



WHITE PAPER

Choosing the Right Service Provider for Storage as a Service

Sponsored by: AT&T

Paul Hughes
September 2014

IN THIS WHITE PAPER

This white paper examines the current trends in enterprise storage, the ongoing growth and shift toward cloud-based storage services, and how enterprises should choose a cloud service provider. This white paper also provides an overview of AT&T Synaptic Storage as a Service.

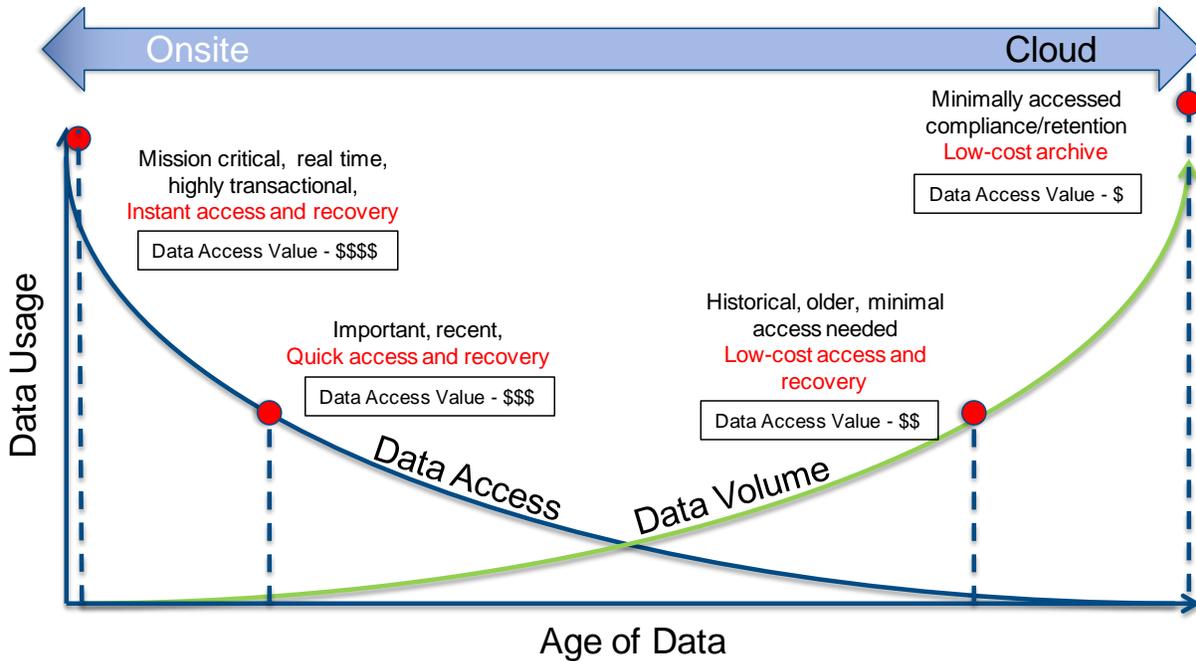
SITUATION OVERVIEW

Moore's law clearly states that computing capabilities (speed, networking, etc.) are doubling every two years, a pace that is well beyond the ability of most enterprises to manage. The massive expansion of internal IT has become a driving point for many organizations to evaluate using cloud-based storage options. Data volumes are increasing faster than legacy networks and traditional scale-up storage arrays can support, and most storage and IT managers must address the daunting task of managing the exponential growth of data. Today's enterprises are seeing explosive growth of unstructured data, increased file sizes, and greater demands from IT users to access the data from multiple sources. Throw in the growing demand for bring your own device (BYOD), and suddenly, managing data growth, security, and storage effectively becomes a daunting task.

All of these issues are driving factors for business model change, particularly where companies are looking to limit the expense of large-scale storage expansions, technology refreshes, and migrations. For companies with limited resources and IT real estate, enterprise storage requirements have forced IT departments to transform the way resources and services are procured, managed, and delivered to the user. On one hand, most enterprises are bound by regulation and compliance rules, requiring existing data to be stored for seven years or longer, regardless of how infrequently it may actually be accessed. Enterprises need lower-cost, long-term storage options for these data types, thus driving increased demand for efficient long-term, but less expensive offsite archiving options. Avoiding long-term business outages from a disaster must be addressed either with an offsite backup and recovery strategy or with a cloud-based option (see Figure 1).

