



The Software-Defined Storage Backup/Recovery Market

The philosophy underlying SDS is that data services and management control are both abstracted from the storage appliance, allowing for agility and scale in operations, while preventing the historical lock-in to specific vendors that has pushed storage costs up significantly.

Clearly, this looks like an attractive business proposition to the IT community, which has led to older products being rebranded as “SDS” where clearly it’s business as usual. At this time, a good rule of thumb is that true SDS packages come from startup companies. This carries a bit of risk for the user, which can be mitigated by careful selection of the software vendor.

■ Making the Right Choice

Key decision points in today’s market revolve around ease of use, and particularly how complex a new installation is to set up. In the ideal world, policy files would be common across all of the better vendors; basic, and even advanced operations, should be easy and intuitive to set up; recovery should allow files, images or volumes





and restored with low pain and high accuracy and saved data should be in a format that other backup tools can access rather than some proprietary format that is aimed at creating lock-in.

Good tools are hardware agnostic. They handle SANs, NAS and DAS with all the standard protocols. Just as importantly, good tools are cloud agnostic. They can talk to ALL the major cloud services, providing backup for cloud storage, and tiering between different archiving services.

Cost tracking is a needed feature. The art of storage management in the cloudy future will revolve around total cost management with the implication that data will move around a lot in a highly competitive and rapidly evolving market. We are still in the early phase of this and a “Good” rating implies reporting is available, though in two years time having “what if” capability will be the norm for that rating.

The last major decision point is of course price. With a spectrum covering historical vendors who still charge many thousands for a solution, and startups at a level that falls in line with cloud prices measured in cents, this is perhaps the first measure to be applied in looking for a short list.

■ Why Traditional Vendors Struggle

The historical model for pricing is a lead weight around the neck of the traditional vendor. They look for client engagements yielding thousands of dollars, even down into the SMB space. They are loaded up with the need for training, expensive support and add-on features.

Technically, they suffer, too. Most traditional software comes from a tape-based era, with evolutions for disk-based backup in recent years. The cloud is requiring yet another makeover. A good analogy is if Chrysler were building today’s green vehicles on a Dodge Dart chassis. There’s just a lot of baggage!

■ The SDS Contrast

The SDS startups are coming from current master design specifications that conform to how data flows during its lifecycle





today. User interfaces fall in line with current expectations, rather than overstretched CLI paradigms. Flow is optimized for efficiency and parallel scalability allows transfer speeds to be sped up or throttled as needed.

■ The Economic Argument

Cloud-based backup and archiving is very cheap today, with numbers in the cents per month range. Clearly, the economic argument for using cloud services is compelling and the result is a wholesale movement of archiving and backup to the cloud.

The transition to new SDS applications for this space isn't moving as fast, even given the mismatch of traditional vendor pricing and the cloud. In part, this is laziness...there are petabytes of existing archives to reprocess out to the cloud, while the usual fear of change adds to the lethargy...where users feel that the status quo using existing traditional software makes for a smooth transition. But often that smooth transition is to a locked in proprietary structure in the cloud.

Inevitably, staying with traditional vendors will lead to much higher archiving costs, but the fears of transition have to be addressed by both the new SDS software and by cloud vendors. The tools should ease the transition by automating the move from existing solutions in the salt mine. Cloud vendors should make available upload from tape and other media and minimize the cost of doing so.

■ Summary

Software-Defined Storage is about to remake the storage market. Startup backup software vendors are aligned already to the scale-out philosophy enshrined in the SDS approach and aim to deliver hardware agnostic solutions. These offer great agility and resulting cost savings over traditional approaches and best service the cloud backup/archiving approach that is fast becoming the industry standard.



Comparing Vendors

The software vendor base is fairly broad so some categorization is useful. There are three identifiable groups. These are the SDS backup startups, the non-SDS startups and the traditional vendors. Our focus is on the SDS backup startups, but it's essential to understand where the other players sit, especially as claims of "SDS-like properties" abound, causing some confusion.

Backup Software Feature Comparison

Feature	SDS Products							
	RingStor	Asigra	Novastor	Acronis	Veeam	Datto	Storage Craft	Actifio
	Enterprise	Cloud Backup	NAS, Bus Essentials	Backup Adv			Shadow Protect	
Market segment	SMB, Ent	Ent	PC, Ent	SMB, Ent	Ent	Ent	SMB, Ent	ENT
Own Hardware	N	Y	N	N	N	Y	N	CISCO
Own Cloud	N	N	N	Y	N	Y	Y	Via AWS
Total Module count (Business)	1	12	2	6	7	7	12	1
Deploy as Virtual Appliance	Y	Y	N	N	N	Y	Y	Y
Hardware Neutral	Y	Y	Y	Y	Y	N	Y	Y
Private Cloud Backup	Y	Y	Y	Y	Y	Y	Y	Y
Hybrid Cloud Backup	Y	Y	Y	Y	Y	Y	Y	Y
Direct-connected Tape/Optical Backup	N	Tape	Tape	Tape	Tape		Optical	N
Public Cloud Backup - AWS	Y	Y	N	N	Y	N	N	Y
Public Cloud Backup - Google	Y	Y	N	N	Y	N	N	Y
Public Cloud Backup - Azure	Y	Y	N	N	Y	N	N	Y
Local Backup	Y	Y	Y	Y	Y	Y	Y	Y
Cloud-Cloud Backup	Y	Y	N	N	N	Y	N	N
FTP	Y	Y	N	Y		N	N	Y
Support for NAS/SAN/DAS	Y	Y	Y	Y	Y	Y	Y	Y
Staging to meet backup window	Y	Y	N	N		N	N	Y
Compression/deduplication	Y	Y	N	Low-50%	Poor	N	Y	Y
Dedupe in appliance	N	Y	N	Y	N	N	N	
Snapshots	Y	Y	N	N	Y	N	Y	Y
Encryption at Source	Y	N	Y	Y	At cloud	Y	Y	Y
Secure Key Management	Y	Y	Y	Y	?		N	Y
Incremental backups	Y	Y	Y	Y	Y	Y	Y	Y

