Online Backup Services

The market place

Executive summary

The amount of data used by businesses has increased exponentially, in the past five years alone. Corporate scandals, international unrest and glaring security flaws in computer operating systems and software applications have resulted in intense and detailed analysis of data, as it enters and leaves an individual's PC/enterprise computer.

With the proliferation of the Internet, data sensitive resources like computers cannot be viewed in isolation – they have become supply chains in themselves. This supply chain has now gotten integrated with the next level of data movement of data backups - from end user's (individual/enterprise) PC to online backup locations, located at an offsite location in a different geography.

It is this data movement – from the end user's PC to the online backup location that will be the focus of this white paper.

Why has the extension of data movement from user's PC to the online backup location gained significance?

The private information stores of several prestigious organizations, largely sensitive and personal in nature, have been lost, misplaced or accessed by hackers. With the emergence of affordable, high-speed Internet connections, online backup solution providers are gaining popularity by offering numerous advantages over traditional tape strategies.

Gartner research corroborates their business strategy as well, with its popular report that states that '**71% of all tape restores fail**'. This is an alarming statistic for anyone used to the traditional system and should send a warning signal to thousands of SMBs who rely solely on it. Many SMBs have paid heed and embraced online backups, as we will see later.

The objective of this white paper is to highlight the key aspects that separate online backups from its predecessors and why the concept has gained currency in the recent past.

Online Backup

Online backup can be defined as a web-based service that specifically allows customers to back up files to a secure or protected site i.e. a remote data center. The purpose of the service is to create a second copy of the customer's primary files, to insure them against any loss of data.

Online backup systems are typically built around a client software program that runs on a schedule, typically once a day. This program collects, compresses, encrypts and transfers the data to the servers of a remote backup service provider. Other types of product are also available in the market, such as remote continuous data protection (CDP).

Providers of such services frequently target specific market segments. High-end LAN-based backup systems may offer services such as near-real-time transaction-level replication or open file backups.

Industry Analysis

Category Definition

The online backup services can be broadly classified as follows:

1. **Backup Service Resellers** – Middlemen, charging their clients for the use of another company's backup software, hardware, and/or support network.

2. **Online Data Storage /Data Repository Vendors** – Rent out space on their servers permitting clients to park data there – with variations on accessibility and sharing.

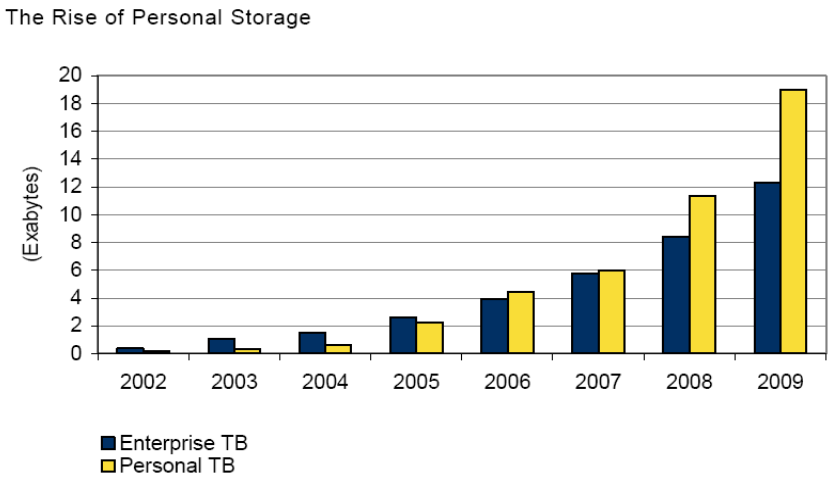
3. **Remote Backup Service Providers** – Typically use locally hosted client and server software and manage their own storage servers.

The online backup vendor landscape:

1. Vendors who offer DR (disaster recovery) services catering to large enterprises and SMB's. Here the need of the hour is how fast the enterprises can recover their data.
2. Basic information security through online backup offerings built on the SaaS (software as a service) strategy catering to needs of enterprises/SMB's or both. Records management etc. form a part of their portfolio (ex: Iron Mountain).
3. Online backup vendors who cater to needs of customers having mass-market appeal (ex: Mozy, Carbonite, IDrive etc.)
4. OEM vendors who either specialize in white labeled online backup offerings or offer online backup as a part of their overall portfolio ex: Adobe Photoshop uses Iron Mountain Connected as a backup provider) to archive photos online.
5. Online backup vendors catering to needs of a specific niche segment or an industry vertical. Ex: Iron Mountain Livevault caters to specialized server backup needs.