FIGURE 1

Managing Access and Costs Along the Data Life Cycle



Note: Data access value is the cost category given to data based on enterprise need to access data.

Source: IDC and AT&T, 2014

From another angle, enterprise end users need access to mission-critical data from fixed network and mobile devices, driving the need for easy access and the ability to integrate with devices that may be brought in by the user. Typically, high-speed disk and flash storage speeds are best for instant data access, but enterprise users can also use cloud storage solutions designed for file sync and share, as well as collaboration.

Every enterprise should constantly be evaluating its storage strategy as technology migrations drive either the replacement of older storage hardware, the addition of newer hardware, or the use of cloud as an offsite alternative. Today's enterprise trends show the evolutionary changes in the ways firms back up and recover data. The use of tape or more traditional client/server backup infrastructure is becoming a slower and less effective alternative to cloud-based offerings, thanks to a higher-cost structure, both in hardware and in overhead costs. These traditional methods are more challenging to upgrade without disturbing existing processes. Enterprises may be unwilling to upgrade application or infrastructure updates because of the risk of the existing backup and recovery time not meeting acceptable time frames or SLAs. These older approaches also affect the way virtual machines can be protected.

The cloud is now an effective alternative to traditional onsite storage. Moving storage to a service model shifts costs to an operational expenditure model, allowing the enterprise to embrace dedicated storage services for backup and recovery, data archiving, and file sharing/collaboration. Customers pay for only what they use, which eliminates the worries around technology refreshes and migrations.

THE MOVE TO CLOUD STORAGE AND STORAGE AS A SERVICE

This next era of storage and data management will require storage architectures capable of 24 x 7 operation and access, and enterprises must be ready to meet the growing scale in order to keep up with the explosion of new data. Enterprises have two choices to support data demands:

- Build an in-house scale-out storage architecture that creates data storage pools from multiple networked storage devices.
- Evaluate the cloud for a storage-as-a-service model that grows and scales based on customer needs, offers a variety of pay-as-you-go service usage, and helps reduce onsite datacenter resource challenges.

For start-ups, and small and medium-sized businesses with limited IT resources, investment in networked storage arrays may be a capital expenditure that is simply too great, as cost requirements will include, and are not limited to, maintenance and support, HVAC, and staffing to support the infrastructure.

IDC's ongoing research in storage and data management services has shown that the use of storage as a service continues to gain traction, particularly for file-based storage, backup and recovery, archiving, and collaboration. These services, when offered via the cloud, allow ubiquitous access for users from any secure endpoint and facilitate access to mission-critical data.

Backup and Recovery as a Service

Using the cloud for backup and recovery is now being embraced as a more secure method to store data offsite. The cloud becomes a central method for storing data captured from highly distributed endpoints such as satellite offices and mobile devices. Most enterprises expect either one or two copies of core data to be available in case of a disaster scenario. For companies with limited datacenter expansion capabilities, the cloud may end up being the only viable option for backup, particularly if an internal backup strategy requires additional storage hardware and datacenter space. Use of the cloud for backup and recovery allows internal IT to better handle the day-to-day data management needs of users while reducing capital costs by shifting the task to a third-party cloud provider.

Many enterprises also see the advantage of using internal disk for backup in the form of a backup appliance onsite in conjunction with the cloud as an intermediary step. These systems are being deployed more often, thanks to features that include NFS/CIFS, deduplication, compression, tape emulation, and encryption. Data replication and mirroring from an appliance to the cloud allows data snapshots to be created more frequently and provides another recovery point for the enterprise.

