TREND TALK_by Amin Marts

The Forecast is Cloudy

Computing in the Cloud is Taking its Rightful Place with Online Hosted Backup and Recovery Services

The cloud is here to stay. Computing in the cloud is becoming a permanent fixture in small business vernacular. In the April issue of *Novell Connection* we talked through the tools being made available to knowledge workers that don't exist on their desktop. Rather, these tools live as elements of SaaS, or software as a service. Frankly the affects of oil at US$130 per barrel will have profound affects on the economy, commuting habits and computing habits.

> Computing habits...how?

At a high level, the use of collaboration software will increase as the justification for business travel becomes even more stringent. Following suit, anyone who is business-continuity minded knows the media containing your backed-up data must be off site. Depending on the compliances standards your business subscribes to, there are proximity guidelines outlining where this secondary data can and cannot live. This data often lives in a separate data center located blocks, miles, timezones or even multiple power grids away. The problem is a large part of the global economy can't afford this type of redundancy or protection. With the commoditization of broadband, the principle barrier which has kept smaller businesses from enjoying industry-leading backup practices has been eliminated.

Reducing the costs associated with moving data as well as leveraging the available bandwidth fully, especially as it relates to larger files is similar to the arguments in support of cloud computing. Realistically, associating these bedrock principles of computing provide a foundation on which a robust online backup environment can be built.

A number of cloud computing players exist in the market. As with any market, the sound, well-built solutions normally bubble to the surface. Nothing is different with regard to technology; the cream rises to the top and is then purchased. For example, Mozy Enterprise was an industry-leading online backup solution provider for personal and smaller enterprises. EMC bought the company in January 2008. This was a logical and sound strategic move on EMC's part much the same as its purchase of VMware and Legato. Mozy catered to the small to medium enterprise market which happens to be the fastest growing segment of the global economy. The acquisition seems obvious.

As an aside, this type of merger and acquisition is the method of innovation de jour for larger, well-established companies living in a Web 2.0 world. The creation of an innovative solution is often handled by smaller, more versatile organizations that can focus on a particular niche. In other words, they can put more wood behind a particular arrow in the market identification and building stages instead of having to cover multiple markets, with multiple products, across multiple business units. Long story short, companies such as EMC and Novell—with the purchases of SiteScape and PlateSpin—can take a technology to the next level without having the stress of determining if there is a market for a particular product.

Getting back on track. The small- to medium-enterprise market has unique requirements that make it ripe for cloud-based solutions. An overarching reason is the lack of an in-house technical staff. Traditionally, IT coverage was performed by committee, meaning whoever had time or knew the most was the IT man of the hour. This can work but it can also be time consuming and dangerous. For example, let's talk car repair; would you feel comfortable working on your brakes? What about the brakes of your child's car? The point is, on some occasions the risks outweigh the perceived short-lived financial savings.

For example, many organizations have learned the hard way that backup and recovery, namely the execution of it, should be left to the pros. Regarding the execution, I'm talking about the removal of media from its original location. This could be a tape drive or autoloader. The setting of the appropriate retention policy, which is how long the organization wishes to keep archived data should also be considered. You also need to think about the configuration of a backup policy that adheres to acceptable Recovery Point Objectives (RPO) and Recovery Time Objectives (RTO).

RPO and RTO, although easy to understand, are noteworthy.

Why?

Data recovery parameters, such as RPO and RTO are a portion of the reason why backup and recovery should be kept in the hands of experts. Moreover, if not taken into account when configuring the backup environment you'll have an environment that's not fully protecting your organization. This protection is deeper than simply being able to recover a file here and there which accounts for 43 percent of all recoveries.

Recovery point objectives (RPO) describe the acceptable amount of data lost within a specific amount of time. While RTO (Recovery Time Objective), describes the duration of time within which a file or set of files must be restored. Both of these configurable settings are often aligned with a business process or service level agreement which outline acceptable parameters of recovery.

Seems simple enough, but when left in the hands of a non-techie, those parameters are not taken into account.

Configuring a backup environment devoid of these parameters is a job only half done.

Having taken the long way around, we've arrived back at backup and recovery in the cloud. Walking through a number of the encompassing caveats is critical to understanding the trend. As mentioned earlier, backing up to or via the cloud is enabled through advances in file compression and broadband technologies, but the human factor can't be overlooked.

The operating budget of the smaller enterprise is lean while competitive forces across the markets they service is stiff. Removing the overhead of purchasing autoloaders, the associated media, training staff, as well as contracting a service to pick up the media with oil going for US$130 per barrel can be become incredibly costly. Cloud computing on a whole helps to mitigate cost and reduce risk while managing complexity.

Let's talk about who are some of the players in this space.

A main stay of backup and recovery for years has been Veritas. Many Novell customers who have administered NetWare and GroupWise are familiar with, and have used Veritas BackupExec for data protection. As with many market-leading products, Veritas was acquired by Symantec. The core product has seen limited development until recently with the addition of online functionality. Titled, Symantec Online Storage for Backup Exec it provides offsite storage for disaster recovery and long-term retention. Additionally, Symantec presents two more core options for use. They are a complement for the local backup storage medium of choice or as a complete replacement for local backup media. Unfortunately, this feature set is only available for Windows.

Next from Symantec is Symantec Online Backup (SOB), which is a true cloud solution and targeted squarely at the smaller enterprise. Unlike the online storage option for Backup Exec for Windows, SOB requires no previous investment in backup software. This is a plus as the recovery, configuration and overall management is all performed from a browser. Lastly, its pricing is based solely on the amount of data in combination with the length of storage.

The suite of products available from Symantec are moderately impressive. Moreover, they are designed to fulfill a niche in smaller- to medium-enterprise computing. One feature that is not so product specific but buyer specific are the various pricing calculators. They do a very good job of simplifying the buying process for the consumer.

Moving along to another player in the online backup space is Broadleaf Services. They also target the smaller- to medium-enterprise space but do so with a strategic twist. Their product is named Archeon. In comparison to the Symantec offering, the sweet spot for the Archeon product is 100 to 150GB of storage. Protection is—and here's the twist—two layers deep. Most online backup solutions provide only a single layer with that layer being data in the cloud. But what happens if your Internet connection is down and you need to have data backed up?

Broadleaf addresses this by providing a physical backup target in-house. Once data is backed up here, it is then uploaded to another box in a data center. The beauty of the scenario comes in the form of data extraction. With solutions like Zmanda that use the Amazon S3 (Simple Storage Service) as a backup target, issues arise when attempting to extract your entire data set.

When would extracting your entire data set be applicable?

When your primary location floods, burns down or is infested with widget-making Gnomes. Basically, if you lose your primary server(s) and need access to your information in its native form, Broadleaf can simply pull the server out of its data center and deliver it to your door. The alternative with many solutions is ad hoc at best. If that same situation were to present itself not only would you or your technical staff be scrabbling to get desktops allocated and acquired but also how to get the data onto a usable server.

The sea of computing is always chock full of solutions ready to harvested. Some bad some good. In the arena of storage and storage backup, this has never been more true. Everyone has a storage problem and collaboration will exacerbate this issue. That said, we are at a good place if simply because many of the stumbling blocks that forced organizations into one camp or another are being removed. A major one was interoperability. With this and data portability on everyone's mind storage management will move closer to the center of computing rather than remain on the fringes. N