Category Analysis

The online backup/storage industry has been growing steadily and the backup volume is expected to triple by 2009. The majority of the market is dominated by Small Office/Home Office (SOHO) and SMBs.



Source: IDC Storage Systems Research

Industry Players

Large Players
Iron Mountain Connected, Symantec
- ✓ Focus on mid-size and large enterprise
- ✓ Focus on feature rich solutions (Healthcare, Finance) and also consulting

Mid sized high potential players
IBackup[1], Mozy (now a division of EMC)[2], Carbonite[3], IDrive[4], Omnidrive[5], iStorage[6], XDrive (a division of AOL)[7]
- ✓ Focus on individuals and SMBs
- ✓ No frills, low cost products – most of them offer SaaS (Software as a service)

New Players
Dell, Microsoft, EMC, Google
- ✓ Dell providing free online backup for all new desktop/laptop
- ✓ Google planning to enter with Platypus

Market Size and Segmentation

The market can be segmented* broadly into the categories:

- **End consumers -** Online PC backups for their home/offices. Typically, services such as Mozy, Carbonite, IDrive cater to this price sensitive consumer segment.
- **SMBs** – Online PC backups for their home offices/corporate setup. Typically, services such as MozyPro, IBackup, Iron Mountain Connected etc. cater to the needs of this segment. Partners are also common in this segment.
- **Large enterprises – vary from a few hundreds to tens of thousands of employees** - Online PC backup; require online server backup offerings such as database backups, server backup abilities. Typically, services such as Iron Mountain Connected dominate this segment.

IBM estimates that the market for online backup services is currently worth USD 2.3 billion in annual revenue, and is growing at around 30% per annum

IDC analyst Doug Chandler has put a smaller number on the market and currently pegs it at under USD 500 million.

The Yankee group has recently put the overall market size at around USD 1.3 billion with a five year CAGR of 32%. Further, it estimates that SMBs contribute to a large market, which is difficult to penetrate. Multi-year deals could be to the tune of USD one to five million. Large enterprises deals could involve USD 10 million and more.

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[1] http://www.ibackup.com
[2] http://www.mozy.com
[3] http://www.carbonite.com
[4] http://www.idrive.com
[5] http://www.omnidrive.com
[6] http://www.iomega.com/
[7] http://www.xdrive.com

Key Success Factors

Some of the key factors contributing to their success:

Multiple OS and file systems: Most online backup/storage solutions have support for multiple OS (Linux, Windows, Solaris, Unix) and file systems (NTFS, FAT, Linux, etc.)

Security: Nearly all the online backup services provide secure communication using 128-bit encryption. It is a mandatory feature without which customers will not trust the providers with their critical data.

Another differentiating factor lies in the ability to encrypt and compress data, as it leaves the end user's PC to the data center of the online backup service provider, during a typical backup procedure. The retrieval procedure involves data decryption only after the data is sent back the end user's PC in an encrypted, compressed format.

Most online backup providers stress on the fact that the data cannot be viewed in the remote storage location, keeping in mind the stringent regulatory requirements laid out by various acts.

Access: Most online backup services have international versions of their product-wares with user-friendly web access, which provides flexibility in usage by breaking all geographical barriers.

Ease-of-use: Most online backup providers provide 'must have' features like drag-n-drop, updates via email, file sharing etc.

Customer service: As with any SaaS provider (Software as a service provider), the online backup companies seek to differentiate themselves based on the fact that they have 24x7 on-call support for their customers/users.

Value Addition

To understand the value that comes from the existing products for online backup (esp. at the bottom of the pyramid) a value addition list was developed. In this, we considered top of the recall brands/pure online backup players that dominate the bottom of the pyramid segment of online backup and have products targeted for the mass market and the individual user.

Security
Performance
Reliability
Confidentiality
Brand Name
Purchase/Package Price (per GB)
Operating Cost (Bandwidth price)
Support Cost
Switching Cost

Apart from the basic value additions provided above, some of these providers differentiate themselves based on the following factors:

- ✓ To aggressively position the service as a SaaS (software as a service) where one does not charge for the product (they give it away for free) but for a recurring monthly/annual subscription fee with plans based on different criteria mostly related to storage space being leased.
- ✓ Provides no frill basic storage with lower performance @ low price (penetration pricing)
- ✓ Trying to build a strong user base, critical for success
- ✓ Lay utmost emphasis on ease-of-use, automation of online backups, and ensure performance is always given top priority.
- ✓ Provide a host of features, premium product with premium pricing

Feature / benefit comparison of online backup providers

For a comprehensive feature-benefit independent analysis of online backup providers, we need to segregate their needs and wants, depending on the sector they operate in.