SDS Products

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	Enterprise	Cloud Backup	NAS, Bus Essentials	Backup Adv			Shadow Protect	
Continuous backup	N	Y	N	N	Y	Y	Y	N
Differential backup (Bare Metal and SQL)	Y	Y	Y	Y	Y	N	Y	Y
Recovery tools	Y	Y	Y	Y	Y	Y	Y	Y
Restore from Local Backup	Y	Y	Y	Y	Y	Y		Y
Customizable Retention	Y	Y	N	N	Y	Y	Y	Y
Task Scheduler	Y	Y	Y			Y	Y	N
OS Support								
Windows Backup	Y	Y	Y	Y	Y	Y	Y	Y
Linux backup	Y	Y	Y	Y	Y	Y	Y	Y
Chrome Support	Y	Y	N	N	N	N	Y	N
iOS	Y	Y	N	N	N	N	N	Y
Oracle	Y	Y	N	Y	Y	N	Y	N
Virtual systems support								
VMware	Y	Y	Y	Y	Y	Y	Y	Y
MS Hyper-V	Y	Y	Y	Y	Y	Y	Y	Y
Citrix Xen	N	Y	N	Y	N	Y	Y	N
Containers	N	Y	N	N	N	N	N	N
Red Hat KVM	N	Y	N	Y	N	N	Y	N
Versioning limits	Y	N	N	N	N	Y	N	N
Retention by policy	Y	Y	N	N	N	N	Y	Y
Multi-tenant customization	Y	N	N	N	Y	N	N	N
Load-balancing	Y	N	N	N	N	N	N	N
Multiple backup replica creation	Y	N	Y	N	Y	N	N	N
Application aware backup								
MS Exchange .pst	Y	Y	Y	Y	Y	Kroll	Y	Y
MS Exchange mailbox	Y	Y	Y	Y	Y	Kroll	Y	Y
SQL Server	Y	Y	Y	N	Y	Y	N	Y
SharePoint	N	N	N	N	Y	Y	N	Y
Office 365	N	Y	N	N	N	N	N	N
SAP	N	N	N	N	N	N	N	Y
Dropbox	N	N	Y	N	N	N	N	N
Google Apps	N	Y	N	N	N	N	N	N
Configurable Reporting system	Y	Y	Y	N	Y	N	N	N
Scripting support	Y	Y	Y	N	N	N	N	N
Community self-management	Y	N	N	N	N	N	N	N
Data Pruning	Y	N	N	N	N	N	N	N
SNMP	N	N	N	Y	N	N	N	N
Emergency Full Backup (Windows)	N	N	N	Y	N	N	N	N

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Max Storage per node (TB)	N	N	N	N	N	60	N	
WSS Price per month/yr	10/m							31,000/yr
WSS Upfront costs		*3	3000	999		1878	1095*1	
Own Public Cloud Service	N		N	N				N
Own Private Cloud Service	N		N	Y		Y	Y	N
Price per month/yr	\$10/serves/mth					350/TB/mth		
Upfront costs	None					1200		

Figure 1

*1. This is just one of the modules. It isn't clear what a minimum set costs.

2. Actifio sells cloud connect at 4.07/hour(32K/yr). It appears to run in a cloud instance. Appliance version starts at 25K list.

RingStor

Designed from the start as a cloud-focused solution, RingStor is highly featured alternative to the more traditional offerings in the backup space. It is simpler to use, with all the control systems in a single user interface talking to a single module – there are no add-in modules or complex configurations to worry about.

RingStor has created a true Software-defined storage solution. There are no hardware dependencies, no proprietary clouds and the software is relatively unconstrained. Moreover, there are no vendor-specific appliances to be bought, which is a common failing of traditional vendors (See Figure 1).

The utility has a very broad reach, aligning with the 4 market leaders in features. Admittedly, it lacks tape support, but it was after all designed for the cloud! Backup facilities exist for all the necessary use cases, covering all of the important OS environments including Chrome and Oracle, supporting the spectrum of hypervisors and servicing many online app environments, including MS Exchange.



Cloud support is excellent – no favoring a single cloud. All the major CSPs are covered as backup destinations, which means any minor players are also accessible if needed. Creating a private or hybrid cloud backup system is supported as well as cloud-cloud backup, making RingStor very versatile in today's environment.

Encryption of data is done properly at the source, something that a couple of the larger traditional vendors need to address. This guarantees data security for the whole lifetime of the data in the cloud, both during transit and while stored away.

RingStor can be deployed as a virtual appliance, meeting the needs of a true software-defined infrastructure and providing agility in performance scaling and resilience against virtual machine failure. This fits the newest storage paradigm really well.

On the back-office side of backup, there is a configurable report generator. Other nice features include multiple replica generation, load-balancing across resources and multi-tenant customization, including self-management. Retention policies are supported as is versioning. These features lift RingStor above their competition.

As a true software-only, cloud-vendor independent solution, RingStor is ideal for the channel as a reseller or integrator product. Add the cost-effective licensing and this makes a discussion with RingStor's sales team worthwhile.