The Business Value of Amazon FSx for NetApp ONTAP

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BUSINESS VALUE HIGHLIGHTS

Click any link and look for the ➤ symbol on the corresponding page. Use the Return to Highlights button to return this page.

288%
three-year ROI

9 months
to payback

37%
lower three-year cost of storage operations

$2.2M
in average annual storage benefits per organization

41%
lower cost of storage infrastructure

32%
storage infrastructure team efficiencies

70%
faster to scale storage for business opportunities

92%
less unplanned downtime

58%
faster data backups

Executive Summary

IDC research shows that most organizations now take a hybrid cloud approach to data storage infrastructure, using a combination of on-premises systems and one or more public cloud services. In the past, such a strategy often left enterprises with problematic data silos among storage systems that supported different protocols and required gateways for data transfer. Today, organizations have choices for multiprotocol storage systems that can run on premises and in the public cloud to help unify their hybrid environments and consolidate data management.

Amazon FSx for NetApp ONTAP is a fully managed AWS cloud service offering the same feature set and management capabilities as an on-premises NetApp ONTAP storage system, with support for data access through file and block storage protocols. IDC conducted in-depth interviews to assess the impact of using Amazon FSx for NetApp ONTAP in terms of cost, operational efficiency, and business outcomes. IDC's findings show that Amazon FSx for NetApp ONTAP delivers substantial value for the research participants in performance, scalability, and cost optimization while also enhancing data protection and IT agility over their prior storage infrastructure, which varied by organization.

IDC's analysis shows that study participants will realize average annual benefits worth $110,800 per 100TB ($9.52 million per organization) in the following areas:

- Reduced storage costs through enhanced compression, data de-duplication, and automated data tiering
- Increased productivity for storage infrastructure and security teams via automation the need to manage less
- Greater agility and scalability to drive improved development and quicker response to the business's needs
- Reduced business and operational risk through enhanced disaster recovery, data protection, and compliance readiness
- Improved application performance and faster data access to help address business opportunities and ensure a strong user experience

Situation Overview

The 2006 launch of Amazon Simple Storage Service (S3) kicked off a period of major disruption in the enterprise storage industry. Many businesses gradually began to shift some of their workloads from on-premises datacenters to Amazon S3 and other public cloud storage services to ease deployment and management, scale up or down on demand, and take advantage of pay-as-you-go pricing that allowed them to change from a capital to an operational expense model. As the rising use of cloud storage led to spending declines for on-premises external storage systems, major vendors started exploring alternatives to compete, including on-premises storage as a service and partnerships with major cloud providers.

Meanwhile, major cloud providers took steps to confront gaps in their storage portfolios. Cloud storage largely equated to object stores designed to support massive scalability, and until the use of flash storage, performance challenges tended to relegate their use to workloads such as backups and archives. Block storage was a common choice for performance-sensitive applications running on public cloud servers. Of the three main types of storage, file tended to be the weak link, lagging in part due to the difficulties inherent in building an enterprise-class file system.

Amazon began offering fully managed file system services in late 2018 with the introduction of FSx for Windows File Server and FSx for Lustre. In September 2021, Amazon added FSx for NetApp ONTAP to provide its cloud customers access to one of the leading file systems

in the enterprise storage market. Amazon FSx for ONTAP marked NetApp's first partnership with a major public cloud provider at a time when customers were increasingly taking a hybrid cloud or hybrid multicloud approach to data storage infrastructure. In November 2021, Amazon launched FSx for OpenZFS to provide another file system option in addition to Amazon FSx for Lustre.

Amazon FSx for Netapp ONTAP

Amazon FSx for NetApp ONTAP is a fully managed, shared AWS file storage service built on NetApp ONTAP, with support for ONTAP's complete feature set and management software. The unified ONTAP-based service offers data access via file (NFS and SMB) and block (iSCSI and NVMe over TCP) protocols. Amazon FSx for ONTAP supports two tiers of storage: a primary high-performance flash tier for active and/or latency-sensitive data and a cost-optimized capacity pool tier for infrequently accessed data. ONTAP's policy-based FabricPool technology monitors data access patterns and automatically transitions data blocks between storage tiers to optimize performance and lower costs.

Additional enterprise storage features in Amazon FSx for NetApp ONTAP include de-duplication and compression to reduce the data footprint; FlexCache to cache on-premises data in an FSx for ONTAP instance, as well as the reverse use case; SnapMirror block-level replication to copy data between two ONTAP instances (on-premises and cloud); SnapVault to replicate snapshots from one ONTAP instance to another for long-term retention; and SnapLock to protect files to a write-once, read-many state to prevent data modification or deletion. In addition, NetApp's Autonomous Ransomware Protection proactively monitors the file system for unusual activity and automatically generates ONTAP snapshots when it detects a potential attack.

As a fully managed service, Amazon FSx for NetApp ONTAP can alleviate the operational burden of hardware management, software patching, and backups. The service offers on-premises NetApp ONTAP storage system customers a smooth path to migrate or extend their deployments to the cloud, across one or more Amazon availability zones, to address ongoing data growth. Additionally, organizations that have never used ONTAP gain access to a long-proven, high-performance enterprise file system for petabyte-scale storage in the public cloud. Target workloads for Amazon FSx for NetApp ONTAP include corporate and departmental file shares, IT applications and databases, line-of-business applications and databases, and data protection use cases such as backup, archive, and disaster recovery.

The Business Value of Amazon FSx for Netapp ONTAP

Study Demographics

The six organizations IDC interviewed for this study represent a cross-section of industries and geographies, spanning retail, construction, financial services, healthcare, manufacturing, and pharmaceuticals, with operations spanning the United States, India, and Germany. These organizations are large enterprises, with an average of 47,417 employees (median of 30,000 employees) and average annual revenue of $35.44 billion (median of $25.50 billion). These study participant firmographic characteristics underscore the broad applicability and scalability of Amazon FSx for NetApp ONTAP across different business contexts.