For the sake of simplicity, let us categorize them into three distinct sectors catering to:

- End consumers or the mass market
- SMBs
- Large enterprises

Further, let's categorize them into **must haves** and **high wants**.

Must haves

- Username/password based authentication
- High encryption for all data being transmitted to the data center of the online backup provider
- Support for fast backups after the initial backup in terms of advanced incremental backup technologies.
- Compressed backups to help conserve end user's bandwidth (since it is at a premium for this segment of users).
- Data versioning to help users retrieve their files as of different backups
- Automated hassle-free backup that does not involve user intervention to initiate daily backups. Users prefer a 'schedule it, forget it' kind of a routine.
- Open file backups
- Bare file/folder retrieval i.e. the ability to retrieve backed up data in one piece
- Backup versioning where at least 10 to 30 copies of user data is maintained.
- 24 X 7 access to technical/customer support

Most providers have these basic features. In fact, some services like Mozy Enterprise offer a 'guaranteed 15-minute response time', which holds appeal for customers who want to get immediate technical support.

High wants

- **Encryption of data at rest**: Customers prefer their data to be encrypted using either the key provided by the service provider or a custom chosen key to encrypt their online backups
- **Support for myriad operating systems**: Most providers expect a support for Windows, Linux, Mac OS based systems to suit their individual requirements
- **Web-based central management console**: Most service providers provide this ability that helps them manage their backup job status, view detailed logs of backup/retrieval activity among other reporting features.
- **Data center requirements**: Most customers prefer certain basic norms such as earthquake protection, fire protection etc. from the data centers at which online backup companies host their data. It is an additional protection if these data centers are also certified on some standards such as SAS-70 Type II etc.
- **Support for MS SQL/Oracle/Exchange server backup**: This is more an SMB and an enterprise class requirement where customers are looking for a cost-effective online backup solution that can take over the online backup of their databases without bringing the databases down during the process.

Pricing

Pricing has always proved to be an Achilles-heel for online backup providers as it keeps changing constantly, in the hyper competitive environment of today.

If we trace the history of online backup to its early stages in late 1990s and early 2000s, the trend was to introduce a free four to five GB plan to familiarize the mass market with the concept. It was discarded when the dotcom boom was busted and a lot of online backup companies went out of business.

Subsequently, most online backup providers introduced the SaaS model, where they offered multiple plan types and charged on a differential basis, based on storage. This was almost USD 19.95 per 5 GB per month (such as those charged by Connected Corporation then (now a part of Iron Mountain). Other vendors restricted their pricing to USD 14.95 for five GB per month.

This scenario changed drastically as storage costs kept plummeting and newer providers created disruptive innovations with aggressive pricing such as those offered by Mozy and Carbonite in 2006 when they charged USD 4.95 per month for unlimited storage. The belief (as supplemented by Carbonite founder, David Friend) is that people upload only so much data to an online backup and this does not usually exceed 100 GB.

How the vendors plan their pricing strategies

Vendors either charge per GB of data backed up by the customer or per GB of storage made to their vault. An alternate pricing strategy is to charge per device of storage. Usually, they do not charge for the online backup software (which comes free and forms the essence of the SaaS model) but on basis of the monthly/annual subscription cost of using the service.

Newer technologies emerging in the field of online backup

Emerging technologies include items like data de-duplication, email archiving etc. It is an innovative landscape and service providers will continue to differentiate themselves based not only on the product and price but also on the ability to innovate.

Recent changes in the online backup landscape (since 2007)

- ✓ New player, IDrive (http://www.idrive.com) enters the low cost segment of this online backup marketplace in Jan 2007.
- ✓ SeaGate acquires EVault in Jan 2007.
- ✓ EMC CORPORATION acquires Mozy in August 2007 for USD 76 million.
- ✓ IBM acquires Arsenal Digital solutions in Dec 2007.
- ✓ EMC CORPORATION is set to acquire Iomega (as of April 2008) for USD 213 million.

Conclusion

With the dynamic landscape and new entrants emerging each year, online backup is an exciting space. Innovation coupled with sound business model exhibited by various players has stamped its authority in the storage sector. While mergers and acquisitions will continue in this field, it is poised for a well-planned growth trajectory, as echoed by the belief of large industry behemoths in their acquisition rationale of smaller, niche players, in the segment.