal device once the person leaves the company? What can you tell your end users who want their corporate apps on their brand new device?

The Next-Generation Workspace Will be Consumerized

The vision is clear: the next-generation workspace will be consumerized although few would venture to predict what form new devices will take. However, one certainty is that consumer devices bought and refreshed three to four times faster than traditional desktops will form a cornerstone of the future workspace for a significant proportion of end users.

Will the advent of Windows 8 — built with tablets in mind — mark the starting point of a "corporate consumerization" trend, whereby the IT department leads its end users towards choice (tablets, laptops, as well as mobile), while retaining the attachment to Microsoft-based infrastructure? Once again, the CIO and the enterprise in general will need to do some work in terms of deciding which work profile should be allowed consumerized devices, as this is not necessarily for everyone, but according to employees' needs.

Whatever workspace model (Windows-based, iOS-based, or other) will incorporate a plethora of device types and applications to enable end users choice while ensuring IT controls if not the technology itself, then the corporate data and IP residing within user devices.

It is About Culture and Process as Much as Technology

From an end-user perspective, the technology aspect of the next-generation workspace is irrelevant. From an IT perspective, it is complex. Complex in the sense that many more devices and apps have to be managed alongside increasingly demanding end users. So the most important factor when it comes to end-user computing and consumerization may be cultural.

To realize the potential of next-generation computing — virtualized or cloud-based workspace — the CIO and the IT department in general will need to embrace a change in their own culture. Enterprises themselves will need to change from HR to IT.

The end-user environment has always been the main technology touch-point between the worker and employer. CIOs must become workspace virtualization and consumerization champions within their own companies. The rewards are significant: end users that are happy work more and are more efficient for their enterprise. When this is achieved, IT departments can take credit for no longer being a mere cost center, but a true business enabler. They will have regained control over the workspace environment and increased business value.

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