Today's Forecast: Cloudy with Cloud Computing
Is your Firm ready for secure Virtual Hosted Desktops?

By Andre Coetzee | Director, i-worx

The rate of change within information technology over the past decade has been staggering and has started to significantly impact the types of technology solutions professional services firms opt for. Before AltaVista (who?), Yahoo and Google, searching on the Web was laborious. Now we can find anything from a great hotel in Europe to instruction about how to make a Margarita – all within a matter of seconds. Gone are the days of having to go to the office on the weekend or in the evening to do work or check emails. Today, we can connect to the Internet from anywhere at any time using almost any device: laptop, home computer, or iPhone, to name a few. I cannot imagine how we survived without all this innovation as it has made us so much more productive and efficient – yes, that's right - now you can respond to client emails or finish working on that client file while on the road, at home, in bed, and on holiday! (Not sure we signed up for all of this, but it's pretty impressive, to say the least). Say "Hello" to the New World of always being connected; say "Hello" to Cloud Computing.

Cloud computing can make many shiver a little since, on the surface, there appears to be more hype than reality. Ask someone to define cloud computing and you'll get anything from a blank stare to, "I use Facebook online – is that what you mean?" I particularly like the all-inclusive definition put forward by Eric Knorr and Galen Gruman from InfoWorld: "Cloud computing encompasses any subscription-based or pay-per-use service that is offered in real time over the Internet." So to us, as mere mortals, it can mean anything from paying to having your backups automated and performed online or hosting your email to having your entire firm's workstations and servers hosted offsite in a data centre. Essentially, cloud computing is Internet-based computing, whereby shared resources, software, and information are provided to computers and other devices on demand (like the electricity grid). Here, we will focus on some of the benefits and pitfalls of Cloud Computing while we explore one component of it: Virtual Hosted Desktops ("VHD").

So what is a virtual hosted desktop? Virtual hosted desktops result from desktop virtualization services provided through an outsourced, hosted subscription model. Simply put, lawyers and support staff connect via the Internet to their virtual hosted desktops and data that resides in a data centre using any device (thin client, existing workstation, Apple Mac, Android Smart Phone etc.). Firms using this model no longer have any data, servers, and - in most cases - workstations residing in their offices. Instead, everything resides in the data centre. In some ways, the model is very similar to "dumb terminals" and mainframes of the 1960's with a modern twist. Before taking the leap, you need to ask some important questions:

- What kind of equipment and technology is required to connect to VHDs?
- How does printing work from the office\home?
- Will our legal and other software work on a virtual hosted desktop and if so how does the licensing work?
- Where does my data reside and what about security?
- What happens in the event of a breakup with your hosted desktop service provider (e.g. what is our exit strategy?

Setting up and delivering VHDs requires a significant amount of investment in hardware and infrastructure at the data centre. Because of the significant cash outlay, companies and professional services firms turn to VHD service providers to provide the service as opposed to investing themselves.

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The equipment required on your premises to connect to the VHD can vary from leveraging and using existing workstations and converting them to thin clients, to purchasing cost-effective thin clients to replace old workstations, to using laptops or tablet PC's. At i-worx, when implementing *OfficeOneLive*, our VHD solution, we remain cognizant of leveraging as much of the firm's equipment onsite as possible so as to reduce the initial capital outlay and leverage the firm's current investment in hardware.

Several vendors provide the technology that drives VHD solutions. Main players include *Citrix, VMware, Microsoft and Parallels Virtuozzo*. In most cases, VHD service providers use a combination of vendors to deliver their virtual hosted desktops to users. Which vendor has the better technology depends on who you talk to. At i-worx, we use Citrix and Microsoft to deliver *OfficeOneLive*. Why Citrix? For i-worx it is about creating a user experience that comes as close to a traditional desktop as possible. We have found that Citrix delivered this to our VHD users through quick-screen refresh rates and the ability to connect from any device quickly.

In a VHD environment, Firms get access to Microsoft licensing, including but not limited, to Windows (Operating System), email (Exchange), Office, database (SQL). Firms also get access to anti-virus and anti-spam licensing. The licensing forms part of the monthly fee and you only pay for what you use. Firms, therefore, are standardized on the same software and never have to worry about falling behind from a version perspective as the licensing comes with software assurance (e.g. you can upgrade to the latest version as part of the monthly fee). This is extremely powerful as moving from XP Professional to Windows7 as an example in a VHD-environment is a significantly simpler migration path than what you are currently used to. Setting up a Windows7 environment to test all of the Firm's applications before migrating is relatively quick and, very importantly, has no impact on the Firm's production environment.

Specific law firm software licensing such as PCLaw, ESILAW, Worldox, Adobe Std.\Pro and others are purchased separately through the respective vendors and loaded on the VHDs. Existing software versions need to be tested in a VHD environment for compatibility and, depending on the software, an upgrade might be needed to move to a VHD environment. The great benefit to a VHD environment is that all the users get access to the same version. If an upgrade is required, it gets installed once and, with the click of a button, all users get upgraded to the latest version.

So you want to switch your firm to VHDs, but you have concerns about how printing works (to different trays, document sizes, on envelopes). Since the universal printer drivers that come with Citrix, printing at the office becomes a non-issue. The ability to track and bill for printing through print tracking software (e.g. Print Audit, Copitrack) also works perfectly. When working at home, users can connect and print to their home printer without having to install printer drivers. This is a huge benefit for Firms who have made the switch.

