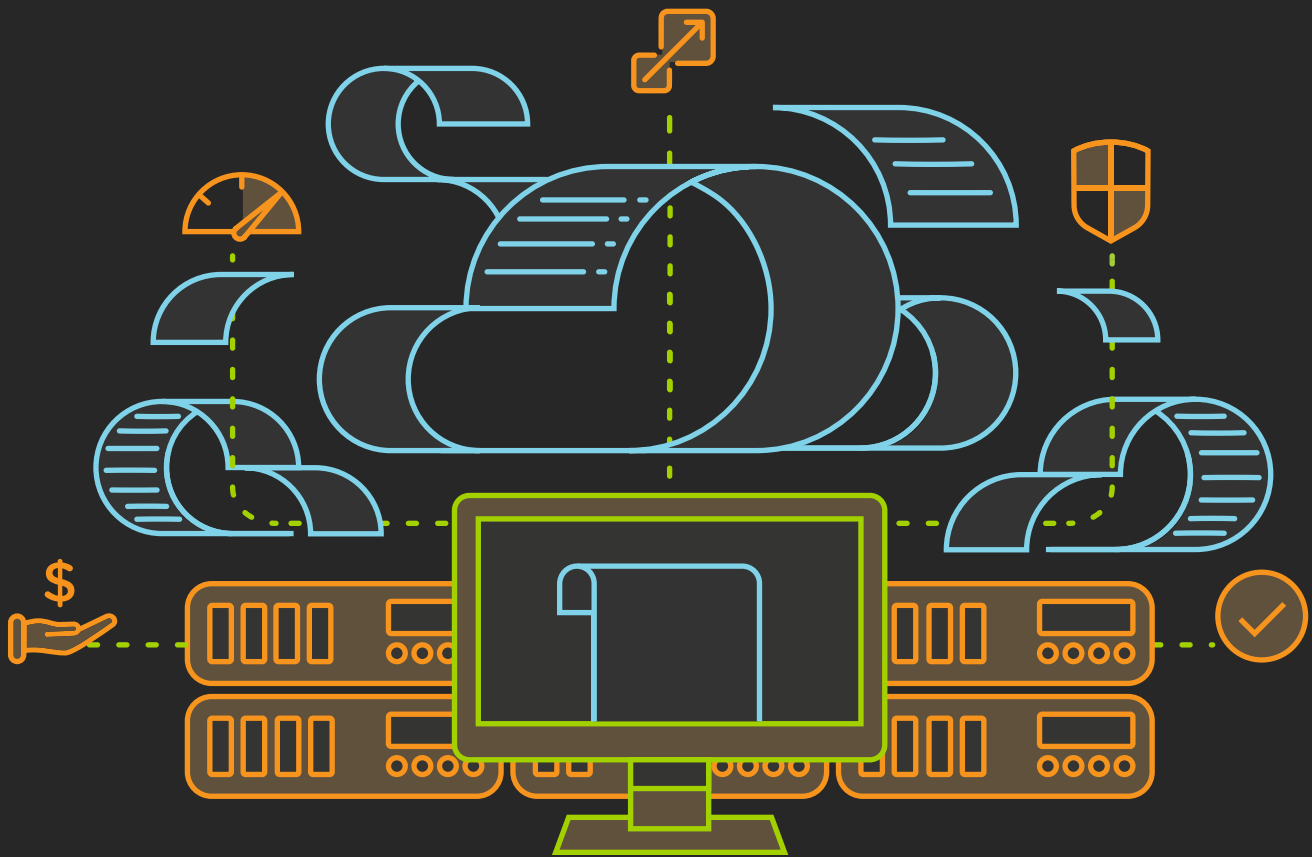


Storage Virtualization: Making Your Storage Wish List Come True



NEC

Introduction

Whether your organization is all about big data or not, your storage requirements are likely to be as large as ever—and growing all the time. In fact, according to the Interop ITX and InformationWeek 2018 State of Infrastructure study, rapid growth of data and data storage technology is the biggest factor driving change in IT infrastructures, far exceeding all other factors.¹

While IT professionals are not strangers to phenomenal data growth, the unprecedented volumes have reached a new threshold—one where traditional approaches to storage simply aren't sustainable. "If you go from 20 terabytes to 100 terabytes, that's phenomenal growth," says Scott Sinclair, senior analyst at ESG. "But if you go from a petabyte to 10 or 20 petabytes, now you start talking about a fundamentally different scale for infrastructure."²

As a result, today's IT professionals are facing the additional challenge of making changes to their approach to storage, as well as planning for more changes in the future.

