

WHITE PAPER

# Solving What Legacy Can't: The Pure Storage Advantage

Replace silos with simplicity and embrace a secure, powerful storage platform to carry your AI, cloud, and app initiatives into tomorrow.

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## Introduction

Enterprise IT is at a breaking point. Market volatility, data sovereignty concerns, and cost pressures have reached an all-time high at the same moment that AI workloads, and the rising volumes of data that fuel them, are becoming business-critical. All of these forces are overwhelming traditional systems and operational models. Legacy platforms, built for a simpler time, are cracking under the weight of more complex workloads and requirements. And IT teams, buried in manual tasks and reactive firefighting, are still expected to deliver high availability, performance, and security on platforms that aren't up to the task.

IT leaders need a new approach to meet the evolving demands of today's business landscape. One that speeds and streamlines day-to-day management, reduces operational overhead, and brings you back control of your data.

## Exploring Challenges and Opportunities

Rapid innovation, from cutting-edge AI workloads to the prevalence of the hybrid cloud, has collided with rising data volumes, tightening budgets, and escalating security threats. Fragmented storage across hybrid environments has led to widespread data silos and sprawl, increasing operational complexity, duplication, and inefficiency. Meanwhile, the lack of centralized governance and visibility has allowed data to drift, exposing organizations to compliance risks and making it harder to ensure protection.

Day-to-day operations remain bogged down by manual provisioning, protection, and migration processes, driving up overhead and opening the door to human error. At the same time, uncontrolled data growth and rampant duplication strain infrastructure, inflate costs, and magnify operational risk. And with unpredictable workload demands emerging faster than ever, IT must be ready to scale, shift, and respond without disruption.

Traditional, siloed infrastructures simply weren't built to handle this level of complexity and change. They drive up costs, slow response times, and overwhelm teams with reactive management when the business needs speed, scalability, and resilience. IT teams need more than incremental improvements to meet these challenges. IT leaders must have a modern data storage and management approach to move forward. One that simplifies day-to-day operations, automates governance and protection, and delivers agility without disruption.

It's time to evolve away from fragmented infrastructure and toward a unified, software-driven platform that powers an Enterprise Data Cloud(EDC).

At its core, an Enterprise Data Cloud is a new operational model. One that replaces manual, siloed workflows with autonomous, fleet-wide management driven by built-in automation and real-time intelligence. It standardizes control across your entire data estate to streamline management, improve infrastructure efficiency, and ensure security and compliance.

Built on the Pure Storage Platform, this architecture simplifies daily operations, unifies control across environments, and delivers the agility and intelligence IT teams need to stay ahead.



**To help you navigate a rapidly changing world, this guide explores four critical areas where legacy storage falls short: AI, modern applications, hybrid cloud, and cyber resiliency.**

Each section outlines the challenges you're facing, defines what an ideal solution might look like, and shows how the Pure Storage Platform delivers.

It's not easy to build a winning IT strategy in such a complex and evolving landscape, but there are tremendous opportunities if you know where to look. We're here to help.

## Storage Built for AI

### Traditional Storage Faces a Non-traditional Challenge

GenAI is transforming organizations' workflows and offerings. More and more companies are shifting from AI proof of concept to full-scale implementation across the enterprise, leaving behind their old ways of operating in favor of new, AI-driven innovations that improve customer service, boost productivity, and expand their capabilities.

**Is it any wonder that their legacy infrastructure can't keep up? Traditional storage was built for a world that we've moved beyond.**

IT buyers identify GenAI as the top area where they expect IT spending to increase this year.<sup>1</sup> As companies invest more time and money into their AI initiatives, having the right technical infrastructure supporting them becomes even more critical. This is especially challenging because AI applications draw on enormous data stores, often including data in many different formats. When your GenAI applications can access and fully utilize your organization's data instead of a non-specific set of data, such as a public LLM might use, you gain richer, more valuable results.

But that's hard to do when your data is siloed. In a traditional storage infrastructure that has grown over time, data is often fragmented, which makes it difficult to access and integrate the diverse data sets that AI applications need. Without the ability to easily access all relevant data, your AI deployment is disadvantaged. Instead of the real-time, data-driven decision-making you desperately need, you might be left with unsatisfying and incomplete answers. An abundance of data with no way to truly gain insights from it? That's called data blindness, and it can make your business more vulnerable to poor decision-making and inefficiencies. You need real insights, not screens full of numbers.

