SaaS or SaaS?

Quick Note

John Webster
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Lately, we've seen two ways to say "SaaS":

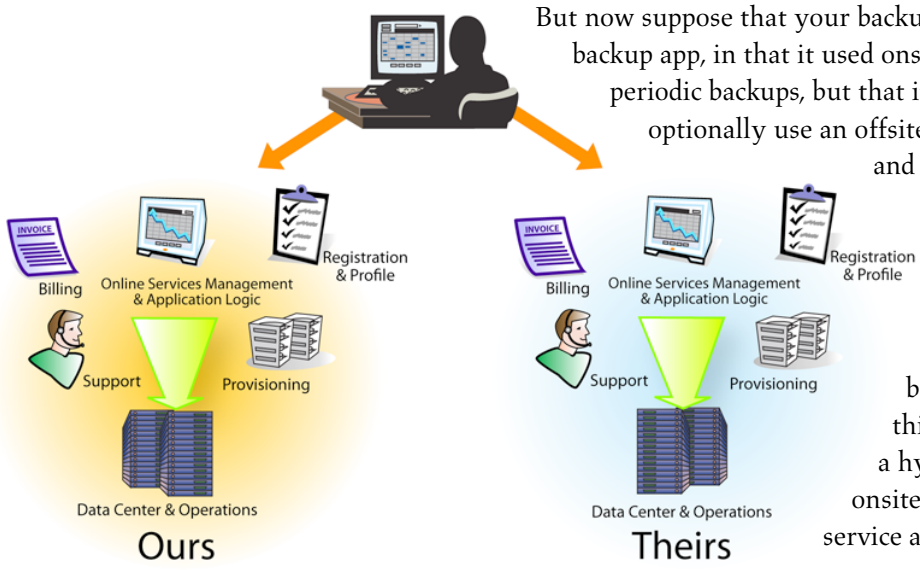
Software as a Service

Storage as a Service

You may be more familiar with the Software SaaS than you are with Storage SaaS. You may even use an online provider of Microsoft Exchange for example (Software SaaS). Or you may have need for a few extra terabytes in a pinch, so you might sign up for Amazon's S3 Storage as a Service (Storage SaaS). Easy to tell the difference, right?

Not really.

Let's say you use Carbonite to backup your laptop to some offsite location somewhere—you know not where because that's not your worry. The offsite storage goes with, and is an integral part of, the backup application running on your laptop. You just want it to work when it does its backup routine—and, more important, to work when you want to restore something you've lost. You'd say that's Software SaaS because Carbonite delivers a backup/restore application comparable to the backup software (say Symantec Backup Exec) you'd otherwise use, only delivered as a monthly service that you pay for "as you go."



But now suppose that your backup application behaved as any backup app, in that it used onsite media as a target for periodic backups, but that it also allowed you to optionally use an offsite storage facility (one owned and managed by someone other than your company) as a secondary backup target. What's more, what if that offsite storage option were an integrated part of the backup application? Let's call this type of backup application a hybrid, in that it supports both onsite media and offsite storage service as backup targets.

We think users should seriously consider adopting such hybrid approaches to provide layered, efficient data protection. We compare two recent examples of

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hybrid backup applications: Symantec's familiar Backup Exec with its Symantec Protection Network (SPN) option, and Zmanda's Amanda Enterprise with Amazon's S3 option.

Symantec Online Backup

In summer 2007, Symantec took its first steps into the new world of SaaS when it announced a beta version of the Symantec Protection Network (SPN). The first offering was the Online Backup Service that is designed for users without an existing backup solution and debuted to small-medium business (SMB) users.[1] The Online Backup Service automates the backup of computers (whether laptop, desktop, or server) running Symantec's Online Backup agent software. It connects via the Internet to multiple, redundant data centers owned and staffed by Symantec. As such, it is delivery of backup/restore software as a service. The only software the customer installs is an agent on each machine to be covered under this offering, which is generally available as of February 17, 2008.[2]

Online Backup customers pay a graduated monthly fee for capacity usage and data retention time (30 days, one year, or seven years). Discounts can be applied for by making an up-front annual commitment to maintain a specified capacity usage level. However, surcharges can be applied when that capacity level is exceeded.

