Solution Showcase

Modernizing NAS Backup and Recovery

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Abstract: The exponential growth of structured and unstructured data across organizations is placing significant pressure on IT professionals using legacy point backup solutions. The challenges to manage and protect the unstructured data in the infrastructure can be addressed by Cohesity with a unified and cloud-ready data management platform.

Market Landscape

ESG research shows that overall data growth is continuing across organizations with an average annual growth of 27%.[1] A lot of this data goes to network attached storage (NAS), which is the most widely deployed on-premises storage technology and has remained the top platform for the past two years, with 63% of organizations reporting using NAS as part of their infrastructure (see Figure 1).[2] NAS platforms store the many types of unstructured data created by a multiplicity of users and applications. IT organizations have a mandate to protect business data. Our research also shows that data protection is the file storage challenge reported by the highest percentage of IT and storage infrastructure professionals.

There is a significant amount of unstructured data and files spread across many systems and locations in the enterprise. It creates a phenomenon of mass data fragmentation, which comes at a high operational cost: two-thirds (67%) of organizations report that it leads to budget wastage, and nearly half (49%) report that it creates employee overwork situations and compliance risks (49%). These operational efficiency issues are compounded by data protection hindrances.[3]

It is easy to see how the combination of the massive and constant influx of unstructured data poses a challenge to ensure appropriate and timely protection of these assets. As a matter of fact, 57% of organizations surveyed were not very confident in their ability to recover from a major data loss event.[4] It has become critical to identify and deploy new ways of protecting NAS platforms to meet the top data protection mandate reported by ESG research respondents of improving recovery point and recovery time objectives.[5] Short recovery times and "fresh" backups are needed for ongoing business continuity.

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[1] Source: ESG Master Survey Research, From Data Backup to Data Intelligence, to be published November 2019.
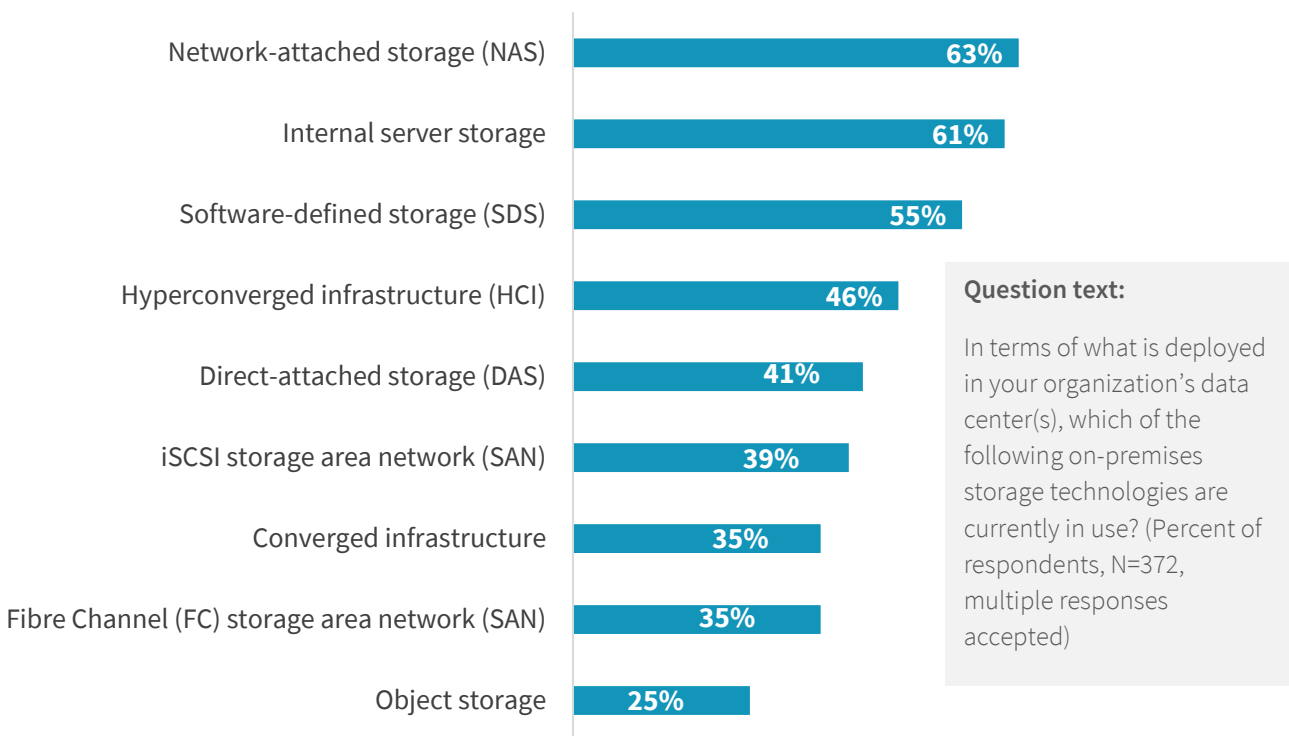[2] Source: ESG Master Survey Results, 2019 General Storage Trends, to be published November 2019.
[3] Source: ESG Research Insight Paper, *Mass Data Fragmentation Is Quietly Killing Digital Transformation Efforts*, May 2019.
[4] Source: ESG Research conducted on behalf of Cohesity, Inc. For more information, see ESG Research Insight Paper, *Mass Data Fragmentation Is Quietly Killing Digital Transformation Efforts*, May 2019.
[5] Source: ESG Master Survey Results, *2018 Data Protection Landscape Survey*, November 2018.