With a lot of effort, you might be able to consolidate and organize all that data. However, data sprawl will slowly but surely encroach again without a more modern solution. It's like decluttering your house. You can enjoy your clean

living room for a few days, but if you don't have clear and consistent places to put your shoes, keys, and mail, it's only a matter of time before everything gets messy again.

With multiple copies of the same data spread across different traditional storage systems, you'll also need to reckon with ever more complex copy data management. There's a cruel irony here: For a successful AI initiative, you *must* deal with copy data management. However, that same work also makes it harder to implement AI. By complicating operations and increasing overhead, you reduce your agility, one of the most important elements of a successful AI implementation.

As your AI operations grow, these issues only grow. With more and more people using your AI tools and contributing to their development, it becomes more important that only authorized users can access the data fueling your AI initiative. But the challenges go beyond security. Traditional systems have a rigid way of provisioning, with preset resources that might or might not be a good fit for evolving AI workloads. At one extreme, your data stores may grow beyond the capacity of your storage system, forcing performance bottlenecks. On the other hand, you might allocate too many resources for a workload, resulting in inefficiencies and wasted capacity. And because data in traditional storage systems is so siloed, you might experience both problems simultaneously.



# 80%

Up to 80% of their IT budgets simply maintaining legacy systems.

**These data management and maintenance tasks take time, energy, and resources. Some estimates note that companies spend up to 80% of their IT budgets simply maintaining legacy systems.<sup>2</sup>** Your budget, not to mention your IT team, wasn't built to handle this kind of pressure.

## Finding the Right Storage Approach for AI

Rigid traditional storage is ill-suited to the needs of today's dynamic, AI-driven environments. But once you've chosen to leave behind your traditional storage, the next question becomes where to go from here. New technologies may offer increased performance and other advancements, but it would be a mistake to simply upgrade to a newer solution with the same underlying architecture that caused issues. Your AI workloads require a solution built for today's problems and today's opportunities, one that takes an entirely new approach.

### As you map out your storage strategy, consider:

- What capabilities would enable maximum agility for new and volatile AI initiatives?
- What solution would enable you to consolidate all your data to use it most effectively for AI-driven decision-making?
- How can you empower artificial intelligence for IT operations (AIOps) with reliability, flexibility, and high performance?

**Below, we outline the key features of a modern storage platform for AI.**

### Unified Architecture for Operational Simplicity

AI workloads require access to a wide range of data types, often spread across different systems. This need strikes at one of the most significant weaknesses of a traditional infrastructure. Legacy environments rely on separate storage silos for block, file, and object data, creating operational complexity and slowing down AI initiatives. A unified storage platform with native multi-protocol support eliminates these silos by allowing all data to be managed through a single architecture. This simplifies operations, accelerates data access, and reduces the burden of maintaining multiple systems, enabling your teams to move faster with AI and AIOps.

### Automation and Agility for a Changing Landscape

AI-driven initiatives demand extreme agility. Adopting a storage platform that embraces automation and offers built-in flexibility allows you to keep pace with these evolving workloads. The ideal platform provides autonomous configuration and self-tuning capabilities to scale performance without manual intervention as capacity grows.

Your team shouldn't have to spend time on the same routine maintenance tasks they were performing 20 years ago. Instead, they should be able to focus on implementing those ambitious AI initiatives, while your storage platform adjusts dynamically.

### Comprehensive Observability with AIOps

To manage and optimize AI workloads and the data that fuels them, you need robust AIOps. With unified observability and modern AIOps, you gain real-time visibility into who's accessing your data and how they use it. Your storage platform should also give you instant insight into your environment's holistic health and performance, alongside automatic problem identification and proactive, AI-driven resolution. That capability should go beyond identifying anomalies and user access issues; your storage platform should also be able to respond to the needs of AI workloads in real time, from adjusting resource allocation to tuning performance.

### Hybrid Cloud Compatibility for AI at Scale

AI initiatives rely on fast, flexible access to large volumes of data, both on premises and in cloud environments. A storage platform built for the hybrid cloud can deliver that access. Such a platform would support seamless data movement, consistent performance, and centralized management across your entire infrastructure. This improves resource efficiency, simplifies operations, and allows AI models to handle training and inference where it makes the most sense, all without adding complexity or cost.



## Flexible Capacity and Scalability

Because AI workloads have unpredictable capacity demands, the ideal storage platform for your AI initiatives can quickly and automatically adjust storage resources without manual overhead. That means scaling up when your workloads require it and scaling down just as easily, instead of overprovisioning and incurring extra costs, which might occur with a traditional storage platform.