TABLE 1

Demographics of Interviewed Organizations

Demographics	Average	Median
Number of employees	47,417	30,000
Number of IT staff	1,829	825
Number of business applications	122	125
Revenue per year	$35.44B	$25.50B
Countries	United States (3), India (2), Germany	
Industries	Apparel/Retail, Construction, Financial Services, Healthcare, Manufacturing, Pharmaceuticals	

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Choice and Use of Amazon FSx for NetApp ONTAP

Interviewed organizations primarily chose to deploy Amazon FSx for NetApp ONTAP to address limitations in their existing storage environments — whether on-premises, private cloud, or native cloud storage — related to performance, scalability, cost, and operations. They found that they had reached thresholds where their legacy storage environments could no longer meet critical SLAs or performance expectations from the business, especially for large-scale, high-performance workloads. They described Amazon FSx for NetApp ONTAP as standing out for its seamless integration with AWS, familiar NetApp capabilities, and strong storage features, such as elastic data tiering, compression, and high availability. Study participants saw these capabilities as central to modernizing their storage and broader IT infrastructures, simplifying operations, and ensuring reliable, scalable, and cost-effective storage aligned with actual business needs.

Interviewed AWS and NetApp customers described their selection criteria as follows:

Storage platform for growing data use and related SLAs:

"The only solution capable of handling our current database size and the extent to which it will continue to grow in the coming years is Amazon FSx for NetApp ONTAP. It is crucial for helping us meet our SLAs."

Integration of NetApp and AWS; ability to use and manage data across environments:

"We chose NetApp ONTAP because it was more compatible with AWS and could manage data across different environments based on how frequently the reporting tools used the data."

Need to optimize storage costs:

"Before Amazon FSx for NetApp ONTAP, we kept all our data live on our private cloud hosting engagement. We switched to Amazon FSx for NetApp ONTAP due to the high storage prices we were paying."

Scalability, redundancy, and ease of migration to cloud environment:

"We chose Amazon FSx for NetApp ONTAP for the scalability capabilities and overall data redundancy, including multiple locations for data cloning. We were already using NetApp on premises, so it facilitated the migration."

Table 2 (next page) shows how study participants use Amazon FSx for NetApp ONTAP to support a wide range of storage needs, with deployments averaging 8,593 usable terabytes (median of 248TB) and spanning both structured (68%) and unstructured (32%) data. These environments typically supported dozens of business applications (average of 51) and databases (average of 23) across an average of 87 business locations that directly affect an average of approximately 68% of organizational revenue. Common major workloads

running on Amazon FSx for NetApp ONTAP include enterprise applications such as SAP and ERP systems, high-performance analytics, document management systems, and data protection use cases, such as backup, disaster recovery, and archival storage.

TABLE 2

Amazon FSx for NetApp ONTAP Use by Interviewed Organizations

	Average	Median
Number of usable TBs	8,593	248
Percent of structured data	68%	70%
Number of business applications	51	15
Number of databases	23	22
Number of business locations	87	28
Percent of revenue	68%	75%

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Business Value and Quantified Benefits of Amazon FSx for NetApp ONTAP

Study participants noted substantial benefits from using Amazon FSx for NetApp ONTAP, driven by improved storage performance, operational efficiencies, and cost optimization. They reported faster application response times, reduced unplanned downtime, and streamlined data management processes, all of which help them provide higher-quality and more responsive services to customers and users alike. The managed nature of the service, combined with advanced features such as compression, de-duplication, and elastic data tiering, has enabled IT teams to focus on higher-value tasks while reducing infrastructure and staffing costs.

Interviewed AWS and NetApp customers spoke about the most important benefits they are achieving through their use of the solution:

Right balance between performance and cost due to flexibility:

"One major benefit for the business of Amazon FSx for NetApp ONTAP is maintaining excellent response times on our OLTP applications. We can off-load data to cheaper disk storage, retrieve it when necessary for legal or audit purposes, while keeping our applications performing at the same speed."

Reliability of performance and cost:

"For us, the most significant benefits of using Amazon FSx for NetApp ONTAP are really twofold. First, it's very reliable storage, and we don't have to worry about losing data at any time. And the cost is just incredibly good."

Improved business outcomes:

"We are making more revenue with Amazon FSx for NetApp ONTAP because our customer service, product, and marketing teams are able to seize new revenue opportunities faster than previously."

Strong privacy and performance required for business activities:

"The most significant benefits of Amazon FSx for NetApp ONTAP include cost efficiency and data protection for sensitive health privacy data. It enhances application performance, allows faster analysis and decision-making, and provides better reliability."

Efficiency of managed service; performance:

"Amazon FSx for NetApp ONTAP is entirely a managed service, which helps us move away from managing those resources ourselves. Additionally, it offers scalability and the capability to scale effectively."

IDC calculates that study participants will realize annual value worth $110,800 per 100TB ($9.52 million per organization) in the following areas:

- **Business productivity benefits:**
  Study participants have achieved value through faster application performance, reduced downtime, and improved employee efficiency across critical business operations. IDC estimates this benefit from higher revenue and user productivity at an annual average of $65,100 per 100TB ($5.59 million per organization).