Archiving as a Service

The goal of a cloud-based archiving service is to provide storage for data that typically is accessed infrequently, if at all. It is optimized for long-term data retention and security and meets all compliance and regulation policies. Unlike offsite storage where data is stored either on tape or in vaults, a cloud-based archive provides the ability to search via metadata tags. Archived files are also protected from any overwriting or tampering. For most organizations, cloud-based archiving meets all client legally specified data retention policies. Cloud-based archiving also provides the user with confidence

because data is typically replicated once or twice, guaranteeing that it is always readily available and is protected against any unfortunate disasters.

Cloud-based archiving is cost effective because it eliminates the cost of implementation and maintenance of internal storage archives, and it can be highly beneficial for organizations with large retention requirements. It also eliminates the need for hardware/technology refreshes throughout the life of the data, as well as related hardware maintenance, support, and staffing costs.

Cloud-Based File Sharing and Collaboration

Use of the cloud for file sharing and collaboration has exploded in popularity over the past few years. Today's offerings serve a particular business need, such as storage, social networking, productivity apps, or email. Cloud-based file sharing allows multiple users to access files centrally via the cloud, creates unique versions of documents once a file is altered, and is significantly faster than emailing large documents back and forth or using an FTP server. Typically, file sharing and collaboration starts within a single department within an enterprise and grows virally across an organization once usage gains traction and cross-departmental collaboration is needed.

Cloud file sharing and collaboration, like backup/recovery and archiving, immediately shifts the cost structure away from expensive capital investments by enabling companies to capitalize on needed technology and eliminate installation and configuration of onsite IT systems. Organizations can work with a provider to get services up and running quickly, and services are typically priced on a per-seat model. Access and security become centralized, companies pay for only what they use, and any software- or security-related updates are automatically managed in the cloud by the cloud service provider.

CHOOSING A STORAGE-AS-A-SERVICE PROVIDER

Organizations ready to embrace the cloud for a variety of storage options must navigate an expanding landscape of technology providers, some of which are dedicated to a specific niche service, and others that support a broader array of offerings. For any company that is looking for cloud-based options, a multistep strategy should be in place.

- **Define your cloud storage strategy.** Storage and data management as a whole becomes more effective to the organization when the business understands the processes and relationships and how new services can benefit them.
- **Create a technology road map.** With a clear cloud strategy in place and an end goal determined, identify the cloud-based services that will help the organization achieve its end goal. This includes gaining a detailed understanding of how storage-as-a-service offerings can drive time-based and cost-based efficiencies.
- **Think beyond just a single cloud service as a point solution.** The benefits of any cloud-based storage transformation should extend well past the datacenter. A broader cloud storage offering creates new opportunities to enable a broad range of new business efficiencies, all potentially tied to a single vendor source.

- **Determine the importance of integrated cloud and network technology for your business.** Cloud-based services are dependent on a robust network that allows secure access to data. Service providers that offer both network capabilities and cloud-based storage services offer a unique position in today's cloud storage market, being able to offer robust SLAs for both cloud service continuity and network capacity.
- **Conduct extensive vendor due diligence.** Today's cloud service provider landscape is made up of technology start-ups, communications service providers, storage hardware providers, and managed service providers. Many of these organizations work directly with customers and others that use partners. Industry leaders in one segment of the storage-as-a-service market may not have offerings in other areas; thus organizations looking for one-stop shopping for a broad range of cloud services should evaluate a more defined vendor landscape, which typically narrows the playing field to communications service providers or storage hardware vendors.

SERVICE OVERVIEW: AT&T SYNAPTIC STORAGE AS A SERVICE

AT&T has a unique position in the cloud storage market space because of its long-standing reputation as a managed services and communications service provider. As such, AT&T can offer both cloud assets and network assets to its customers. AT&T is also well seasoned in storage as a service, with AT&T Synaptic Storage as a Service being launched in May 2009. It has since evolved from a simple object storage offering to a comprehensive managed services offering. AT&T Synaptic Storage as a Service is now supported via four datacenters in Virginia, Texas, the United Kingdom, and the Netherlands. The service encompasses a broad range of storage, distribution, and data retrieval options using any Web-enabled device. AT&T Synaptic Storage as a Service was designed with AT&T network assets in mind, letting customers use the AT&T network cloud to store, distribute, and retrieve data as needed to meet their business or legal requirements. Customers access the service through a Web-based customer portal, and the service automatically scales needed storage volumes up or down as needed. Customers simply pay only for the amount they use.