You may not start your AI initiatives with large volumes of data, but as your data needs grow, you need a solution that can offer simple, non-disruptive expansion. Ultimately, for your most complex AI workloads, your platform should be able to easily expand to deliver high performance with petabytes of data and billions of individual data items.

## High Availability and Continuity

High availability and durability are critical requirements for AI workloads, due to the need for continuous, uninterrupted access to immense stores of data. The right storage platform can offer continuous operation for real-time, AI-driven decision-making. Robust loss protection is another piece of the puzzle, so no matter what happens with your hardware, software, or operations, you can retrieve the critical data that fuels your AI initiatives.

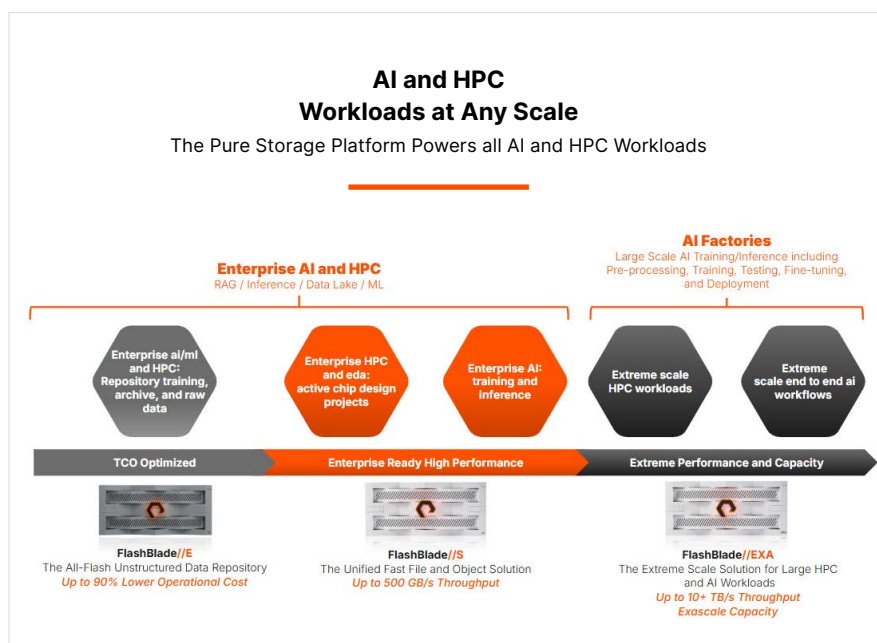
Your AI initiatives will likely grow more critical over time, and it is all but sure that AI workloads and tools will grow more complex and capable. Google Gemini, for example, doubled the number of tokens it could process in only a four-month span.<sup>3</sup> Similarly, you'll need to ensure your storage platform can keep pace with your growing data needs. Ideally, your solution would offer easy software upgrades and seamless hardware upgrades and replacements, so you can keep growing your capabilities without the financial disruption of a new purchase or the operational disruption of downtime around an upgrade.

## Why Choose the Pure Storage Platform for AI

AI initiatives may be some of the most complex, technical work your teams have ever handled. There's no need to increase their burden by forcing them to use a cumbersome, outdated storage platform. An Enterprise Data Cloud approach utilizing the unified, as-a-service Pure Storage Platform can smooth their path and yours.

## An Array Designed for AI

Although the Pure Storage Platform offers much more than high-performance hardware, let's start with arrays. The Pure Storage FlashBlade//EXA™ brings agility, scalability, and exceptional performance for AI workloads. Among the many storage array options available with the Pure Storage Platform, FlashBlade//EXA stands out as an AI powerhouse, maximizing performance density and empowering you to accelerate all stages of your AI workloads. Production, inference, and training happen at the speed of business. With the Pure Storage Platform, you can truly make the most of your AI investment, no more idle GPUs because the storage solution backing them wasn't up to snuff.