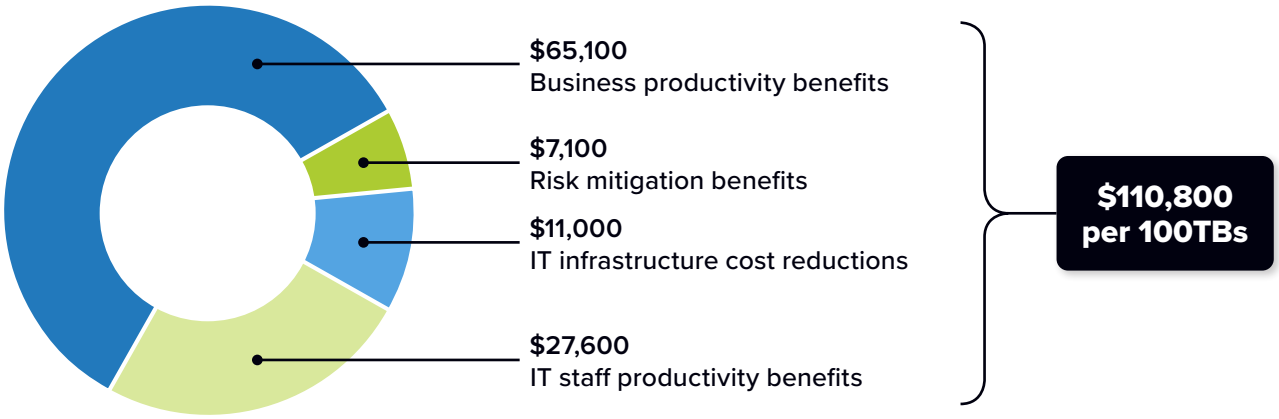
- **IT staff productivity benefits:**
  Organizations have reduced manual storage management requirements by leveraging automation and managed services, freeing up IT storage teams for higher-value tasks. IDC quantifies the value of these staff efficiency gains at $27,600 per 100TB per year ($2.37 million per organization).

- **IT infrastructure cost reductions:**
  Study participants have lowered their storage costs by taking advantage of data compression, de-duplication, and elastic tiering to optimize capacity and performance. This has resulted in annual savings of $11,000 per 100TB ($947,000 per organization).
- **Risk mitigation benefits:**
  Enhanced data protection, faster recovery, and improved compliance have reduced the impact and frequency of unplanned downtime and data loss. IDC values resultant employee productivity gains at $7,100 per 100TB per year ($613,600 per organization).

FIGURE 1

Average Annual Benefits per 100TB

($ per interviewed organization)



n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Storage Cost Optimization

Study participants reported optimizing their storage costs with Amazon FSx for NetApp ONTAP by leveraging features that allowed them to provision and use storage more efficiently. Key capabilities, such as data compression, de-duplication, and elastic data tiering, enabled organizations to significantly reduce the required amount of active storage while maintaining performance. For example, elastic tiering allowed them to automatically move infrequently accessed data to lower-cost storage tiers, ensuring they only paid for what they actively used. Interviewed customers have also leveraged improved data compression capabilities to reduce their storage footprints considerably, enabling them to store significantly more data within the same capacity and lower overall storage costs.

Meanwhile, enhanced de-duplication features allowed them to eliminate redundant data across workloads, further optimizing storage efficiency and reducing the need for additional provisioning.

Interviewed organizations provided examples of how they have reduced their storage requirements and costs with Amazon FSx for NetApp ONTAP:

Cost savings with elastic data tiering:
"Elastic data tiering with Amazon FSx for NetApp ONTAP allows us to segregate and index data appropriately, depending on how often it gets used for reporting. This saves us money because we don't pay for what we don't use."

Significant storage efficiencies due to data compression:
"Data compression with Amazon FSx for NetApp ONTAP has reduced our data size — it was originally around 80%–90% larger previously."

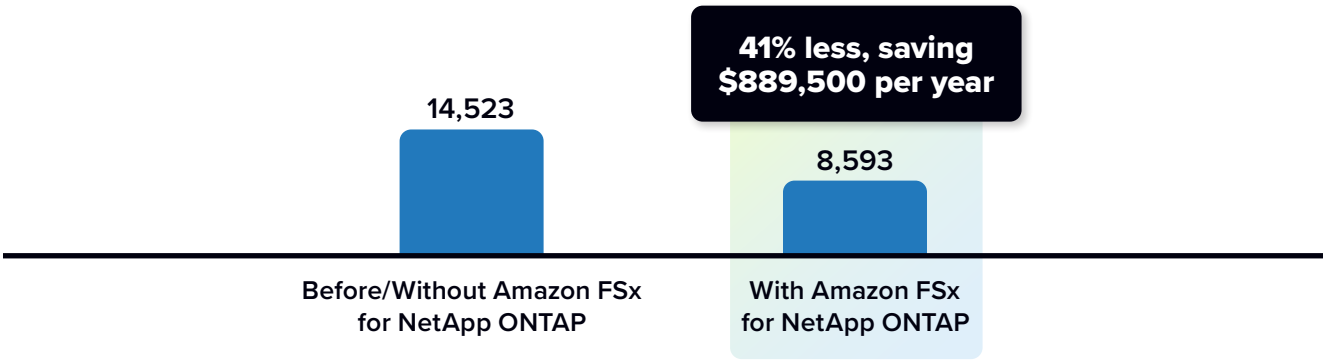
Good cost-to-performance and benefits ratios:
"If Amazon FSx for NetApp ONTAP is managed properly, the cost is not significantly higher than using standard storage. However, the benefits are much greater, making it a very good cost-to-benefit ratio."

Interviewed organizations reported significant positive impacts in terms of how elastic data tiering (25% less storage required) and enhanced data compression (92% higher) affect their storage requirements. On average, participants reduced their storage footprint by 41% (**Figure 2**), translating into significantly lower storage requirements (almost 6PB less storage per organization on average) and substantial storage cost savings ($889,500 annually per organization).

FIGURE 2

Equivalent Storage Required

(Numbers of TBs required)



n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Storage IT Team Efficiencies

Study participants connected their use of Amazon FSx for NetApp ONTAP to more efficient storage infrastructure management by automating many of the tasks traditionally requiring manual oversight. They reported that once configured, the system required minimal ongoing adjustments, thanks to built-in capabilities such as automated performance tuning, elastic data tiering, and intelligent storage provisioning. These features allowed IT teams to avoid routine interventions, such as adjusting IOPS or reallocating capacity, significantly reducing operational complexity and freeing up staff to focus on higher-value initiatives. Regular architecture reviews and proactive optimization sessions with AWS and NetApp further enhanced cost efficiency by ensuring that storage environments remained right-sized and aligned with evolving business needs.