AT&T leverages EMC as the technology provider for cloud storage and file share/sync and collaboration. For backup and archiving, AT&T uses the EMC Atmos policy-based information management platform. This, along with numerous network access methods, allows users to access data via the Internet, wireless network, virtual private network, cross-connect from a collocation center or directly from the AT&T network cloud via a virtual private network or other transport service. This gives users the ability to create a virtual private storage cloud protected by AT&T network-based security services. Users have the option of two policy structures that allow for either one or two copies of data in the cloud, both with erasure coding to prevent accidental data loss. Data storage costs starting at \$0.05 per gigabyte, with a \$0.10 charge per gigabyte for transport out. Currently, about half of AT&T's customers store two copies of their data in the AT&T cloud. AT&T also uses EMC Syncplicity for its file sharing and collaboration service. The offering is integrated as part of a greater storage service offering, allowing a fully managed Enterprise File Sync and Share service out of the AT&T IDC locations and network, and is rebranded as an AT&T-based service. AT&T also has certifications for federal and other industry compliance, including FedRAMP, ISO 27001, and HITRUST.

AT&T has expanded its customer reach by using both direct and partner sales strategy for its service, working with Riverbed, TwinStrata, Seven10, Panzura, and EMC, which also can expand the storage-as-a-service offering to include a physical gateway appliance that sits in the customer's datacenter.

CHALLENGES/OPPORTUNITIES

The biggest challenge that AT&T and the storage industry as a whole face is helping customers deal with the ongoing sprawl of infrastructure to support storage needs. Typically, an average enterprise may end up using multiple backup and recovery tools, cloud storage and collaboration services designed more for consumer than business, and offsite physical storage for archiving. While this may be effective, it is not efficient, particularly when data management is growing in importance. These inefficiencies can also create substantial disconnects across infrastructure, internal processes, and staff.

AT&T cloud storage offerings have evolved into a comprehensive one-stop shop for backup, archiving, and collaboration. Whether offered as a single or part of a comprehensive offering, these services, combined with network assets, lay a strong foundation for organizations that aim to reduce costs and improve operational efficiency. At a time when standalone cloud storage providers like Google and Microsoft are moving to an unlimited model, none of these providers have their own network assets or the ability to offer a combined bundle of enterprise services that may include communications and cloud-based services delivered over their own secure network.

CONCLUSION

Any IT transformation that embraces the cloud involves a paradigm shift of moving internal IT processes and resources. At a time when technology refreshes remain an expensive capital cost component of the business, the ability to shift costs to an operational model and reduce constant cash outlays on hardware and related services will continue to gain in popularity.

AT&T has been a world leader in communications and networking and has made substantial investments in cloud technologies that help its customers work smarter. Customers lacking internal resources to manage the growth of data are prime candidates for comprehensive cloud-based storage services that AT&T can provide today. Through its backup and recovery, archiving, and collaboration services, AT&T is effectively helping IT organizations tackle multiple data management problems, all via the same service provider solution set.

AT&T's success in storage as a service to date is due in part to the company's long-standing position in managed services, early adoption of cloud, investment in AT&T Synaptic Storage as a Service functionality, and customer trust, thanks to stability of the brand and financial strength. These strengths, coupled with AT&T's secure network assets and ability to bundle a broad range of enterprise services for its customers, should help solidify the company's position as a cloud leader for the foreseeable future.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

Global Headquarters

5 Speen Street
Framingham, MA 01701
USA
508.872.8200
Twitter: @IDC
idc-insights-community.com
www.idc.com

Copyright Notice

External Publication of IDC Information and Data – Any IDC information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate IDC Vice President or Country Manager. A draft of the proposed document should accompany any such request. IDC reserves the right to deny approval of external usage for any reason.

Copyright 2014 IDC. Reproduction without written permission is completely forbidden.