## Management Reimagined

By choosing the Pure Storage Platform, you're replacing the many data silos of traditional storage with a single, unified platform with one control plane. The Pure Storage Platform includes AIOps from the ground up with Pure1®. Pure1 uses machine learning to process data, extract insights, and streamline IT operations. It offers intelligent workload placement, security recommendations, and performance troubleshooting among other services. When your platform can handle this much traditional IT work without human intervention, your IT teams have the freedom to focus on higher-level tasks. **With maximum visibility, increased automation, and easier management, our customers have seen as much as a 75% reduction in storage management time.**<sup>4</sup>

Our Portworx® platform further eases the management burden by simplifying and automating container management and protection for Kubernetes workloads. By making common data sets accessible to all data scientists, no matter where the data is located, Portworx provides the agility and data mobility that AI workloads so desperately need. Like the rest of the Pure Storage Platform, it takes an as-a-service approach that enables easy scalability as you plan for larger AI implementations.

## Scale and Upgrade Painlessly

As your data stores continue to grow and AI technologies get more complex (and more valuable), you need a storage infrastructure that scales along with you. With the Pure Storage Platform, your storage pool can evolve and expand with your users' demands. At the same time, Pure Fusion™ automated workload orchestration ensures efficient utilization of storage resources, supports dynamic provisioning, and enables proactive security and compliance management. Unlike traditional storage, the Pure Storage Platform is designed specifically for AI, analytics, and other next-gen workloads with ever-increasing data demands.

Larger upgrades aren't going to be a problem, either. The Pure Storage Platform is future-proof: Evergreen® lets you invest once and stay current forever. With Pure Storage, you can rest assured that you always have the most modern storage technology, reliable and highly available, without worrying about major software upgrades or disruptive hardware upgrades. Evergreen//One™ for AI expands on that promise with performance guarantees based on your GPUs' and accelerators' maximum bandwidth requirements. Instead of bottlenecking on legacy storage, your AI implementation can scale up seamlessly as it evolves or scale down as you iterate on specific workloads.

## Future-Driven Resilience

All of us expect the services we use every day to just work. You should be able to expect the same of your storage. To keep data flowing to AI workloads, Pure Storage gives you unprecedented availability and a guarantee of up to 99.9999% uptime with monitored and managed STaaS SLAs.<sup>5</sup> Even during unforeseen disruptions, your critical AI workloads can keep running. The Pure Storage Platform offers a highly resilient architecture built to withstand threats from bad actors, natural disasters, and everything in between.

## Best-in-Class Partnerships

To help you achieve your AI goals, we've embraced partnerships with other companies delivering AI excellence. Having worked closely with NVIDIA®, our Pure Storage Platform is certified as a high-performance data storage platform for NVIDIA Partner Network Cloud Partners. Together, we offer an AI-ready infrastructure (AIRI®) reference architecture validated and certified with NVIDIA technology. Other results of these partnerships include pre-validated designs with Cisco for easy deployment, solutions with CoreWeave for scalable AI performance, and support for multiple vector databases ideal for AI workloads. The Pure Storage Platform goes beyond storage to deliver a truly AI-ready infrastructure, including the best of the broader AI ecosystem.

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## The Bottom Line

**87% of executives believe that GenAI can boost revenue within three years.**<sup>6</sup> But those windfalls won't just happen. You must strategically transform your IT infrastructure to take full advantage of the GenAI revolution. With the high-performance hardware, streamlined management tools, easy scalability, unprecedented availability, and partner ecosystems that future workloads demand, Pure Storage Platform is the right choice to help you realize AI's full potential.



## Modern Applications, Driven by Data

### Tomorrow's Applications, Yesterday's Solutions

AI isn't the only disruptive force in today's application landscape. The industry agrees that application modernization is critical, with 95% of respondents to a Red Hat survey stating that application modernization is vital for the success of their organization.<sup>7</sup> Increasingly, modern applications are microservices-based and built with scalability and agility in mind. They likely leverage containers and Kubernetes, and the DevOps teams that build them utilize agile development methodologies to increase the speed of deployment.

A modern approach to application development has a lot of advantages. Modern apps are faster in production, highly available to demanding user bases, and highly flexible for easy adaptation in an ever-changing business landscape. However, they pose a significant challenge for legacy storage focused on traditional workloads.

Traditional storage systems have static architectures that worked well for older, slower application development models. Today, developers need rapid provisioning and extreme flexibility for iterative building, and traditional storage simply can't adapt. The manual processes of legacy, multi-system storage reduce the value of these dynamic new applications and make the jobs of DevOps teams significantly more difficult. And as we've discussed, legacy storage infrastructures often have data scattered across many different systems, a death knell for data-driven initiatives.

