Enterprise Strategy Group by TechTarget

EXECUTIVE SUMMARY

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Modernizing Storage in the AI Era

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Overview

In the digital era of business, storage infrastructure provides the data foundation for everything from empowering new innovation, to driving internal operations, to enabling customer engagement. As business transitions into an age defined by AI, organizations are turning to their IT leaders to modernize their storage infrastructure to serve the future of application demands.

To gain insight into how these storage environments must evolve to be able to empower a new, likely AI-based, application era, and how strategies related to the deployment and migration of applications are impacted, TechTarget's Enterprise Strategy Group surveyed 350 IT professionals from small and medium-sized organizations (SMBs; 50-750 employees) worldwide who are knowledgeable about their organization's purchase process for storage, servers, and client technology solutions.

The study sought to:

- **Measure** the needs of modern storage environments for SMBs worldwide.
- **Examine** how AI is impacting the key requirements for storage environments in the cloud and on premises.
- **Predict** the direction of future storage infrastructure investments and impact of AI, security and hybrid cloud technologies on application environments.
- **Validate** the role of IT driving business goals and the value of and preferences for on-premises and cloud storage solutions and services to assist in meeting application goals.

Analysis

As SMBs seek to modernize their storage environments, an overwhelming majority (83%) deem that a differentiated ability to support and power AI workloads is either a critical or important capability in new on-premises storage infrastructure (see Figure 1). Additionally, AI-optimized storage is a top investment area for SMBs. If data is the fuel that powers AI, then the storage infrastructure is the fuel tank, and SMBs are looking to their storage environment to help them unlock critical new insights, driven by AI.

It's also clear that on-premises environments will form a key part of customer AI strategies. More than two-thirds of respondents (68%) expect that their custom GenAI applications will run primarily on on-premises infrastructure or in a hybrid manner that also utilizes on-prem environments. Hence, on-premises storage is set to play a key role in helping organizations unlock the value of data for AI.

Though AI is playing an unprecedented role in shaping customer storage strategies, other factors are also having a major influence on future storage infrastructure planning. In recent years the public cloud has emerged as a popular destination for customer applications and workloads. However, public cloud has not proven to be a panacea and is creating challenges for customers.

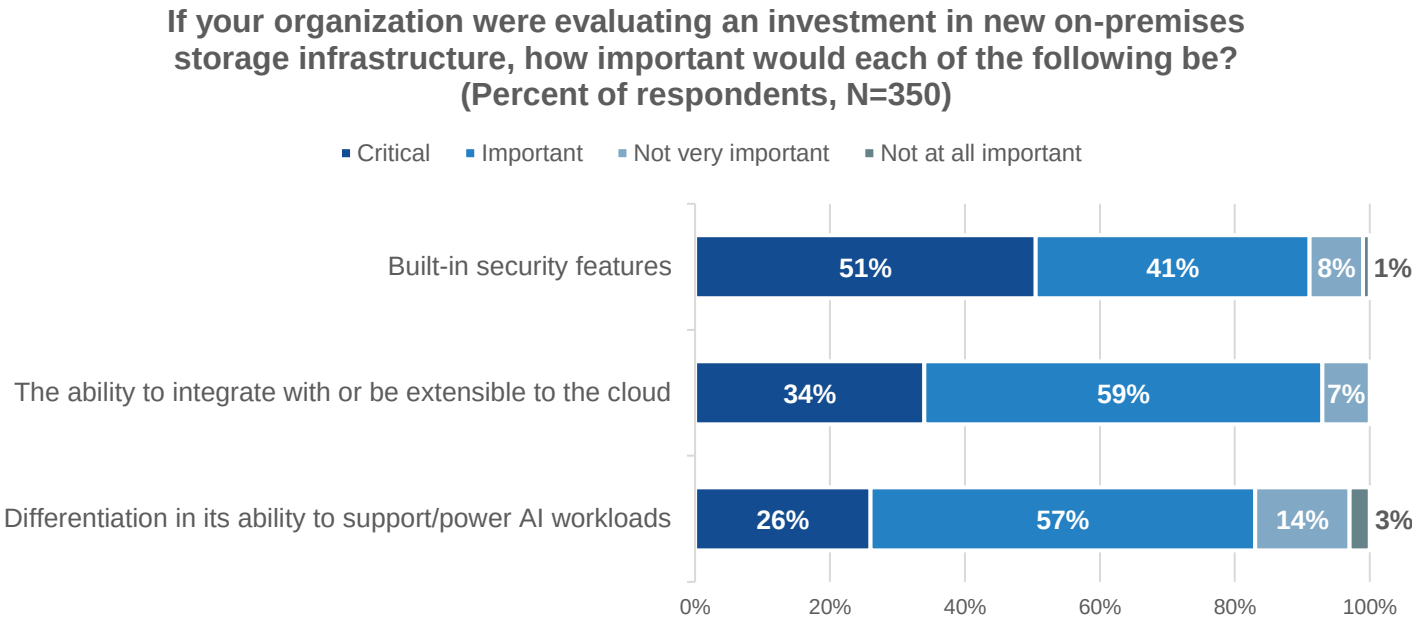
Two areas here, in particular, stand out. The first is in the security domain, which is a priority area of focus and concern for many organizations. More than 7 out of 10 organizations say that adopting cloud solutions has made the security of their overall environment more challenging. Second, almost three quarters of respondents (72%) said that adopting cloud solutions had made the overall manageability of their IT environment more complex.