Figure 1. NAS Is the Storage Technology Most Deployed in the Data Center

Network-attached storage (NAS) — 63%
Internal server storage — 61%
Software-defined storage (SDS) — 55%
Hyperconverged infrastructure (HCI) — 46%
Direct-attached storage (DAS) — 41%
iSCSI storage area network (SAN) — 39%
Converged infrastructure — 35%
Fibre Channel (FC) storage area network (SAN) — 35%
Object storage — 25%

Question text:

In terms of what is deployed in your organization's data center(s), which of the following on-premises storage technologies are currently in use? (Percent of respondents, N=372, multiple responses accepted)

Source: Enterprise Strategy Group

Solving A Legacy Problem: The Cohesity Solution

That's why a modern approach to NAS backup is necessary—a unified end-to-end data management and protection solution that consolidates target storage, backup software, replication, and disaster recovery on a single solution with easy cloud integration for achieving operational efficiency and meeting service level agreements (SLAs).

The time has come to remove older technology and protocols such as legacy file backup and NDMP to meet modern requirements. While these were great processes years ago, the multiplication of systems and the exponential growth of files and unstructured data in general as well as increased cloud adoption have affected backup and recovery windows and operational recovery flexibility. A change in approach is needed.

New technologies and features are needed to meet modern requirements, such as:

- Flexibility and granularity of backup and predictable recovery.

- Auto-discovery of data assets to protect.

- Storage optimization through deduplication and compression.

- Incremental forever backups for higher performance and storage cost.

- Advanced recovery capabilities that scale on-premises and in the cloud.

- Primary storage snapshot integrations (i.e., no NDMP).

- Cloud integration.

That's where Cohesity's data management platform can help. Inspired by web-scale architecture, Cohesity is a software-defined hyperconverged solution that unifies backup and recovery infrastructure, including target storage, backup software, replication, and disaster recovery on a single cloud-native solution. In this case, hyperconverged also means *converging all of the backup infrastructure and supporting industry-leading traditional and modern data sources on the Cohesity scale-out platform*.

In addition, the solution comes with built-in integration with the leading public clouds for cloud-native backups and long-term archival, tiering, and replication. It supports generic NAS and includes advanced snapshot-based integration with NetApp, Dell EMC, and Pure storage systems—this means no NDMP backups.

A few salient features of the Cohesity solution should be noted:

- The ability to stream across all available cluster nodes, bridging the performance gap of single-threaded legacy protocols like NDMP.

- Instantly and fully "hydrated" data available to any authorized host, server, or storage system.

- Automation and easy administration, such as policies, auto-discovery of NAS volumes, multi-stream backups, metadata indexing, and global search across data sources and locations.

- Integrated cybersecurity against ransomware attacking backup copies and vulnerability management.

- Cloud integration with the leading public cloud providers for archiving/tape replacement use cases, as well as scalable cloud-tiering and cloud disaster recovery.

The combination of modern capabilities and optimized technology and processes solves a variety of issues for end-users. It simplifies and hardens the backup and recovery schema across the NAS infrastructure, modernizes the data protection topology for performance and scale, and makes it cloud-ready by design.

The Bigger Truth

Simpler, more resilient, and operationally efficient NAS backup and recovery is a great start, but what about being able to do more with all this data? The real prize beyond backup and recovery is the ability to reuse data assets for other business outcomes, including security, compliance, and analytics. The data assets are protected but not leveraged. They are dormant, so why not use them to advance one's business?

The ability to reuse data for enhanced business outcomes, such as analytics or to improve dev/test processes, whether on-premises or at web-scale, is also one of the benefits of using the Cohesity solution. It allows organizations to transform siloed and dormant data into a potential source of additional value for the business.

Cohesity is doing a very credible job providing a web-scale solution for improved backup and disaster recovery. It is fully invested in the next stage of the market: data management, a stage in which organizations reuse traditional backup data for the creation of additional value. These are very good reasons to give Cohesity a close look.