So, it's settled. You need more capacity and performance than you have with your legacy solutions. Why not purchase a new storage array from your tried-and-true vendor? Unfortunately, it's not going to solve the problem. It might make things worse. That particular array might be able to

deliver lower latencies and hold more data, but if it's built on a traditional approach, you've just added another layer to your conundrum. You still have data silos. You still have legacy solutions with persistent problems. And not only do you still have separate management processes for traditional and cloud solutions, but you've likely just added *another* management approach to the mix.

Plus, you've introduced the challenge of migrating data. To effectively utilize your data in the modern applications they're developing, your teams must migrate all the data they need to a single location, which is easier said than done. Which data goes where...and how do you get it there? Cumbersome, manual migrations can disrupt projects before they even begin.

Another issue is incorporating hybrid cloud technologies and cloud-like capabilities (i.e., easy scalability, self-service options, and on-demand pricing, to name a few). While some legacy storage infrastructures have cloud extensions, that doesn't mean they've truly embraced cloud principles. These bolted-on cloud connections frequently cobble together multiple traditional storage systems, exacerbating the problems your teams are already facing with supporting many different isolated platforms.

Traditional storage systems are only growing in complexity as they age. Your company can't afford the costs associated with maintaining and updating those systems, especially as more and more of your budget goes to cutting-edge initiatives. Modern applications can potentially transform your business, but that's impossible if your team spends all its time on low-level tasks.





## A Modern Platform for Modern Apps

Modern applications require a modern approach to storage. Fueled by increasingly large stores of data and rapid development cycles, modern apps need agility, flexibility, and easy scalability. Traditional storage infrastructures, built for a different era of computing, are no longer sufficient. Your DevOps teams, users, and bottom line all benefit when you choose a platform built for this moment.

Before you make your next storage investment, think about what you want your applications' future to look like.

### Consider:

- What do your DevOps teams need to maximize efficiency and productivity?
- What solution will offer the scalability you need as your data stores continue to grow in tandem with the complexity of your workloads and applications?
- What characteristics of a storage platform will enable you to expand the use of your data and utilize it to drive innovation in your business?

**Let's discuss what factors make for an effective storage platform today.**

**One that will empower your teams to continue developing and utilizing modern apps.**

### Seamless, Cloud-like Data Management

Modern applications are built with cloud environments in mind, independent of any specific hardware solution, so the ideal storage platform also takes a cloud-like approach. Data management should be comprehensive and cross-platform, covering everything from production applications running in containers to little-used (but important) historical data. With a truly modern data management tool, you and your teams should be able to operate anywhere in your hybrid cloud infrastructure with equal ease and control. This approach allows IT teams to utilize both on-premises infrastructure and public cloud resources, if needed, while DevOps teams can focus on their work without worrying about where exactly their data lives.

### Scalability for Growing Data Stores

The more data your applications can utilize, the more powerful and effective they become, but only if they have a powerful storage solution backing them. The ideal storage platform should seamlessly scale resources up or down to deal with spikes in user traffic, data-intensive workloads, or the deployment of new applications. It should also be able to grow with your business as your stores of data expand.

A storage-as-a-service (STaaS) model is a perfect fit. Instead of purchasing a new array every time you need more storage, a cumbersome and costly process, not to mention one that gives you more space than you initially need, STaaS lets you pay as you go. Your costs increase linearly and fairly alongside your data stores. And scaling happens automatically, so your IT team doesn't waste time configuring new resources. If your DevOps teams can adapt their applications quickly to take advantage of new data, your storage solution should be able to do the same.

### Agility and Automation

In an agile development process, developers work iteratively, making frequent, incremental changes and completing rapid review cycles with their stakeholders. Because data fuels many modern applications, the ideal storage platform would enable easy, fast access to all the data these developers need. Going through a storage admin just slows development, so the ideal platform also incorporates self-service elements. With a self-service approach, similar to what you'd get in a public cloud setting, your DevOps teams can order up the resources and environments they need, increasing efficiency and agility.

Intelligent automation should be built from the ground up with a storage platform built for modern applications. By taking an AI-driven, automated approach to storage deployment, application deployment, and data management, you can save time and reduce time to market. On the DevOps side, automation adds even more value. By automating routine tasks such as code testing, provisioning, and monitoring, DevOps teams can streamline workflows and focus on more complex design problems. Automation also enables consistent deployment practices across environments, ensuring that applications perform consistently, securely, and reliably regardless of location.



## The Right Balance of Freedom and Control

The needs of DevOps teams and those of IT leaders can sometimes seem at odds: Developers want to call up resources easily, and leaders want to know where their resources are going. But this doesn't have to be an issue.