The process of burning client information, court documents and such to CD or DVD is possible in a VHD environment; however, you need to keep your wits about you as it can be laborious and time consuming.

Moving your entire Firm's infrastructure into the 'cloud' and using VHDs also means moving all data into the cloud. Many go weak at the knees, at the thought, as traditionally, the Firm's data sits on

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servers, at their premises, which they can touch and see. Physical servers on site may seem more secure at the outset until a breach of security or natural disaster strikes and the servers are damaged or knee-deep in water. Most Firms perform backups so believe they can recover our data relatively quickly. (Heaven forbid the backups have not been rotated for weeks or are corrupt.) When making the decision to move to the cloud, ensure that the service provider stores data in a secure data centre with multiple layers of physical security. Accessing your client's data and legal applications using a VHD via the Internet can present security challenges, however with Security Certificates (similar to online banking) and encryption, you can connect securely. Different schools of thought persist on this, but overall, the Firm's data becomes more secure in a data centre than at a Firm's premises. Most savvy hosted service providers have sophisticated backup software that automatically backs up the Firm's data on a daily basis and to multiple physical locations in order to ensure a strategic backup and disaster recovery solution. That's right, backup is no longer your concern! You can reclaim some real estate in your purse or briefcase as well as some precious square footage at your premises.

VHDs are reliant on a stable Internet connection and, for most Firms, two are recommended for redundancy and fail-safe purposes. In the unlikely event that both Internet connections go down, users will find themselves staring at a black screen. Some users will soak up the peace and tranquility, while others will be absolutely irate. For those irate users, the good news is they can connect from anywhere at anytime so that if there is a prolonged outage, they can go home, to favourite coffee shop, (the beach, even!) and connect to their VHD and continue working.

Sold? Great! So where do you sign up? Not so fast. Being sold is one thing, having an exit strategy in the event things go wrong with your service provider, is another. Although VHDs have emerged as the way of the future, technology remains in the early adoption stage and there are actually not that many service providers that offer VHDs. As a result, there may be a bump in moving VHDS from one service provider to another, but rest assured: changing service providers will soon became as easy as changing from one mobile service provider to another.

In summary there are many compelling benefits of moving to VHD; laptop stolen or hard drive fails, no problem with a VHD as the data resides centrally in a secure data centre; mobility of your staff i.e. work from anywhere, anytime as well the flexibility of adding to your staff compliment without adding office space; concerns about daily back ups and offsite disaster recovery are replaced by hands free back of data stored in multiple locations; spend your capital elsewhere in your Firm as no more capital outlay for onsite servers, workstations and Microsoft licensing; VHD standardization leads to more efficient and effective user experience and reduces IT support costs; print from any computer at the office, at home or on the road; cost effective as you pay for VHD on a monthly basis; VHD is energy efficient and hence Green too. Besides the tangible benefits there are intangible efficiency benefits of VHD, an example being; because your desktop follows you, if you leave the office and get home\hotel to continue to work on a Case, all the documents, email, Internet etc. will still be open and hence you can pick up from where you left off quickly; in the event a user deletes\moves a document inadvertently they are able to restore the file themselves without calling for support – this saves significant time, effort and reduces user frustration.

So, is your Firm ready to take a leap to the cloud? We are on the precipice of a completely new era regarding the way we purchase and use computers. Law firms are excellent candidates for moving their computers to the cloud due to the fact that most of their business revolves around office productivity

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suites with transactional-based legal applications and the need for compliant secure client data storage. Cloud computing, with virtual hosted desktops, can help.

Andre Coetzee is a Director and a founding member of i-worx, a Premium Managed Service Provider with a focus on Cloud Computing. i-worx has delivered innovative IT solutions since 2003. Their latest Virtual Hosted Desktop offering, OfficeOneLive, has been well received within the legal industry. For more information or to learn more about real cost savings and how OfficeOneLive could benefit your Firm, call 604.639.6300 or email andre@i-worx.ca.

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Glossary – According to Wikipedia

<u>Desktop Virtualization:</u> Sometimes called client virtualization, as a concept, separates a personal computer desktop environment from a physical machine using a client–server model of computing. The model stores the resulting "virtualized" desktop on a remote central server, instead of on the local storage of a remote client; thus, when users work from their remote desktop client, all of the programs, applications, processes, and data used are kept and run centrally. This scenario allows users to access their desktops on any capable device, such as a traditional personal computer, notebook computer, smart phone, or thin client.

<u>Virtual Hosted Desktop</u>: Virtual hosted desktops result from desktop virtualization services provided through an outsourced, hosted subscription model. Hosted virtual desktop services generally include a managed desktop client operating-system configuration. Security may be physical, through a local storage-area network, or virtual through data-center policies. Transferring information technology infrastructure to an outsourced model can shift accounting for the associated costs from capital expenses to operating expenses.

<u>Thin (or Lean or Slim) Client</u>: A computer or a computer program that depends heavily on some other computer (its server) to fulfill its traditional computational roles. Thin clients occur as components of a broader computer infrastructure, where many clients share their computations with the same server. As such, thin client infrastructures can be viewed as the amortization of some computing service across several user-interfaces. The most common type of modern thin client is a low-end computer terminal which concentrates solely on providing a graphical user interface to the end-user (think of a user-terminal at the public library). The remaining functionality, in particular the operating system, is provided by the server.

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