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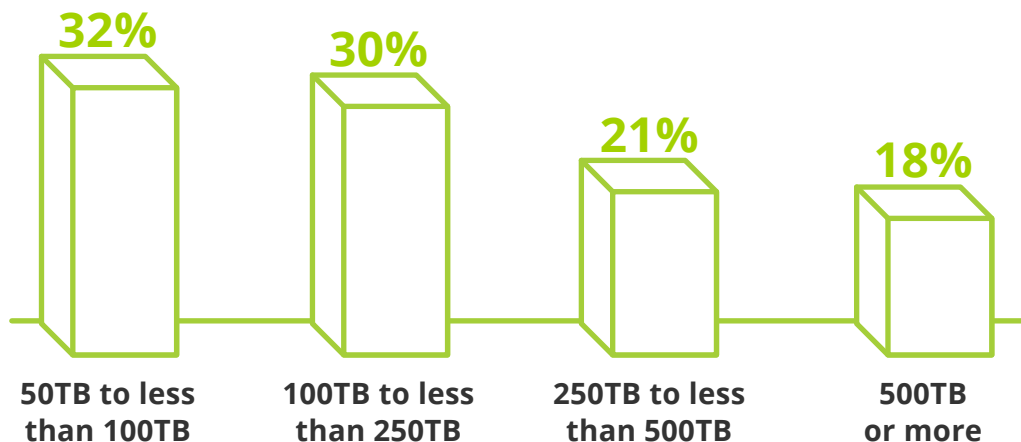
-Scott Sinclair, senior analyst at ESG²

The State of Storage

Storage virtualization is one of the many technologies IT organizations are turning to in the quest to manage growing data stores effectively and efficiently. The use of storage virtualization itself has boomed in recent years. According to the Interop ITX study, 38% of respondents say some or all of their storage is virtualized (or software-defined), while 31% are either planning to implement it in the next 12 months or are looking into it.¹

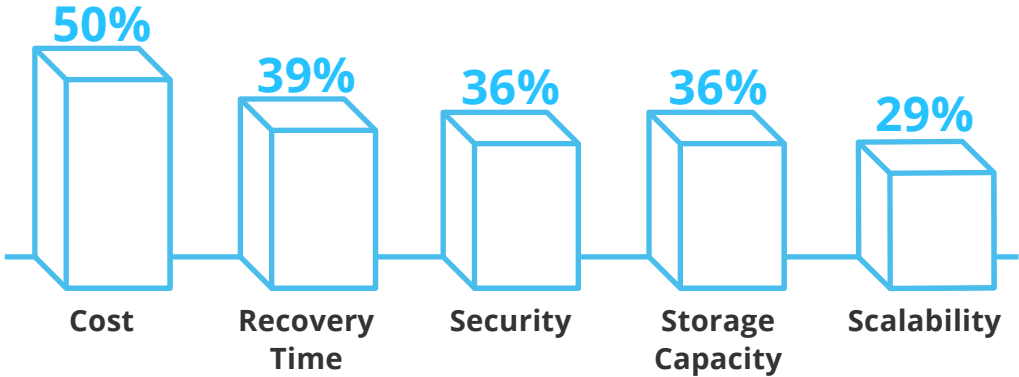
But when it comes to storage virtualization implementations, exactly how much data are we talking about? A survey of IT decision makers conducted by Spiceworks specifically examined organizations that use virtualization or a storage appliance to back up substantial data stores (50 TB or more). Nearly 70% are backing up 100 TB or more. Almost 39% are backing up more than 250 TB. And almost 20% are backing up more than 500 TB.

Total Data Currently Backed Up



IT pros are using a wide range of solutions to meet their data storage and backup needs, but they are not necessarily satisfied with them. When asked to evaluate their existing data center storage solutions, IT pros named five challenges: cost, recovery time, security, capacity, and scalability.

Top Challenges with Current Datacenter Storage Solutions



Clearly, many IT pros' current data center storage solutions are leaving a lot to be desired, creating more obstacles to solving an already difficult problem.

A Storage Wish List

Naturally, many IT pros are evaluating new solutions that better meet their needs. When asked what they look for in a data storage solution, respondents said the five most important factors are:

- 1 **Security and compliance**
- 2 **Cost/value**
- 3 **Performance**
- 4 **Capacity and scalability**
- 5 **Availability and reliability**

In terms of backup and recovery strategies, more than half of the respondents indicated that these features were critical:

-  **Encryption**
-  **Centralized management**
-  **Granular control**
-  **The ability to back up VMware and Hyper-V environments**
-  **Local and remote management**

With a sea of storage options to choose from, it can be difficult for IT pros to find a solution that checks all the boxes in their individual wish lists. HYDRAsTOR from NEC can make that process easier.

HYDRAsstor: A Pioneer of Scale-Out Storage

For organizations looking for a new way to manage storage and accommodate growing data volumes, NEC HYDRAsstor can help by providing the features that today's IT pros are looking for—including their top five wish list items—in a robust yet flexible scale-out architecture.



Security and compliance: HYDRAsstor offers highly secure and efficient offsite data movement, with source-side encryption that prevents unauthorized access to lost or stolen disks. Data can be WORM protected, eliminating the risk of deletion or unwanted encryption associated with cyberattacks such as ransomware. Data-shredding features help ensure regulatory compliance.



Cost/value: HYDRAsstor per-TB cost is extremely competitive while giving organizations scale-out capabilities without the costs associated with forklift upgrades or “rip and replace” deployments. It generates additional savings by allowing organizations to make the most of their existing hardware investments and by leveraging commodity hardware.