Backup Exec for Windows Servers, Version 12

Now, Symantec is introducing a hybrid—a customer-resident software application plus optional online storage services—dubbed Backup Exec 12 for Windows Servers. With this new version, Backup Exec administrators can choose to copy onsite backups to Symantec's online storage repository. Here's how the SPN option works:

Suppose that as part of the normal backup process, tapes are sent offsite to a tape vaulting service. As a fully integrated option within Backup Exec 12, instead of writing and sending tapes offsite, a copy of the backup is sent to Symantec Online Storage and stored on disk, potentially eliminating the need for offsite vaulting of backup tapes—an increasingly risky business proposition.[3] Under the control of the Backup Exec server, compressed backup data streams are sent both to an onsite storage device (disk or tape) and Symantec's Online Storage service that uses an additional Online Backup Agent that resides on the Backup Exec for Windows server.

Note that, when using Symantec's Online storage repository, a customer will incur three separate charges: one for Backup Exec for Windows, one for support, and one for Symantec Online storage capacity.

As Symantec announces this new version of Backup Exec for Windows, it also introduces Symantec Online Storage for Backup Exec, a new Storage-as-a-Service offering that is provided from the Symantec Protection Network. Essentially, what Symantec has done is add a service to SPN. The first was Online Backup (software SaaS). It now adds Online Storage (storage SaaS). It is conceivable and perhaps likely that some customers will use both SPN services: Online Backup to protect mobile laptops and remote desktops, and Online Storage to eliminate sending backup tapes offsite.

Zmanda Internet Backup to Amazon S3

Zmanda is the commercial face of Amanda, an Open Source backup and recovery application that was first developed by coders at the University of

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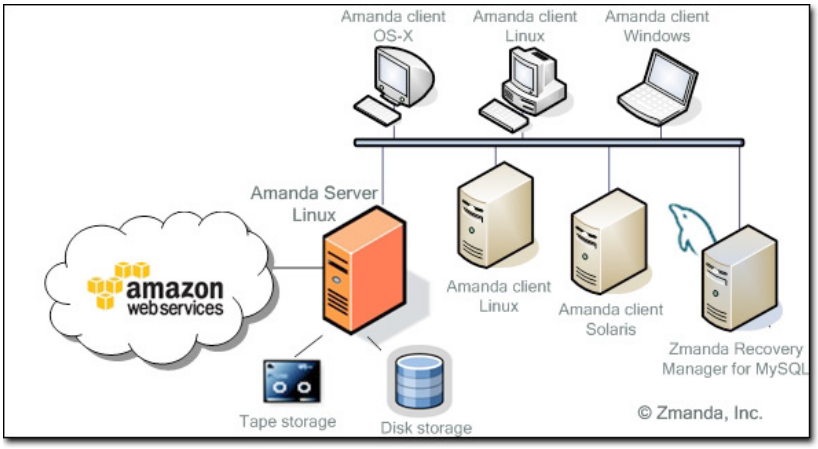
1 See our *Symantec's Protection Network: "Wire-wrapped" Software*

2 It should also be noted that while this service is compatible with Symantec Backup Exec, it is not Backup Exec delivered as a service.

3 Iron Mountain recently lost a backup tape from GE Money that contained over 650,000 customer records which had been stored offsite in an Iron Mountain facility. While the tape was encrypted and would have been next to impossible to read by anyone other than GE Money, the fallout from this event cost both companies in terms of public image and loss of good will, not to mention the expense incurred by GE Money in informing its affected customers.

Maryland in 1991. Zmanda counts over 500,000 Amanda system deployments; it is especially popular at universities, research centers, and HPC-oriented data centers. Partners include Red Hat, MySQL (now owned by Sun), and Oracle.



Zmanda's flagship product is Amanda Enterprise, a "commercial-grade, network-based backup and recovery solution designed to back up and recover files from multiple hosts across a network and store data on disk, tape, or optical devices." In addition to Amanda, Zmanda now offers Recovery Manager (ZRM) for MySQL—a spin-off of the original aimed specifically at MySQL-based databases and applications.

