White Paper

Veritas Access Appliance Offers a Balance of Economic and Operational Benefits

IT Decision Makers Say the Solution's Price Is Attractive, but Its Ongoing OpEx Advantages Hold Even More Appeal

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Introduction

The state of the information technology industry is in flux. But that has always been the case. IT is well-known for constant evolution.

What is explicitly different now is that the digital economy has grown beyond being a marketing term into official, full-fledged reality. At this point, great portions of the global business world would stall if they lost their newfound digital empowerment. In some cases, the success of these businesses is now wholly based on millions of electronic files and billions of transactions.

But the ancillary effect is that organizations are experiencing rapidly expanding volumes of data, upsurges in the value of data, and increases in the functional complexity of IT. ESG found that 68% of the IT decision makers it surveyed believe IT is more complex now than just two years ago. According to 41% of those respondents, one of the biggest causes of the complexity is their ever-growing volumes of data.[1]

Vendors have worked hard to ensure the solutions they develop can address the challenges associated with more data being more valuable. They've accomplished that effort in part by selling offerings that accommodate public cloud, hybrid cloud, and multi-cloud environments. The strategy does appear to conform to IT's current usage patterns and styles: 51% of the organizations surveyed by ESG now leverage infrastructure-as-a-service (IaaS), and 39% take advantage of platform-as-a-service (PaaS) to run applications without needing onsite hardware.[2] In addition, 81% of the organizations that use public-cloud IaaS and/or PaaS reported they have decided to use more than one cloud provider.[3]

Even though cloud computing's benefits are obvious at this point, having to manage a multi-cloud/hybrid cloud environment can bring yet more complexity. Thirty-three percent of the survey respondents said using on-premises data centers and public cloud services together makes IT more complex for them.[4]

Additionally, ESG has observed other drivers of complexity come into play, for example:

- The natural latency of off-prem clouds, which can cause a business's employees and customers to experience operational slowdowns.

- Compliance, security, visibility, and accessibility considerations that lead organizations to feel compelled to continue retaining large amounts of data onsite.

IT organizations need a strong "bridge" connecting their on-premises and multi-cloud environments—a bridge providing access to flexible cloud infrastructures *and* delivering cloud-model economics in a speedy on-premises solution.

A new software-defined storage solution called Veritas Access Appliance 3340 might be that bridge. It combines the CapEx and OpEx savings characteristic of cloud storage with the low latency of onsite hardware and software. This hardware/software combination enables IT teams to recover backup copies and archived files quickly and economically. The product eliminates the "either/or" conundrum (i.e., the need to opt for either "cheap" or "fast") by plugging into an organization's cloud environments, yet providing recovery/retrieval speeds that are typically only achievable using onsite gear.

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[1] Source: ESG Master Survey Results, *2018 IT Spending Intentions Survey*, December 2017.
[2] ibid.
[3] Source: ESG Brief, *2018 Public Cloud Infrastructure Trends*, April 2018.
[4] Source: ESG Master Survey Results, *2018 IT Spending Intentions Survey*, December 2017.

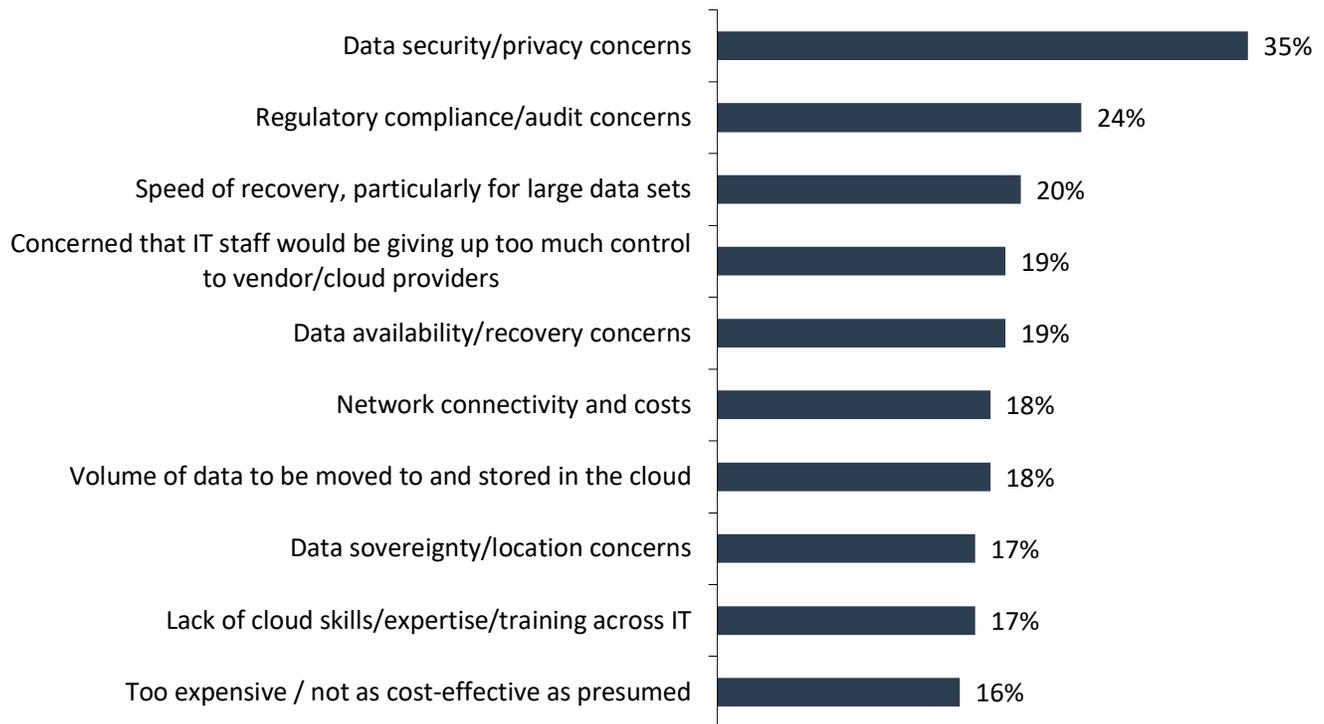## Investigating the Data Center/Cloud Gap in Data Protection