Interviewed AWS and NetApp customers provided examples of how their IT storage teams have benefited:

Proactive discussions about architecture:

"Amazon FSx for NetApp ONTAP has been influencing our management requirements positively in the sense that we have regular sessions to revalidate if we're on an optimal standpoint, architecture-wise. … There are always recommendations that help us improve reaction times."

Ease of use and manageability:

"We don't need to touch Amazon FSx for NetApp ONTAP. We free up time that we sometimes needed to make modifications, especially to increase or decrease the number of IOPS. With Amazon FSx for NetApp ONTAP, it comes out of the box."

Table 3 (next page) highlights the efficiencies storage infrastructure teams gained using Amazon FSx for NetApp ONTAP. On average, study participants reported 32% efficiency gains for these teams, representing a substantial benefit in terms of allowing them to provide strong support for growing data environments or shift storage team focus to more innovative and business-impacting activities.

TABLE 3

Impact on Storage Infrastructure Teams

Efficiencies, FTEs per Organization	Before/Without Amazon FSx for NetApp ONTAP	With Amazon FSx for NetApp ONTAP	Difference	Benefit
Storage infrastructure management, FTEs	26.0	**17.6**	8.4	32%
Value of equivalent FTE time required ($ per organization per year)	$2.60M	**$1.76M**	$839,200	32%

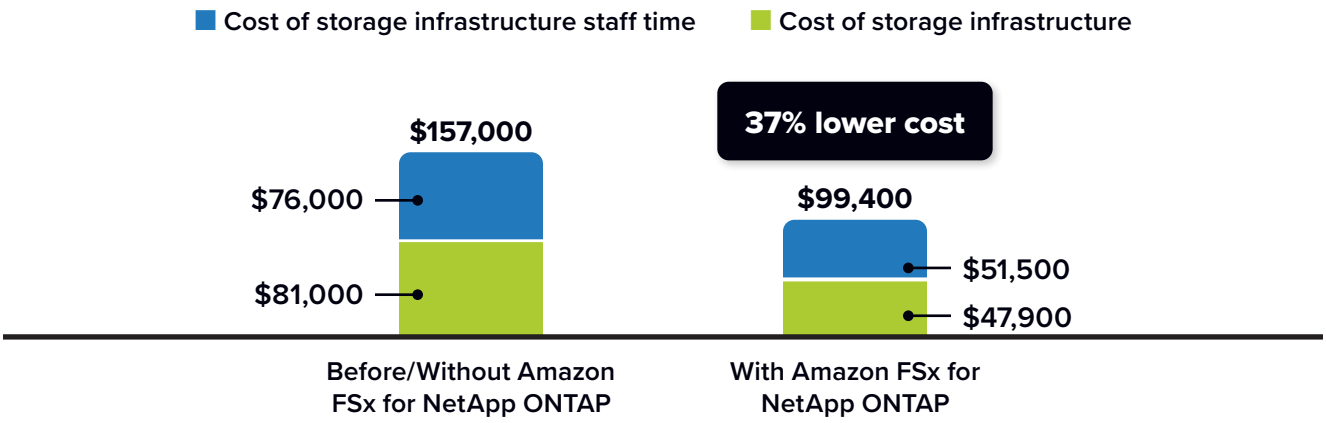
n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Figure 3 shows the combined impact of lower storage costs and storage infrastructure team efficiency gains on the cost of providing storage for equivalent environments for study participants. On average, IDC calculates that Amazon FSx for NetApp ONTAP enables 37% savings, representing a significant cost efficiency across hundreds of terabytes or many petabytes of storage.

FIGURE 3

Three-Year Cost of Operations per 100TB

For an accessible version of the data in this figure, see Figure 3 Supplemental Data in Appendix 3.



n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Study participants also linked their use of Amazon FSx for NetApp ONTAP to efficiency gains for their storage security teams. They explained that these teams work more efficiently thanks to simplified monitoring and improved observability, which have reduced the complexity of managing security and data protection tasks. As a result, these organizations have achieved a 39% improvement in security team efficiency, as **Table 4** shows.

TABLE 4

Impact on Storage Security Teams

Efficiencies, FTEs per Organization	Before/Without Amazon FSx for NetApp ONTAP	With Amazon FSx for NetApp ONTAP	Difference	Benefit
Storage security team, FTEs	17.2	**10.5**	6.6	39%
Value of equivalent FTE time required ($ per organization per year)	$1.72M	**$1.05M**	$663,200	39%

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Improved Storage Agility

Study participants have improved their IT agility with Amazon FSx for NetApp ONTAP by reducing the time and complexity involved in deploying, scaling, and managing storage environments. Key features, such as automated provisioning, elastic scalability, and seamless integration with AWS services, have enabled organizations to provide storage resources to respond more quickly to changing business demands.

Interviewed organizations provided numerous examples of these agility-related benefits, including:

Importance of being able to create multiple environments for redundancy:

"The ability with Amazon FSx for NetApp ONTAP to create multiple environments for some of the most intense business users and set up our infrastructure in a way that prevents a critical database from going down at any one time has been a significant benefit. We can isolate it much more effectively."

Faster migration and improved recovery drive better overall services for customers:

"The ability to migrate faster and recover instances due to improved disaster recovery with Amazon FSx for NetApp ONTAP has greatly helped us provide better service to our internal customers."