The right storage platform solves this problem with a cloud-like operational approach, featuring a centralized management system and strong observability. For DevOps, self-service portals offer autonomy, allowing them to access all the required data and spin up development environments. Like with a public cloud infrastructure, they can leverage cloud tools and the freedom to get the resources needed to move apps into production fast.

At the same time, IT teams have complete visibility into and control over the entire infrastructure. Governance stays with IT, and an API-first approach ensures that the platform provides consistent security and data management. Plus, a unified management experience helps reduce shadow IT, as all activity is visible in a single pane of glass, no more hidden data silos.

## Centralized Security

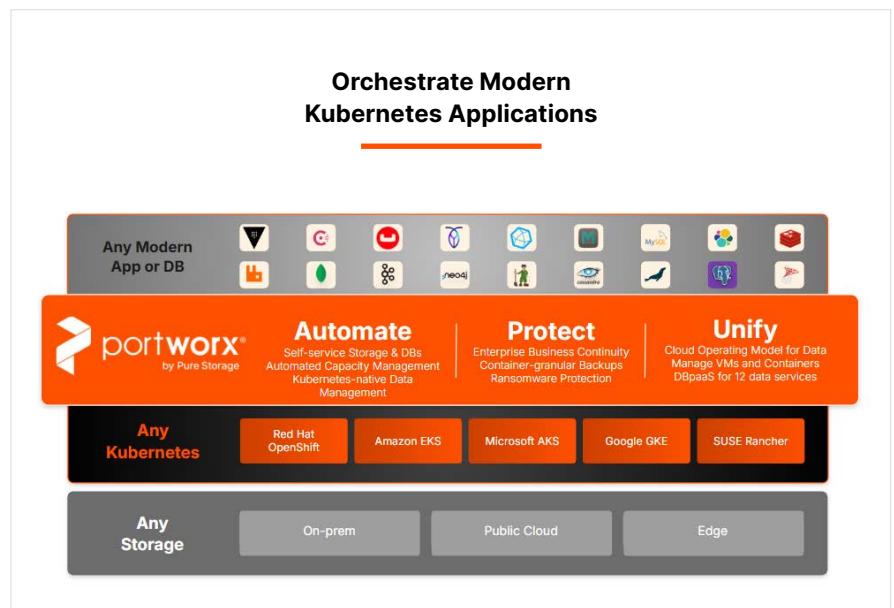
Modern applications aim to incorporate security in their very design from the beginning, and the ideal storage platform should do the same. Robust, built-in security is a must for your next storage platform. By taking a consistent, centralized approach across the environment, rather than piecing together multiple disparate security policies, you can reduce risk, maintain compliance, and manage the data fueling your applications with the confidence that you're safe from cyberattacks. For more on this topic, see the section [Meeting Today's Cybersecurity Challenges](#) later in this paper.

## Why Choose the Pure Storage Platform for Modern Applications

Modern applications are a hard requirement if you want your business to be relevant and scalable. By investing in a storage infrastructure that can support the development and implementation of these applications, you're setting yourself up for success. **The Pure Storage Platform is that infrastructure.**

## Efficiently Scale Across Environments

The Pure Storage Platform provides a cloud-like storage architecture to match the app architectures your DevOps teams use. Portworx is a key player for this use case. Part of the Pure Storage Platform, Portworx allows you to manage and scale containerized applications across hybrid cloud environments efficiently. Like the Enterprise Data Cloud, which brings cloud principles to storage, Portworx provides a cloud operating model for Kubernetes data management. It offers database-as-a-service (DBaaS) via Portworx Data Services, giving hundreds or thousands of DevOps teams the self-service capabilities they need to move at maximum productivity.



## Streamline IT Operations

With the Pure Storage Platform, centralized, policy-based governance works smoothly and automatically across the entire infrastructure. That means your IT administrators have complete visibility into and control over each team's access to data and resources, whether you're most concerned about cost control or data security. And to give time back to IT teams, the Pure Storage Platform automates capacity management and provides container-granular backups, protecting your applications in all stages of development.