In January 2008, Zmanda announced that version 2.6.3 of Amanda Enterprise would support the use of Amazon's S3 online storage service as an additional backup target with an add-on option called Zmanda Internet Backup to Amazon S3. For Zmanda, S3 functions essentially as an alternative, open market analog of Symantec's SPN infrastructure.[4]

Amanda Enterprise now allows users to configure Amazon S3 as an additional target for backup and archiving. This must be done for each Amada Enterprise Server. After that, users of Amanda Enterprise will have three backup target choices: disk, tape and/or Amazon S3. Additionally, locally resident backups on disk, for example, can be copied to Amazon S3.

To use this option, users must purchase the Zmanda Internet Backup to Amazon S3 option and sign up to use Amazon S3 via Zmanda. S3 users are charged using a model that includes both data transfer and storage capacity usage.

Cost Considerations for Hybrids

It is important to note that, for both Symantec Backup Exec and Zmanda Internet Backup to Amazon S3, the cost of the Storage as a Service option is billed separately and in addition to the cost of the software application, other add-ons, and support. In both cases, these are monthly fees which can vary greatly depending on capacity used, how that capacity is measured, and how often it is accessed after data is stored. In both cases, customers pay for the software license (subscription in the case of Zmanda) and storage capacity used. In addition, contract terms may allow the online storage service vendor to increase usage fees over time.

There is a basic difference in the way that users of Backup Exec/SPN and Zmanda/Amazon S3 are billed for offsite storage. Symantec bills for backup capacity used as measured at the customer site. Remember that SPN is not a primary backup target from the view of Backup Exec. Rather, users copy backups that were made initially to primary targets (disk and/or tape), then optionally copy these backups to SPN. This actual, non-versioned, storage utilization by the customer is used to calculate the monthly bill for SPN services. The significance of this becomes clearer once one understands the pricing models in play.

Amazon S3 uses a pricing model that consists of two components: capacity and volume of I/O traffic. In the case of Zmanda Internet Backup to Amazon S3, users will be charged $0.20 per GB per month on data stored plus $0.20 per GB per month for data transferred into the S3 data center. Recovering and transferring data out of S3 using Zmanda is free (normally costs $0.13-$0.18 per GB,

[4] S3 supports many different users and provides an openly published API, whereas SPN and its API are limited to Symantec's use.

depending on volume) and those choosing to store data in a European S3 site will pay a little more for on-disk storage.[5]

SPN billing is a bit less complex. The online storage service is based purely upon a capacity tier. For example, if a customer sends 25 GB of compressed data to the Online Storage service, the customer is charged for 25 GB. Pricing for capacity used is tiered: 5 GB, 10 GB, 25 GB, 100 GB, or 250 GB. The highest defined capacity tier is 250 GB. However, a customer is able to go beyond that, but incurs overage charges at a flat rate.

In either case, when using the online storage services as an option, a customer will pay for the software license and storage cost that varies based on capacity plus usage fees at the offsite storage services facility. Since Backup Exec customers transfer data from an existing backup to SPN, they pay once for that data capacity under the software license fee, and once again under the SPN fee. However, because Zmanda supports Amazon S3 as a primary backup target, customers can avoid a double fee by opting to store selected backups only at Amazon S3.

Conclusion

We have reviewed but two of these application-plus-SaaS mashups. We expect more to follow in both the data protection and archival storage spaces. EMC could choose to offer Mozy as an optional service to Legato users, for example, as well as Documentum. Heathcare imaging is another prime candidate. Storage vendors with integrated digital image storage solutions for PACS could team up with a vendor like Iron Mountain, already established in the offsite archival storage and preservation of film-based studies.

It's as if the SSPs of years gone by suddenly figured out that the key to success was to align themselves with an application. In this case, backup and restore is the application du jour. Generation One SSPs thought that all they had to do was attach the Internet to a storage array. The new economy would then come along and make their new business model work. Not so. Generation Two gets it. The SSP concept is reborn a SaaS—in this case, both storage and software as a service.

[5] Further details are available at Amazon's S3 page (tinyurl.com/qx87a), which links to a handy "how much will it cost me?" calculator.