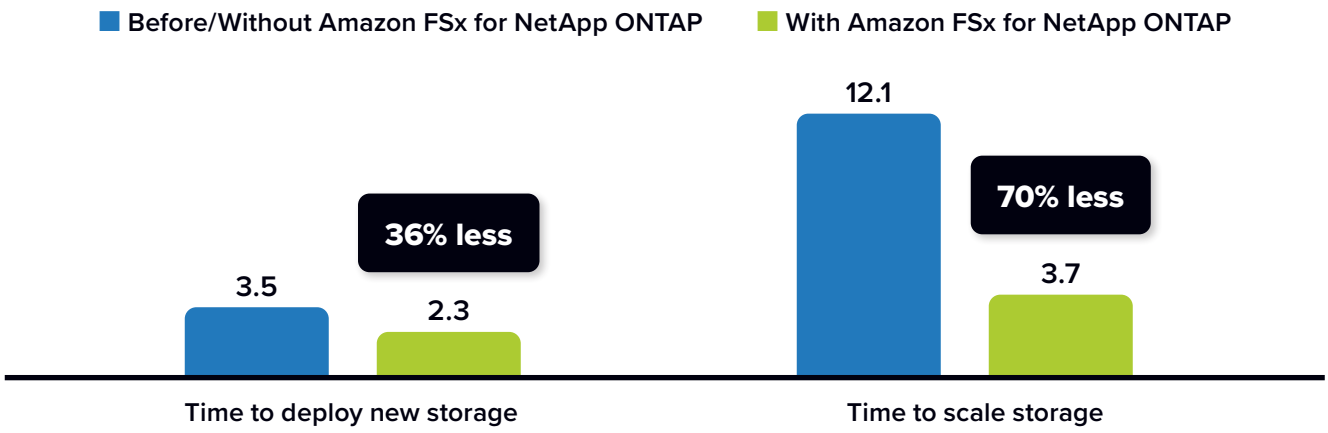
Figure 4 shows the scale of Amazon FSx for NetApp ONTAP's impact on study participants' storage agility. On average, participants have reduced the time to scale storage by 70% and to deploy new storage by 36%, allowing them to adapt storage infrastructure more efficiently and with less manual effort.

FIGURE 4

Impact on Storage Agility

(Number of hours)

For an accessible version of the data in this figure, see Figure 4 Supplemental Data in Appendix 3.



n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

These agility gains also extended to development activities. Organizations reported that Amazon FSx for NetApp ONTAP's support for rapid cloning, simplified replica creation, and parameterization capabilities allowed development teams to spend more time coding and less time setting up and maintaining environments.

Study participants described these development-related benefits:

Customizability makes it easier to effect changes:

"Amazon FSx for NetApp ONTAP supports customer parameterization very well. Once we complete the initial development, we can parameterize most elements, making subsequent changes easier."

Ease of creating replicas enables development:

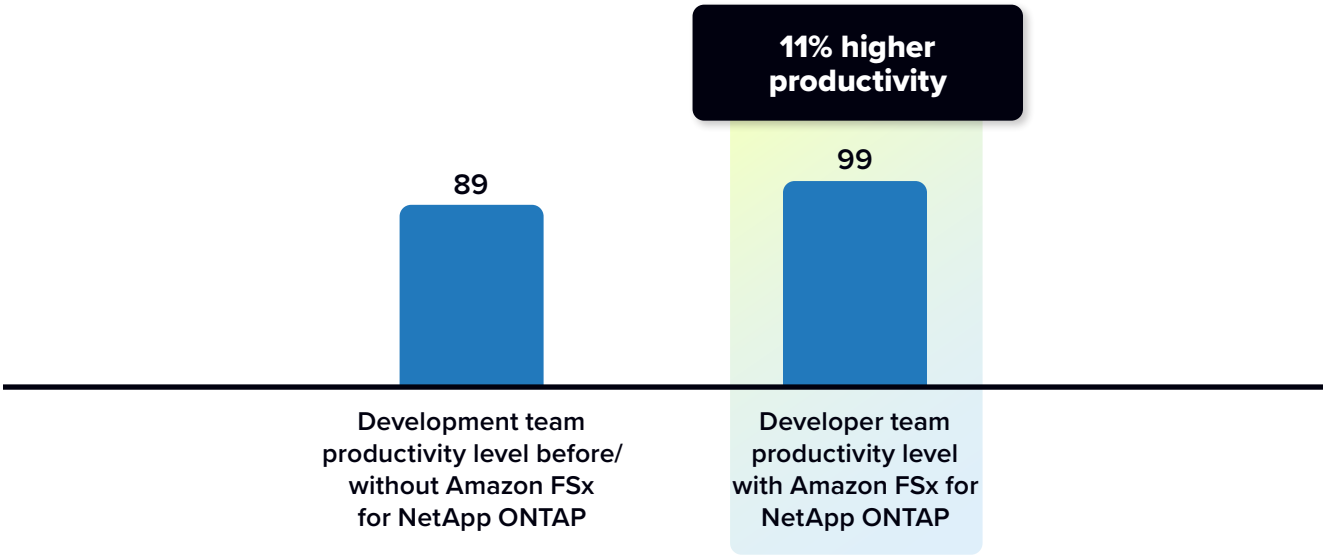
"We have gained much more agility now with Amazon FSx for NetApp ONTAP. It has helped our development teams create applications faster because it's much easier to create replicas."

These agility gains with Amazon FSx for NetApp have led to an average 11% increase in developer productivity (**Figure 5**) because teams can more easily create test environments and iterate faster. These productivity gains reflect the increased ability of development teams to meet business requirements with timely and relevant software functionalities.

FIGURE 5

Impact on Development Team Productivity

(Equivalent productivity in FTEs)



n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Application Availability and Data Protection

Amazon FSx for NetApp ONTAP has significantly improved application availability for study participants by reducing the frequency and duration of unplanned outages. Organizations reported a 64% decrease in the number of unplanned outages per year and a 90% reduction in mean time to recovery (MTTR), combining to drive an average 92% decrease in impactful unplanned downtime (see **Table 5,** next page). They attributed these improvements to Amazon FSx for NetApp ONTAP's high-availability architecture, fast restore capabilities, and built-in data protection features. They also highlighted the ability to isolate workloads and maintain continuous access to critical systems, which helped ensure business continuity and minimize disruptions to end users. One study participant commented: *"The ability with Amazon FSx for NetApp ONTAP to create multiple environments for some of the most intense business users and set up our infrastructure in a way that prevents a critical database from going down at any one time has been a significant benefit. We can isolate it much more effectively."*