## Boost Efficiency and Security with Automation

To increase efficiency even further, the Pure Storage Platform offers a host of automation opportunities through Pure Fusion and Pure1. Dynamic and AI-driven workload orchestration, proactive problem detection, and capacity and performance tracking give your IT team the tools they need to support DevOps, while still having time for innovations of their own. Plus, an infrastructure-as-code approach enables DevOps to automate simple repeated tasks and accelerate time to market. Just as automation can save time for

IT teams, it can also free up space for developers to tackle the hardest tasks in front of them, from ideating on the most compelling user interface (UI) to fixing the trickiest bug.

Automation also assists in security, which you can integrate right into the development process with the Pure Storage Platform. Robust security across the entire infrastructure helps you avoid security breaches during development. It enables you to release applications quickly with the confidence that security has been baked in from the beginning. Container-granular backups from Portworx protect your data (both at rest and in transit) and your applications (in all stages of development).

## Scale for Success

Building successful apps is no easy task, but let's say your DevOps teams succeed. Your applications are thriving, your profits are rising, and your customers are clamoring for more. How do you scale your storage to meet the growing demand? The answer is Evergreen//One. Taking an STaaS approach, this architectural model lets you start small and scale resources on demand. For larger upgrades, we handle both hardware and software non-disruptively and in a modular fashion. Gone are the days when you had to purchase a new array or replace an old one, creating yet more data silos; with Evergreen, your hardware always stays current. It helps that Pure Storage systems are highly reliable and long-lasting: 97% of Pure Storage arrays sold in the last six years are still working hard in production.<sup>8</sup>

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## The Bottom Line

**The Pure Storage Platform is a modern platform built for modern apps.** DevOps and IT teams get the resources and control they need to minimize time to market, maintain a secure infrastructure, and save precious time. And as we mentioned earlier, Pure Storage promises 99.9999% uptime, so you can ensure business continuity for all your most critical applications (whether still in development or production).<sup>9</sup> This reliability is paired with built-in security and all-flash speed to help your team complete even the most demanding tasks faster, from failure analysis to concurrent builds to refreshing data from development to production.



## Optimizing for a Hybrid Cloud World

### Traditional Storage: Stuck on the Ground

# 72%

**72% of organizations taking a cloud-first or hybrid cloud strategy.**

**Cloud computing has become ubiquitous, with 72% of organizations taking a cloud-first or hybrid cloud strategy.<sup>10</sup>** A hybrid cloud approach has significant advantages: You can get the flexibility and scalability of the cloud while maintaining the performance and security of an on-premises infrastructure.

You might think you could continue using your traditional storage while reaching for the cloud for innovation and scalability. But even as it delivers the best of both worlds, the hybrid cloud also creates challenges, especially if the on-premises half of the solution is a traditional storage architecture.

Traditional storage systems weren't built to act in concert with the cloud. In hybrid cloud solutions based on traditional storage, no consistent architecture or unified UI exists. You have to keep up with multiple different management systems, a problem that's exacerbated if you also maintain multiple older storage arrays with different user interfaces. Monitoring and managing so many different systems is a massive time drain for IT. Plus, such a disjointed infrastructure increases the likelihood of human error when it comes to tasks such as applying security policies, monitoring cloud spend, or flagging performance issues.

Data migration is another challenge. While some companies are repatriating specific workloads from the public cloud to on-premises systems, most of those organizations still have a cloud presence, and it's just a matter of what data goes where.<sup>11</sup> In theory, the beauty of the hybrid cloud is that your data can live anywhere, seamlessly shifting to wherever it's most needed.

That's not possible with traditional storage, though. Without a unified management system and better visibility across the environment, IT teams must deal with the constant, manual work of data migration using multiple siloed management tools. The more data they bring on premises, the more pressure they put on those aging legacy storage arrays. And just as moving data between different traditional storage arrays requires heavy IT involvement, so does moving data between a traditional array and the cloud. As your stores of data grow, this burden on IT will only get worse.

However, combining traditional storage with the public cloud hurts more than just your IT team—it impacts your bottom line. Sticking with a legacy storage architecture means committing to endless rebuy cycles to keep up with new technology. Meanwhile, public cloud costs can escalate unpredictably, especially without close monitoring. The result? You get the worst of both worlds: the ongoing maintenance and upgrade expenses of on-premises systems and the unpredictable and sometimes rapid cost growth of the cloud.

Cloud computing has changed the world. If your business embraces a hybrid cloud strategy, as many do, utilizing systems designed for an on-premises approach makes no sense. You need a platform built with cloud principles in mind.



