The desktop
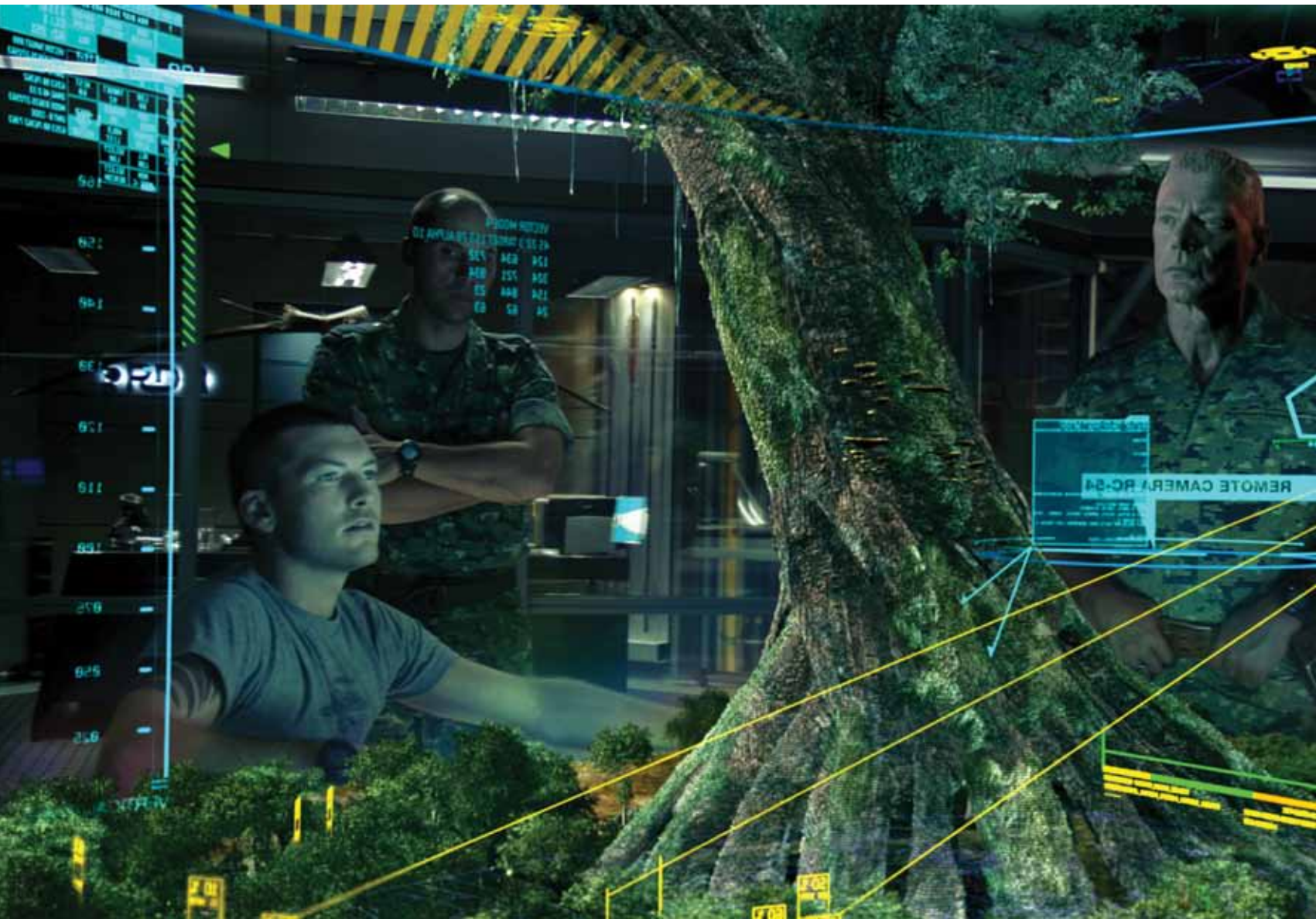
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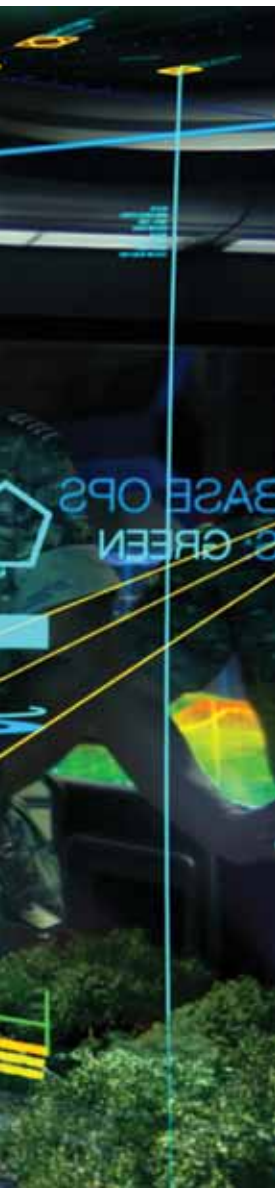
You may shudder at the thought, but modern enterprise architecture is slowly but surely returning to the mainframe fold, at least conceptually, and never more so than with the idea of virtual desktops – hosted in 'the cloud'. iStart *reviews the leading alternatives...*