TABLE 5

Impact on Unplanned Downtime KPIs

Unplanned Downtime KPIs	Before/Without Amazon FSx for NetApp ONTAP	With Amazon FSx for NetApp ONTAP	Difference	Benefit
Number of unplanned outages per year	8.2	**3.0**	5.2	64%
MTTR, hours	18.5	**1.9**	16.6	90%
Hours of productive time lost per user per year	0.3	**0.0**	0.3	92%
Productivity loss per year in FTEs per organization	8.1	**0.7**	7.5	92%
Value of lost productivity per organization per year	$568,500	**$45,800**	$522,700	92%

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

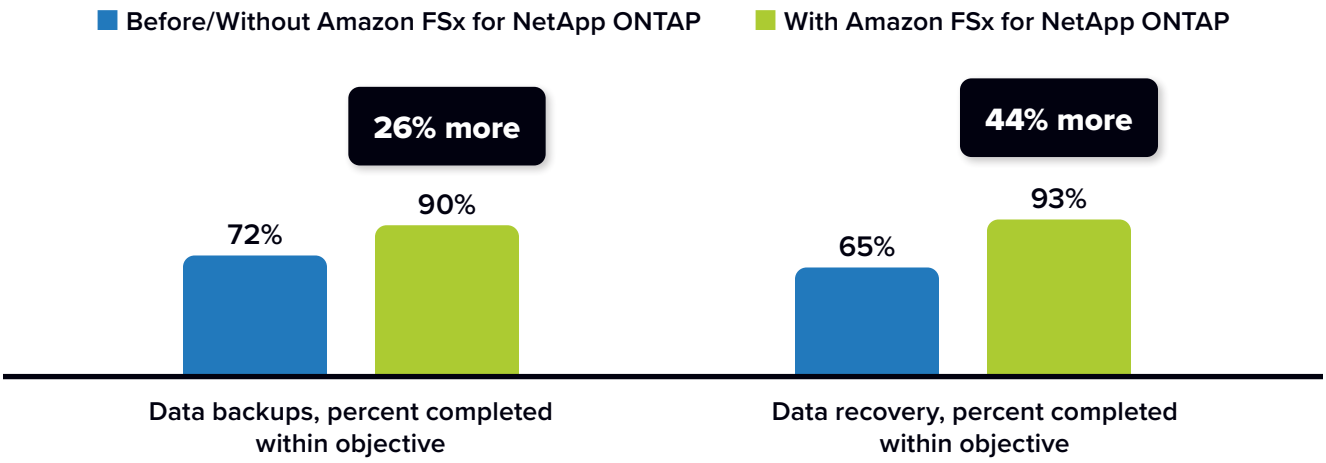
Study participants also described how they have improved their data protection and disaster recovery capabilities with Amazon FSx for NetApp ONTAP by leveraging its built-in automation, high-speed backup and restore functions, and advanced storage features, such as data compression, de-duplication, and tiering. **These capabilities enabled faster, more reliable backups and significantly reduced recovery times, with backup windows shrinking by 58% on average.** They further reported increased data recovery success rates of 44% and data backup success rates of 26% on average (see **Figure 6,** next page). One interviewed customer explained: *"With Amazon FSx for NetApp ONTAP, we can completely restore the system in less than 10 minutes, even for our large database. Besides speed, it also offers reliability, as it is a very dependable service."*

FIGURE 6

Impact on Data Protection KPIs

(Number of hours)

For an accessible version of the data in this figure, see Figure 6 Supplemental Data in Appendix 3.



n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Organizations also benefited from the ability to automate disaster recovery processes and move workloads between storage tiers based on usage, enhancing the efficiency of their disaster recovery teams and disaster recovery outcomes. They reported average efficiency gains of 31% for their disaster recovery teams (**Table 6**), in addition to greater confidence in meeting compliance and business continuity requirements.

TABLE 6

Impact on Disaster Recovery Teams

	Before/Without Amazon FSx for NetApp ONTAP	With Amazon FSx for NetApp ONTAP	Difference	Benefit
Equivalent FTEs required per organization	10.6	**7.3**	3.2	31%
Value of equivalent staff time ($ per organization per year)	$1.06M	**$733,300**	$322,700	31%

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Improved Business Outcomes and Operational Efficiencies

Study participants cited improved performance, scalability, and agility with Amazon FSx for NetApp ONTAP as directly contributing to better business outcomes by enabling faster, more reliable access to critical applications and data. They gave numerous examples of improved storage and application performance, which have resulted in benefits such as minimized downtime and enhanced responsiveness. Further, improved performance allows employees to complete tasks more efficiently, particularly in environments where even brief delays can impact operations across global teams.

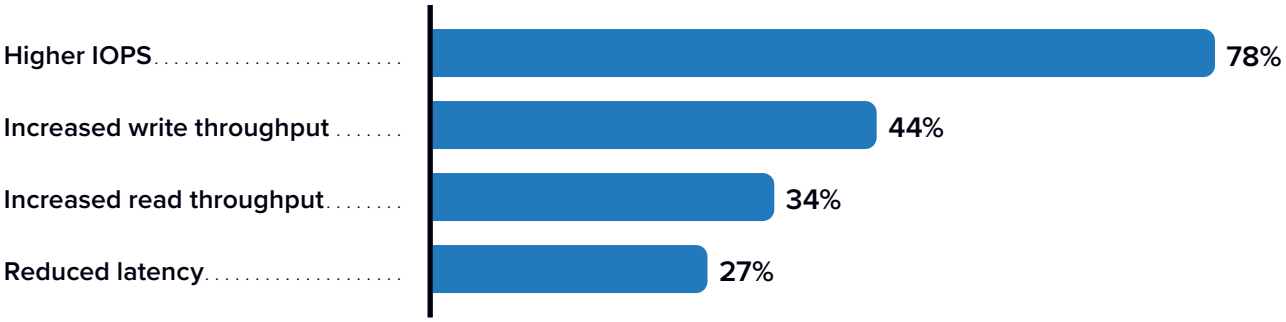
The scalability and agility participants achieved with Amazon FSx for NetApp ONTAP were also key enablers of productivity gains. Organizations highlighted the ease of scaling storage resources to meet growing data demands and the ability to quickly deploy or replicate environments for development and testing. These capabilities reduced the time and effort to support business expansion and innovation. In turn, employees benefited from more stable, responsive systems and fewer disruptions, allowing them to focus on higher-value work.