In response, many organizations are choosing to bring workloads back to their on-premises data centers. More than one-third of respondents said they will repatriate IaaS-hosted workloads this year. And of those repatriating workloads, almost all of them (96%) will repatriate more than one back to their own data centers. Reinforcing the security challenge, the top driver for repatriation from a public cloud environment is that the organization had experienced a security breach or incident.

The importance of robust, in-depth security across all aspects of the modern IT environment cannot be overemphasized, and the storage infrastructure is no exception. The distributed IT environment has greatly expanded the attack surface of many organizations, elevating security to a board-level concern. In response, IT decision makers are looking to embed security into all aspects of the infrastructure. The storage environment, as a critical data custodian, increasingly requires built-in security as part of this "defense-in-depth" strategy; 92% of respondents said this would be a critical or important feature of any new on-premises storage infrastructure (see Figure 1).

Meanwhile, with many organizations adopting hybrid cloud strategies, investment focus is shifting toward technologies that enable improved integration and consistent operations across on-premises and public cloud environments. Integration with the public cloud at the storage level is becoming a critical capability as organizations look to facilitate data movement across the hybrid cloud, particularly for operations such as using the cloud as a data protection and archiving tier, as well as for workload repatriation.

Figure 1. Importance of Various Features in Evaluating New Storage Investment



Source: Enterprise Strategy Group, a division of TechTarget, Inc.

Conclusion

The future of many organizations will be driven by insights unearthed by AI, and IT organizations need to deploy data and storage infrastructure capable of unlocking these insights. IT orgs also need to do this across their entire environment securely and with consistent operations. Therefore, they will require comprehensive levels of built-in security and hybrid cloud support. All of these aspects are now must-have features in modern storage environments. As SMBs increasingly rely on IT to be the leader for the business in both growth and customer engagement, the usage of storage technology that has built-in functionality to improve security and better support AI is crucial to success.

Dell Technologies, a trailblazer in IT, has an extensive portfolio of leading storage solutions, along with a broad portfolio that covers the whole IT stack (storage, servers, software, networking, and services) to help organizations simplify their IT environments across the core data center, cloud, and edge.

How Dell Technologies and Intel Can Help

To effectively harness AI, organizations must modernize their data infrastructure, as most existing data centers fall short of AI demands. Dell Technologies, in partnership with Intel, offers cutting-edge storage solutions that leverage Intel's advanced processors and technologies. This collaboration ensures powerful, optimized infrastructure capable of handling AI workloads, leading to faster insights and better decision-making.

With Intel's advanced technologies embedded in Dell solutions, you can expect world-class performance, optimized workloads, and efficient power usage. Optimized for AI, PowerScale plays a critical role in powering performance-intensive use cases providing a scalable storage platform that meets our customers at their business needs. Intel's innovation in AI and analytics, combined with Dell's storage solutions, enables businesses to process and analyze large volumes of data more quickly and accurately, leading to faster insights and better decision-making.

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