The birth of the PC was a boon for the democratisation of computing. Microsoft's Windows and Apple's Mac operating systems allowed users to set up their own machine, and make it, well, personal. Many moons and OS versions later, that flexibility has also created an ongoing burden for IT departments. Maintaining a consistent desktop standard across all staff allows applications to run smoothly on everyone's PC, and means issues like back up, security, user support and licensing can be better managed. Consistency makes management easier, and saves costs. But it's hard to do, and so what is supposed to be a cost saving exercise in simplification for the IT department becomes expensive and complex in itself.

BYOD Computing

In parallel, users have sought out the best computing capabilities for their home situations, where often multi-media applications such as gaming, video and music are much more demanding on computing resources. They end up with much better gear at home than they have at work – and that brings frustration and animosity toward the IT team hamstrung by organisational policies demanding consistency.

Smart phones and tablets have further compounded the issue with individuals expecting to have the capability they are used to at home at their fingertips during the day. No surprise then that we all circumvent policies and connect multitudes of devices and applications to work networks and merrily remain connected.

"The workplace has changed," says Nick Day, A/NZ sales executive for IBM's Solutions for Smart Business team. "Where before, workers would head in to the office each day, the office is now at home, on the road, at the airport or in a coffee shop across the way. Employees are always on, always connected and working from mobile devices

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TECHNOLOGY	DESCRIPTION	BENEFITS	EXAMPLE USE CASES
Hosted VDI	A Windows desktop OS such as Windows 7 runs as a virtual machine on servers in the data centre with a one-to-one mapping between the user and the OS.	Overcomes compatibility and vendor support issues sometimes seen with shared hosted desktops, provides a more flexible, customisable and personal user experience than with shared hosted desktops.	Support staff who need to customise their desktop beyond the limits of a locked down shared hosted desktop.
Hosted Shared	A Windows server OS such as Windows Server 2008 R2 with Remote Desktop Services (RDS) runs on servers in the data centre where multiple users share a single OS.	Excellent scalability, offers far lower TCO compared to VDI, the same "look & feel" as Windows 7.	Call centre and admin staff who have a defined set of applications.
Local VM	A Windows desktop OS such as Windows 7 runs within a virtual machine on the user's PCs or laptop and makes use of local processing power.	Single image management for client devices, provides offline usage.	Executives who require online and offline access and developers who require access to multiple Operating Systems.
Streamed VHD	A Windows desktop or server OS is streamed to a physical or virtual device allowing multiple devices to share a single disk image.	Leverage local processing power, single image management, and consistent user experience.	School or university labs where users are free to make changes to the system while a consistent desktop must be delivered to each class.

wherever they are," says Day.

And so the idea of BYOD computing has emerged (that's D for Device), and is rapidly gaining traction. Virtual desktop infrastructure and BYOD computing go hand in hand as users can access a standard desktop, but because it runs in a central data centre, it can be managed much more easily and consistently by the IT department, giving users flexibility as to how they access it.

"In this new office landscape, organisations need a smarter way of supporting this mobile worker and improving productivity. Virtualised desktop management can help them to do this," says Day

VDI – its not a disease

A Virtual Desktop Infrastructure (VDI) is attractive for organisations wanting to rein in the costs of managing desktop computing, while at the same time delivering increased security, robust back-up and recovery and offering employees greater flexibility in terms of mobility and remote access. Typically 40-70 per cent of employees are likely to need only the most common office productivity tools (word processing, spreadsheets, presentation mail, messaging and internet connectivity) and are a great starting point for organisations to explore desktop virtualisation.

"A virtual desktop environment can benefit many industries or even teams within an organisation. Think about the value to a real estate agent of being able to access company email, CRM data and office programmes to make a sale while out of the office. Or imagine the savings in a call centre environment, where each worker needs access to specific data and applications but not the power of a PC," says Day.

A virtual desktop makes working absolutely seamless across all devices. Workers can access their desktops whether online or not and still be productive, whether they are on their PC in the office, giving a presentation off their laptop in a client office across town or working on a tablet while travelling," he says.

Why VDI?