Backup and archiving represent excellent use cases for connecting an on-premises IT infrastructure to an off-premises one. ESG has researched the trend, finding that 40% of the organizations it surveyed use cloud infrastructure services as a repository for backup and/or archive data.[5] The new results are consistent with previously conducted ESG research into cloud-based data protection—this trend is not fading.

However, regardless of organizations' sustained cloud-adoption activity, data protection remains their number-one storage-related challenge.[6] And improving data backup and recovery is their second most commonly identified area of significant investment for data center modernization.[7]

Some insight into why those challenges and priorities persist shows up in the results of ESG's research into factors preventing pervasive usage of cloud-based data protection. As Figure 1 shows, concerns about security, compliance, and recovery speed each play a role in suppressing cloud adoption.[8] While the survey focused predominantly on data protection concerns, it is not a stretch to presume that similar considerations and worries would be associated with cloud archiving as well.

Figure 1. Top Ten Factors Preventing Increased Use of Cloud-based Data Protection

In general, which of the following factors would you say are preventing your organization from using cloud-based data protection services more pervasively? (Percent of respondents, N=212, multiple responses accepted)

Factor	Percent
Data security/privacy concerns	35%
Regulatory compliance/audit concerns	24%
Speed of recovery, particularly for large data sets	20%
Concerned that IT staff would be giving up too much control to vendor/cloud providers	19%
Data availability/recovery concerns	19%
Network connectivity and costs	18%
Volume of data to be moved to and stored in the cloud	18%
Data sovereignty/location concerns	17%
Lack of cloud skills/expertise/training across IT	17%
Too expensive / not as cost-effective as presumed	16%

Source: Enterprise Strategy Group

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[5] Source: ESG Brief, *2018 Public Cloud Infrastructure Trends*, April 2018.
[6] Source: ESG Master Survey Results, *2017 General Storage Trends*, November 2017.
[7] Source: ESG Master Survey Results, *2018 IT Spending Intentions Survey*, December 2017.
[8] Source: ESG Research Report, *Data Protection Cloud Strategies*, December 2016.

Basically, nearly all of the concerns that the respondents identified to ESG indicate a need for an on-premises solution that is cost-effective (i.e., similar in price to a tape library or cloud subscription) yet boasts the speed and low latency of on-prem storage.

Veritas Access Appliance

Organizations with workflows that involve occasional retrieval of semi-dormant data desire capacity that is nearly as inexpensive as a tape library or a cloud subscription, but that sits on-premises and is thus much faster. As mentioned, Veritas Access Appliance 3340 could be the long-term data retention product these organizations have been waiting for. At its heart is intelligent software—Veritas's proven software-defined storage sitting on purpose-built, cost-optimized appliance hardware.

Access Appliance features deep, deliberate integration with other Veritas data protection solutions, particularly the popular Veritas NetBackup backup and Veritas Enterprise Vault archiving products. The result looks to be an extremely easy-to-deploy, simple-to-operate, end-to-end packaged solution whose individual components are optimized for data protection workloads.

Those qualities of ease, simplicity, and optimized architecture could help an organization reduce its IT operating expenses. For example, Access Appliance 3340 should support any company that experiences challenges with:

- Chronic overspending on primary storage to hold semi-dormant production data.