Interviewed organizations reported strong gains in core storage performance metrics with Amazon FSx for NetApp ONTAP, which translated directly into an improved user experience in many cases. As **Figure 7** shows, performance improvement KPIs ranged from 27% reduced latency to 78% higher IOPS, as well as increased write (44%) and read (34%) throughput, when comparing Amazon FSx for NetApp ONTAP against their prior storage systems, which varied by organization.

FIGURE 7

Impact on Storage Performance

(Percent benefit with Amazon FSx for NetApp ONTAP)



n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Study participants focused on how the performance benefits of using Amazon FSx for NetApp ONTAP translate into business and operational gains:

Improved performance leads to better analysis to support decision-making:
"With Amazon FSx for NetApp ONTAP, our applications perform better, allowing us to run reports and cache data more effectively, leading to faster analysis and decision-making."

Confidence in reliability, security, and performance:
"We have complete trust in Amazon FSx for NetApp ONTAP. If the data is there, we don't need to worry. Our most important business operations will never be disrupted and will continuously perform. You can access any kind of data from anywhere, and data protection is also ensured."

Improved performance in terms of latency:
"Performance has improved with Amazon FSx for NetApp ONTAP, particularly in terms of low latency. Previously, latency was either neutral or worsening in our applications, but now it has significantly improved."

Platform for modernization:
"With Amazon FSx for NetApp ONTAP, the benefit to the business is that we've made more progress in moving our ERP to the cloud, which is important because our legacy system was slower and outdated. Moving to the cloud allows us to modernize."

Table 7 demonstrates the significant positive impact of improved storage performance and capabilities on study participants' business outcomes. On average, study participants attributed annual revenue gains of $33.23 million per organization to their use of Amazon FSx for NetApp ONTAP.

TABLE 7

Business Productivity Benefits — Higher Revenue

Business Enablement — Higher Revenue	Per Organization	Per 100TB
Number of employees	47,417	30,000
Higher revenue per year	$33.23M	$386,700
Assumed operating margin	15%	15%
Higher net revenue per year	$4.98M	$58,000

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Table 8 provides IDC's analysis of the benefits of improved performance, scalability, and availability that participants achieved in employee productivity levels with Amazon FSx for NetApp ONTAP. As the table shows, study participants reported an average 9% gain in productivity for 1,842 employees, marking a significant improvement in these employees' ability to deliver value and work effectively.

TABLE 8

Impact on User Productivity

	Before/Without Amazon FSx for NetApp ONTAP	With Amazon FSx for NetApp ONTAP	Difference	Benefit
Productivity impact, equivalent FTEs per organization overall	1,842	**2,003**	161	9.0%
Productivity impact, equivalent net FTEs per organization overall	1,842	**1,866**	24	1.3%
Value of net productivity per organization	$128.92M	**$130.61M**	$1.69M	1.3%

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

ROI Summary

Table 9 (next page) presents IDC's analysis of the benefits and investment costs related to the interviewed organizations' use of Amazon FSx for NetApp ONTAP. IDC calculates that study participants will realize average discounted three-year benefits worth $22.42 million per organization ($261,000 per 100TB), compared to average three-year discounted investment costs of $5.78 million per organization ($67,300 per 100TB). These levels of benefits and investment costs would yield, on average, a three-year ROI of 288%, with the average organization breaking even on its investment in Amazon FSx for NetApp ONTAP in nine months.

TABLE 9

ROI Analysis

Three-Year ROI Analysis	Per Organization	Per 100TB
Benefit (discounted)	$22.42M	$261,000
Investment (discounted)	$5.78M	$67,300
Net present value (NPV)	$16.64M	$193,700
ROI (NPV/investment)	288%	288%
Payback	9 months	9 months
Discount factor	12%	12%

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Challenges/Opportunities

Although public cloud storage can offer several benefits, many enterprises recognize that it might not be the optimal choice for all workloads. IDC research shows that the top reasons organizations repatriate or plan to repatriate storage workloads from public cloud storage include hybrid cloud management complexity, security, performance issues, overall cost concerns, and data egress charges. In addition, some organizations need to keep data on premises for regulatory or compliance reasons. While Amazon FSx for NetApp ONTAP can help address some enterprise concerns, such as easing hybrid cloud management and strengthening security, organizations may need to carefully assess which workloads are best suited for public cloud deployment.

The pairing of NetApp ONTAP-based storage systems with Amazon FSx for NetApp ONTAP offers the opportunity to use unified multiprotocol storage across on-premises and public cloud sites. IDC's recently published Enterprise Infrastructure Pulse Storage Survey shows that most enterprises have a strong interest in multiprotocol storage systems and that they either already use or plan to adopt unified systems. Unified multiprotocol storage systems can facilitate workload consolidation; provide a consistent model for data management, security, and governance; and help reduce the complexity of storing and managing data across hybrid cloud or multicloud environments.

Conclusion

Organizations are increasingly taking a hybrid cloud approach to data storage infrastructure; however, the strategy can lead to problematic data silos and other storage-related inefficiencies. Amazon FSx for NetApp ONTAP helps address these challenges by offering a fully managed AWS cloud service with the same features and management capabilities as an on-premises NetApp ONTAP multiprotocol storage system.