When approached to discuss VDI, Jason Poyner, director of Citrix partner Deptive, says that his first question is always 'Why VDI?' "I almost come across as anti-VDI when I first speak about the subject, which is surprising since I run a business specialising in desktop virtualisation! But don't get me wrong, I am not 'anti-VDI' at all. I just do not believe VDI is the first choice for desktop virtualisation," says Poyner.

"Without fully understanding the business drivers and requirements, implementing VDI can end up a case of hammering a square peg into a round hole; it will not fit," he adds.

Poyner explains that VDI is one of the four main types of desktop virtualisation available, at least in the Citrix world, as outlined in the table.

"Partnering with Citrix enables us to openly and honestly discuss desktop virtualisation strategies with clients as the Citrix solutions cover all four types of desktop virtualisation," says Poyner.

"The choices available from the Citrix product suite have resulted in competitors labelling Citrix products as overly complex," says Poyner. "The way I see it is if you have only one tool in your toolbox then life is simple: just get out that hammer and start hitting! When you have a range of tools to choose from you need to understand which tool will work best for the job at hand, and often it is not one tool, but several tools which are required for the job."

Citrix has been in the virtualisation game for many years and, according to Poyner, holds the market lead, however both IBM and Microsoft are currently in launch mode with their own desktop virtualisation solutions.

These three leading solutions are discussed below:

CITRIX

XenDesktop for VDI
XenApp for shared hosted desktops
XenClient for client-side hypervisors
Provisioning Services for OS streaming
www.flexcast.citrix.com (refer the 'analyzeandcompare' tool)

The starting point of a desktop virtualisation conversation is always with Citrix XenApp as XenApp quite simply provides the best TCO. XenDesktop VDI (or VDI from any other vendor) will not tick the right boxes when the primary business driver is to reduce desktop TCO, but shared hosted desktops via XenApp will.

So where should VDI be used? For those users, or for those applications, that require more than hosted shared desktops can provide, VDI with Citrix XenDesktop may be the answer. For example, a user should never have local administrative rights to a XenApp server, but while it is still not advised, a user could have local administrative rights to a XenDesktop Windows 7 virtual machine. There are also some applications which will not run in a XenApp shared hosted desktop environment and for these applications XenDesktop may be the best solution.

Choice does bring some complexity, but also broadens

the use case and dramatically improves the end result. And it is often the case that a single flavour of desktop virtualisation will not fit your entire user base; perhaps a mix of XenApp, XenDesktop and some traditional fat client desktops will suit. Citrix have recently bought Kaviza who have a simple, cost effective "VDI-in-a-box" solution aimed at the SMB market and this product is likely to gain traction in New Zealand's large SMB market.

"VDI is getting an enormous amount of attention at the moment which is great as it raises awareness of the benefits desktop virtualisation can bring. But VDI is too often seen as a panacea for all desktop problems. VDI will not fix a poorly managed desktop environment, dodgy network or reduce desktop TCO" says Poyner.

Poyner explains that to really make a XenDesktop VDI implementation fly, desktop and application management practices must be reviewed, along with existing infrastructure to ensure the headaches of the current physical desktop world are not transferred to the virtual desktop world. Desktop virtualisation will provide benefits such as increasing data security (the data lives in the data centre), creating an agile workforce (enabled by anywhere, anytime access to their desktop, applications and data), and enabling BYOD schemes which allow employees to use a device of their choice at work.

And finally, when embarking on a desktop virtualisation project Poyner advises not to fall into the trap of believing your server virtualisation guru should also be your desktop virtualisation guru. Desktop virtualisation is not the same

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as server virtualisation; servers and desktops are two very different workloads and require a user centric view point.

Citrix XenApp and XenDesktop licensing starts from $8 per user per month over a 36 month period.

MICROSOFT
Office 365

www.microsoft.com/office365/online-software

Microsoft's cloud desktop offering has only recently hit the shelves and looks set to give small to medium sized enterprises access to benefits that, until now, have been reserved for larger operations. The much anticipated 'Office 365' software has finally been released after a beta pre-launch that attracted over 100,000 users, approximately 70 per cent of them small businesses.

Office 365 brings together popular Microsoft productivity software - Office, Exchange, Sharepoint and Lync – at a pretty reasonable price ($9.25 NZD per month for small to medium businesses, and $38.25 per month for large enterprises).

Office 365 is Microsoft's big four business products made cloud-ready, and delivered through a familiar and manageable interface. If you like the idea of all your Microsoft software - e-mail, documents, contacts and calendars - available anywhere at any time, and from a range of devices (PCs, Macs, iPhones, Android phones, Blackberry smartphones, Windows Mobile and Windows Phones are all supported) Office 365 may be the all-in-one solution

you've been waiting for.