- Recurrent spending on high-performing backup devices—because maintaining service level objectives for recovery and uptime must be the priority.

- Involuntarily non-productive workers who are forced to wait until the archived data they need is retrieved for them from tape or a cloud service.

Not a Replacement for the Cloud—Filling the Cost/Performance Gap

Some people might regard Access Appliance as a long-term retention appliance, but that's a bit of a misnomer. The concept behind the solution stemmed from Veritas's observation that organizations are running out of primary storage capacity but are loathe to buy more because it is so expensive, especially for holding archived files or semi-dormant production data.

In these cases, organizations often decide to look to tape libraries due to the great dollar-per-terabyte profile of tape technology. But for a lot of workflows, tape's latency proves prohibitive. Some companies need to retrieve cold data on occasion or even on a somewhat regular basis, and the time-cost of restoration from tape or retrieval from a public cloud can be unacceptable.

This is the cost/performance gap. And Veritas has created software-defined storage to fill it. Access Appliance provides on-premises, fairly low-cost-per-terabyte capacity that is almost as inexpensive as tape and that definitely has a lower cost of ownership than primary storage. It also has performance characteristics that rival the speed of primary/production storage. It tiers to the cloud transparently—with multi-cloud tiering supported—and IT admins can set policies for it, even creating one big storage pool if they wish.

> Mind the Gap with Veritas Access Appliance
>
> **This is on-prem, low-cost, easy-to-use, high-performing capacity that tiers to the cloud transparently, with multi-cloud tiering supported.**

A Multi-cloud, Single-pool Architecture Can Overcome Multiple Challenges

In a recent survey, 29% of respondents told ESG they struggle with inadequate integration and cooperation between their cloud operations and other IT domains.[9] Inadequate integration was one of the top-five challenges identified by respondents using public cloud infrastructure services. In a closely related finding from that survey, 22% of those IT managers reported challenges in moving data workloads transparently between their offsite cloud service and their onsite data center(s).

Clearly, they would benefit from a solution that allows them to integrate their processes and knowledgebases, that supports cooperation between their teams, and that essentially allows everyone involved to view and manage all data as a big pool that quickly and seamlessly flows to and from on-prem locations and off-prem clouds.

Beyond Latency and Cost, Scalability and Capacity Matter Too

One reason many organizations choose tape storage is that they are required to store huge amounts of data—sometimes many petabytes. (Think of film-editing production companies, for example.) They have traditionally viewed tape as the only affordable option for them. If they used traditional onsite storage architectures, they'd inevitably run out of money and space.

But the cloud is in essence unlimited, and it solves those problems. Thus, a cloud-accessibility product that has no storage lock-in restrictions, data-migration problems, or capacity-expansion problems is appealing.

A Few of the Enterprise-level Qualities of Veritas Access Appliance 3340

- Resilient, with high capacity—can scale up to 2.8 petabytes.

- Offers a high-availability architecture with active-active nodes.

- Features a RAID architecture for durable, long-term data retention.

- Offers policy-based, automated tiering to the cloud.

- Integrates with Veritas NetBackup, NetBackup CloudCatalyst, and Veritas Enterprise Vault.

- Includes registration/CallHome. Register the appliance at the Veritas MyAppliance portal, and enable integrated CallHome functionality.

Customer Case Studies Show the Real-world Value of Access Appliance

Over the past several months, ESG has engaged in sustained discussions with Veritas representatives about the ability of Access Appliance to provide measurable benefits to real-world organizations. Veritas provided ESG with a sampling of what a few of these Access Appliance customers are experiencing.[10]

Customer One—Moving from Legacy Tape

The IT decision makers at a large public-sector agency responsible for maintenance and administration of personal health and insurance records are now leveraging a Veritas integrated solution to assist them in their effort to evolve beyond legacy tape backup. The managers determined that moving beyond tape was not only a smart business decision, but also a necessary one. Essentially, they needed to act after confirming that the agency:

- Was operating an expensive, non-integrated, tape-heavy solution requiring lots of manual intervention.

- Would experience serious negative financial impacts if data-loss and chronic outage issues were not resolved. (This agency actually had lost data due to an inability to read several backup tapes.)

- Would be noncompliant with a new government requirement if it did not pursue a better approach.

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[9] Source: ESG Master Survey Results, *The Emergence of Multi-cloud Strategies*, April 2018.

[10] Certain details have been scrubbed to protect the anonymity of the three Veritas customer organizations. It should also be noted that they were each existing Veritas NetBackup users at the time they purchased and implemented Veritas Access Appliance.