Speed/performance: HYDRAsstor offers high performance with the flexibility to independently scale performance and capacity within a single system. It ingests deduped data at an industry-leading rate of 5.2 PB per hour.³



Scalability/capacity: HYDRAsstor scales from one physical node to a total of 165 nodes, from 18 TB to 11.88 PB raw capacity. And its inline global data deduplication can lower storage capacity consumption by 95% or more.



Reliability/availability: NEC's HYDRAsstor grid architecture offers advanced data protection with erasure-coded resilience. Automatic rebuilding of only lost data enables faster recovery than with traditional RAID technology.

Designed to run on industry-standard Linux server clusters, HYDRAsstor can be implemented as a virtual appliance, a pre-configured single node appliance, or as a scale-out cluster of pre-configured nodes.

The HYDRAsstor Portfolio and Partner Solutions

Data storage and backup requirements vary from industry to industry, company to company, and department to department. The complete HYDRAsstor portfolio offers a range of storage hardware and software solutions to meet each organization's unique needs:

- ★ **HS8-5000 Global Dedupe Backup Storage:** Scale-out global deduplication grid storage platform for backup and archiving
- ★ **HS6-5000A Scale-Out Archive Storage:** Scale-out grid storage for archive and long-term data
- ★ **HS3-510 Backup Storage-SMB/Remote:** Inline deduplication storage for small and medium enterprises and remote locations
- ★ **HS Virtual Appliance (VA):** Universal deduplication storage for virtualized environments
- ★ **RepliGrid Software:** WAN-optimized replication for disaster recovery and business continuity
- ★ **Advanced Data Services Software:** Advanced integration with backup and archive applications
- ★ **HYDRALock Software:** Compliance data management with write once, read many administration
- ★ **Encryption At Rest Software:** Inline encryption for long-term data protection

NEC also provides collaborative solutions that extend the functionality—and value—of your existing investments, including:

- **Veeam**
- **Veritas NetBackup**
- **Archiware P5**
- **Tiger Technology**
- **Optica zVT**
- **Milestone XProtect**



HYDRAsTOR in Action

Segue Technologies is a technology solutions provider that designs, develops, implements, and sustains custom applications, websites, services, and systems for a wide range of clients. Serving enterprises, government agencies, and non-profit organizations for more than 20 years, Segue personnel work at client sites across the US.

Like many growing companies, Segue faced a handful of challenges around data storage and backup. Backups for the company's 100+ servers were so slow and unreliable, they couldn't be completed during the after-hours backup window. In addition, growing data volumes combined with limited deduplication capabilities were creating capacity shortages. The company set out to find a Veeam-compatible solution that provided high levels of performance, availability, scalability, security, cost-effectiveness, and ease of use. After initial research, Segue determined that a 100% in-cloud solution would not meet their requirements.

Segue turned to NEC for a flexible hybrid storage solution that integrated with their existing infrastructure and provided a seamless path for scalability. The NEC solution included an M-Series Hybrid Storage Array and NEC's award-winning HYDRAsTOR, which provided a scale-out architecture, extremely fast deduplication rates, optimum backup performance, high availability, and secure data storage.

Veeam backup times were cut by 75%, and the upgrade-as-you-go architecture made the solution very cost effective.

The NEC solution was implemented with no disruption to the users, and Segue saw the benefits immediately. Veeam backup times were cut by 75%, and the upgrade-as-you-go architecture made the solution very cost effective. Says Mike Behrmann, EVP of Segue, "I felt very confident in what NEC brought to the table, and the performance is just tremendous."

Learn More

Modern data centers are providing the world's most sophisticated business services, backed by massive volumes of invaluable data. Storing, managing, and protecting that data is one of today's top IT imperatives. For more than ten years, NEC's HYDRAsstor has been empowering companies to meet these challenges with innovative scale-out storage technology. Having continuously grown and refined the portfolio since its initial launch in 2007, NEC is now shipping the fifth generation of HYDRAsstor.

Want to learn more about NEC HYDRAsstor? Check out our [blog](#), visit our [website](#), or [contact us](#) to schedule a hassle-free storage strategy session.

About the Survey

NEC commissioned Spiceworks to conduct an online survey in January 2018 to understand current perceptions and practices around data storage. The survey targeted IT decision-makers, including IT directors, IT managers, and other IT staff, in organizations in the US and Canada with 100 or more employees. The results of the survey reflect responses from more than 150 participants across a wide range of industries, including IT services, manufacturing, healthcare, education, finance, construction, government, and retail.

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Sources

- ¹ Gibson, Stan, "2018 State of Infrastructure," *Interop ITX*, 2018.
<http://reg.interop.com/stateofinfrastructure>
- ² "7 Enterprise Storage Trends for 2018," *Network Computing*, December 11, 2017.
<https://www.networkcomputing.com/storage/7-enterprise-storage-trends-2018/1406298047>
- ³ Scully, Steve, "Scale-Out Architectures for Secondary Storage," *Evaluator Group*, January 2018.