Larger business can adopt the more expensive model featuring full downloads (especially should they be worried about lost internet connections affecting their ability to work) while cost-conscious smaller businesses can access popular Microsoft software completely online via the cheaper Office Web Apps-only version.

Microsoft Office 365 is all about collaboration. Users can share large files both inside and outside their organisation, from a single document location point, meaning that the current version of a document is always the most current, regardless of how many editors are involved.

Office Web Apps allow users to access and edit Word, Excel, PowerPoint and OneNote documents in their browser, and simultaneous editing of Excel spreadsheets and OneNote notebooks with others in real time is easy and intuitive, with users able to see exactly who is editing and viewing documents at all times.

The suite comes with pretty solid email and calendar functionality. While accessing your applications from mobile devices, the email interface is nonetheless totally familiar, if somewhat stripped down. Calendar functionality is robust, with the ability to share and view calendars side-by-side, to compare availability and suggested meeting times.

If you've been using Google Docs as a means to handle Word Documents you may have experienced frustration with formatting issues when shifting bodies of text and graphical elements between programs. That problem has been addressed with Office 365, with consistent formatting across desktop to web applications – if you've created a document offline you know what it will look like when it's online, and vice versa. Large files can be shared via an Office 365 enabled password-protected website, and for smaller businesses, Office 365 also provides simple website design tools, allowing users to create simple, if unimpressive websites.

Lync, Microsoft's take on unified communication, allows users to connect with colleagues and customers across the board. IM, audio and video conferencing and PC-to-PC voice calling are all supported, plus users can share their desktop, online white boards and presentations in one integrated environment.

For those still wary about cloud downtime (and after the recent struggles of the Amazon Cloud service and

Microsoft's BPOS Cloud, who wouldn't be?) Microsoft are promising 99.9 per cent guaranteed uptime.

"We have a financially backed SLA," says Rachel Turney Product Marketing Manager for Microsoft New Zealand. "So we say to our customers 'you have a 99.9 per cent uptime' and that we will financially back that... If it is ever down we will financially give you credit for that... that's part of our service level agreement with customers when they sign up for our services."

Still, those with a tendency to feel overwhelmed by complicated setup procedures, take heed. While blank slate users may enjoy a relatively simple setup process, if you're currently using existing Exchange email accounts you'll need to put aside time for the migration to Office 365. That said, once you're sorted, the familiar look of the Microsoft interfaces will make current Microsoft Office users feel right at home.

For businesses, especially small to medium-sized enterprises, eager to move operations to the cloud, Office 365 could just be what they've been looking for. While initial set-up may require outside expertise, at the price, cost-conscious SMEs will find Microsoft's cloud offering, and the suite of software included, a lot of bang for their buck.

IBM

Virtual Desktop for Smart Business
(based on VERDE from Virtual Bridges)

www.ibm.com/smartbusiness/virtualdesktop

IBM's Virtual Desktop for Smart Business is a desktop management solution which delivers a secure, high-quality, end-user experience on any device. Every component needed to establish a VDI, including user administration, security and configuration support, is included on two DVDs, eliminating issues that sometimes arise when integrating different products. An IT department can install IBM's virtual desktop infrastructure solution in around 2 hours, and be ready to create the standardised 'gold master' desktop templates that will be deployed to users across the organisation. The templates can be configured to provide the required operating system and applications that different classes of users need.

Ongoing desktop image management is done on consolidated virtual machines in the data centre through deployment and management of standard desktop templates, or images, significantly reducing the time and cost of making

individual updates.

While the desktop looks the same to individual users, they are not limited to a single, physical computer and can access their desktop from almost anywhere, at any time, through a variety of connected devices. This is because the Virtual Desktop solution combines traditional online VDI technology with integrated offline (for disconnected and mobile use) and remote branch desktop virtualisation capabilities. Once remote users reconnect, all their work is synchronised with the online virtual desktop, where it is secured and backed up. People working from home or travelling can now update documents on their virtual desktop rather than emailing old versions back and forth.

Adjustments can be made to personal preferences such as document management, desktop settings (icons, wallpapers, themes, etc) and browser bookmarks, but all other settings are locked down, a major advantage for data security and desktop management. The loss or theft of a laptop or other device is also much less likely to result in a security breach because critical data lives only on your virtual desktop.

The open architecture of IBM's solution supports virtual Windows desktops (Microsoft Windows XP and Microsoft Windows 7 platforms) as well as Linux desktops (including Ubuntu and Red Hat platforms).

The recommended retail price for a per-concurrent-user per-year fixed term subscription license of Virtual Desktop for Smart Business is AU$213.27 plus GST or NZ$245.36 plus GST.