Through in-depth interviews with six customers, IDC research demonstrated that Amazon FSx for NetApp ONTAP can provide significant value in terms of performance, scalability, cost optimization, data protection, and IT agility. Study participants cited Amazon FSx for NetApp ONTAP features, such as elastic data tiering, compression, and high availability, as central to modernizing their storage infrastructure and providing the foundation for achieving significant value. Additional reported benefits include reduced storage costs, increased productivity for storage and security teams, and improved application performance. Importantly, the service's managed nature allows IT teams to focus on higher-value tasks, enabling them to bring greater business advantage to their organizations. IDC's study projects that Amazon FSx for NetApp ONTAP will result in an average three-year ROI of 288% and a payback term of nine months for the study participants. Benefits and ROI can vary based on an organization's prior storage environment and other factors, but the IDC findings underscore how Amazon FSx for NetApp ONTAP can help enterprises seeking to modernize their storage infrastructure and improve business outcomes.

Appendix 1: Methodology

IDC utilized its standard Business Value/ROI methodology for this project, gathering data from organizations currently running applications and workloads on Amazon FSx for NetApp ONTAP.

Based on interviews with organizations using Amazon FSx for NetApp ONTAP, IDC performed a three-step process to calculate the ROI and payback period:

1. **IDC gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of using Amazon FSx for NetApp ONTAP.** In this study, the benefits included storage infrastructure cost savings, storage staff efficiency gains, development productivity gains, user productivity gains, and higher net revenue.
2. **IDC created a complete investment (three-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using Amazon FSx for NetApp ONTAP and can include additional costs related to migrations, planning, consulting, and staff or user training.
3. **IDC calculated the ROI and payback period.** It conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of Amazon FSx for NetApp ONTAP over a three-year period. ROI is the ratio of the NPV and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on several assumptions, which are summarized as follows:

- Multiplying time values by burdened salary (salary + 28% for benefits and overhead) quantifies efficiency and manager productivity savings. For the purposes of this analysis, IDC has used its standard assumptions of an average fully loaded salary of $100,000 per year for IT staff members and an average fully loaded salary of $70,000 per year for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).
- IDC calculates the net present value of the three-year savings by subtracting the amount that organizations would have realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.
- Because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All dollar figures in this white paper are in USD.

Appendix 2: Quantified Benefits of Amazon FSx for NetApp ONTAP

Table 10 provides details about the IDC-quantified financial benefits that relate to study participants' use of Amazon FSx for NetApp ONTAP.

On average, IDC calculates that study participants will realize annual average benefits worth $9.52 million per organization ($110,800 per 100TB) in the areas of value below:

TABLE 10

ROI Analysis

Category of Value	Average Quantitative Benefit	15% Margin Assumption Applied	Calculated Average Annual Value*
Storage infrastructure cost savings	41% lower annual cost, saving $889,500 per organization per year; $172,500 per organization initial costs	No	$947,000
Storage infrastructure team efficiencies	32% efficiency gains, worth 8.4 FTEs; $100,000 salary	No	$702,800
Storage security team efficiencies	39% efficiency gains, worth 6.6 FTEs; $100,000 salary	No	$555,400
Disaster recovery/ data protection team efficiencies	31% efficiency gains, worth 3.2 FTEs; $100,000 salary	No	$270,200
Development team productivity gains	11% productivity gains, worth 10 FTEs; $100,000 salary	No	$841,600
Unplanned downtime productivity gains	92% less unplanned downtime, worth 7.5 FTEs; $70,000 salary	No	$437,700

Table 10 continued

Table 10 continued

Category of Value	Average Quantitative Benefit	15% Margin Assumption Applied	Calculated Average Annual Value*
Compliance team efficiencies	40% productivity gains, worth 3.0 FTEs; $70,000 salary	No	$175,900
Higher net revenue, business enablement	$33.23M higher revenue per organization per year; 15% margin	Yes	$4.17M
Higher net user productivity, improved performance	9% higher productivity for 1,842 impacted users; $70,000 salary; 15% margin	Yes	$1.42M
Total average annual benefits	$9.52M per organization/$110,800 per 100TB		

Note: *includes 5.9-month average deployment time, year 1
n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Note: All numbers in this document may not be exact due to rounding.

Appendix 3: Supplemental Data

This appendix provides an accessible version of the data for the complex figures in this document. Click "Return to original figure" below each table to get back to the original data figure.

FIGURE 3 SUPPLEMENTAL DATA

Three-Year Cost of Operations per 100TB

Cost of Storage	Before/Without Amazon FSx for NetApp ONTAP	With Amazon FSx for NetApp ONTAP
Cost of storage infrastructure	$81,000	$47,900
Cost of storage infrastructure staff time	$76,000	$51,500
Total	**$157,000**	**$99,400 (37% lower cost)**

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

Return to original figure

FIGURE 4 SUPPLEMENTAL DATA

Impact on Storage Agility

	Time to Deploy New Storage	Time to Scale Storage
Before/Without Amazon FSx for NetApp ONTAP	3.5	12.1
With Amazon FSx for NetApp ONTAP	2.3	3.7
Difference	**36% less**	**70% less**

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

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Appendix3: Supplemental Data (continued)

FIGURE 6 SUPPLEMENTAL DATA

Impact on Storage Agility

	Data Backups, Percent Completed Within Objective	Data Backups, Percent Completed Within Objective
Before/Without Amazon FSx for NetApp ONTAP	72%	65%
With Amazon FSx for NetApp ONTAP	90%	93%
Difference	**26% more**	**44% more**

n = 6; Source: IDC Business Value In-Depth Interviews, May 2025

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About the IDC Analysts

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Carol Sliwa is research director within IDC's Worldwide Infrastructure Research organization and is part of the Storage and Converged Systems practice. Sliwa is the lead analyst for IDC's storage infrastructure coverage. Her core research spans block, file, and object storage, with a special focus on the storage of unstructured data. Sliwa's coverage also includes distributed, parallel, and scale-out storage systems for performance-intensive computing environments and the evolving state of flash media.

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Matthew Marden is responsible for carrying out custom business value research engagements and consulting projects for clients in several technology areas, focusing on determining the return on investment of their use of enterprise technologies. Marden's research often analyzes how organizations are leveraging investment in digital technology solutions and initiatives to create value through efficiencies and business enablement.

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