The decision makers chose a fully integrated backup and long-term retention solution from Veritas that would help them move from legacy tape to tapeless backup and enable them to take advantage of the cloud.

Today, Veritas is supporting this agency's retention requirements for the next three to five years with a solution composed of Veritas NetBackup Appliances, Veritas Cloud Catalyst Appliances, the Access Appliance 3340, and professional services to help with data migrations off legacy tape. The agency uses NetBackup for short-term data retention, Access Appliance for one-year data retention, and the cloud for seven-year archiving. As a result, it is now seeing benefits tied to:

- Increased data integrity (no more data losses due to unreadable tapes).
- Cost reduction.
- Simplification that comes with using an integrated, one-vendor solution.
- Better application performance.
- More efficiency thanks to global deduplication reducing the amount of data to be backed up.
- Improved business agility and flexibility.
- An ability to migrate to and from the cloud.
- Compliance with the government-issued regulation.

Customer Two—Maintaining Uptime

This organization runs a very large, complex environment, and it was being challenged by availability problems. Specifically, it had been experiencing media server outages at the hardware layer that were putting it at risk of regulatory noncompliance. The outages were also forcing its staff to engage in manual, error-prone efforts to move backup jobs from downed or overloaded media servers to operational ones. It was an unsustainable situation: The organization needs to run an average of 60,000 discrete backup jobs nightly to a private cloud—it was a nearly impossible effort when the backup servers went down.

Maintaining uptime was just one need, however. The organization also wanted to increase performance, reduce its backup requirements (a problem that was the outcome of unlimited retention), lower its TCO, and find a better alternative to all those manual server restorations.

The purchasing decision makers determined that Access Appliance would be a low-risk implementation allowing them to retain the things they liked about their existing architecture while improving performance, simplifying the environment, and reducing risk and cost. The new software-defined storage appliance could simply be "slipped under the covers," enabling them to create media server load balance pools, leverage global deduplication, and consolidate their small storage pools into larger, more efficient clusters.

Today, with Access Appliance in place, this organization has a much more reliable enterprise-wide solution for long-term retention. And as a result, it is seeing benefits such as:

- **Global deduplication**, which has reduced the amount of data stored in the backup environment. A side-effect of that improvement is increased performance and lower storage costs.

- **Better media server load balancing** without the need to perform frequent manual fixes—the process is now automated. With the new architecture, any one of the media servers could go offline, but backups will proceed nonetheless.

- **Consolidated storage pools** that have produced a one-third reduction in media servers needed, which of course would translate into a much easier-to-manage IT environment.

Customer Three—Reducing Costs and Absorbing an Acquisition

This organization's most urgent need centered on cutting more than $1 million in costs—particularly storage costs—following huge unavoidable rises in expenditures and a subsequent reduction in the company's stock price.

Veritas and the organization worked together to assess the situation, and they determined it would be possible to achieve significant savings by moving stale data to lower-tier storage and leveraging Access Appliance.

There would be three important supplemental benefits to this strategy as well:

- First, the organization was in the middle of a major acquisition—it was acquiring another company that had almost twice as many employees. Access Appliance might be able to support the management of the acquired companies' data.

- Second, this company was constantly being hit with legal/compliance issues overseas, and the new solution might help it overcome or at least alleviate those problems.

- Third, Access Appliance would help the organization make progress in its efforts to take better advantage of hybrid cloud computing.

Today, Access Appliance is providing a far more cost-effective solution for the organization's NAS/tier-2 storage. The organization can also use its Access Appliance with its NetBackup software for backup storage processing if desired.

The company is managing its environment more efficiently and securely—achieving millions of dollars in savings as a result—and it has made considerable progress in being able to take maximum advantage of hybrid cloud IT.

The Bigger Truth

Software-defined storage is in the DNA of Veritas. The company started as a software vendor. Access Appliance is Veritas's proven software-defined storage running on purpose-built, cost-optimized appliance hardware. This product could be an incredibly flexible tool for any organization that maintains cold data with warm pockets.

Part of its flexibility stems from the product's rather distinctive ability to allow an organization to replace the hardware under the software license. Because the software licenses are detached from the hardware, an organization can choose to replace the appliance hardware with its own hardware somewhere down the road.

The initial CapEx of Access Appliance is low, but the ongoing OpEx, especially for workflows requiring retrieval of cold data, is as well. The OpEx is, at least in the cases identified by Veritas, low enough to eventually more than offset the one-time CapEx savings an organization would have seen by buying additional tape libraries or lower-end backup servers/storage.

Access Appliance is faster than restoring data from a public cloud, and certainly faster and more reliable than ordering data to be restored from tape. With RTO capabilities better than tape's at a cost comparable to a tape library, it could potentially be a great replacement to support appropriate workloads.

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