## Creating a Cloud Experience Anywhere

The benefits of a modern cloud experience are obvious for users: data is always available, wherever and whenever they need it. However, delivering that experience across hybrid environments has been anything but simple for IT teams. Fragmented multi-architecture systems make it harder to move data freely, and in most cases, data needs to be migrated between different formats, rather than simply just moved.

Hybrid cloud is today's standard, and a modern storage strategy must reflect that. Applications and data must move seamlessly across environments with dependable security, resilience, and automation. IT teams need centralized control that makes their jobs easier, not more complicated. And the business expects continuous availability, agility, and cost efficiency.

Legacy storage cannot meet these expectations. You need a new model. One that brings cloud-like operations to your entire hybrid environment through a unified platform. This is the promise of the Enterprise Data Cloud.

As you plan your next steps, key questions to consider include:

- How can you provide users and IT teams a unified experience, regardless of where the data resides?
- How can you simplify operations and increase automation to match the pace of modern workloads, including AI?
- How can you deliver continuous uptime, seamless upgrades, and operational consistency across hybrid environments?

### Here are the key capabilities to look for.

#### Unified Management

A truly modern storage platform offers a single control plane across on-premises, public cloud, and hybrid environments. Centralized policies, consistent SLAs, and full visibility simplify management, reduce human error, and free up your IT teams for higher-value tasks.

#### Intelligent Automation and Orchestration

The right platform automates routine tasks such as provisioning, optimization, and protection, while supporting DevOps and cloud tools like Kubernetes, Ansible, and Terraform. Automation ensures faster service delivery and reduces operational complexity across all environments.

#### Effortless Data Mobility

Seamless data movement is essential in a hybrid world. Your platform should enable the fast and secure data mobility between clouds and on-premises systems without disruption or heavy manual involvement, empowering applications and AI workloads to run where needed most.

#### Non-disruptive Scalability and Upgrades

Your storage should scale effortlessly as your environment grows, without downtime, costly migrations, or service interruptions. Continuous modernization must be built into the platform to maintain availability and performance without operational disruption.

#### Automated Governance, Cyber Resilience, and Intelligent Resource Efficiency

Security, compliance, and resource optimization must be built into the platform, not bolted on. Automated governance should minimize human error and enforce policies consistently across environments. Simultaneously, your platform should have real-time analytics to strengthen cyber resilience, optimize infrastructure usage, improve sustainability, and help control costs by eliminating wasteful overprovisioning.

#### Consistent Performance and Predictable Costs

A modern storage platform must deliver high throughput, low latency, and reliable performance across hybrid environments. At the same time, predictable, consumption-based pricing models should give finance teams clear visibility and control over costs as demand grows. Cost management is a significant challenge for over 80% of cloud users, so this is an especially critical concern.<sup>12</sup>

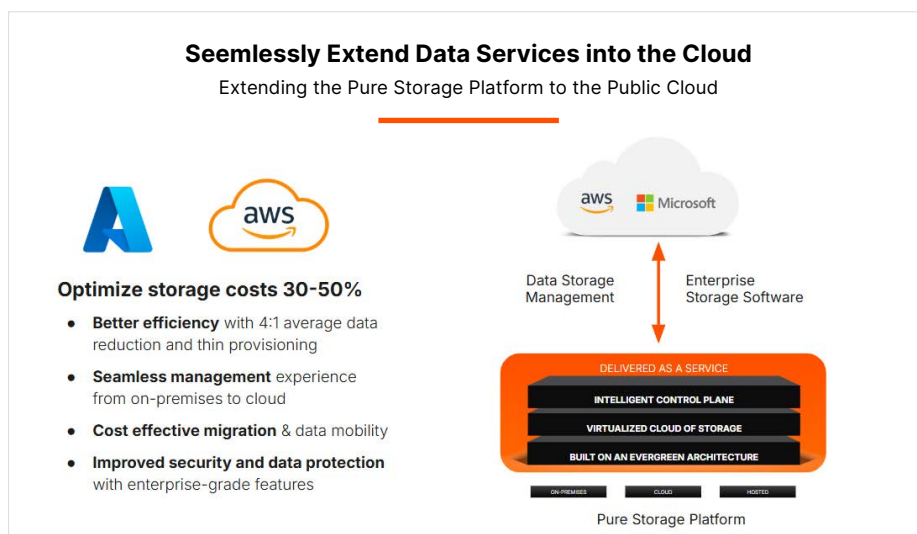


## Why the Pure Storage Platform Delivers the Best Enterprise Data Cloud

For technical leaders managing accelerating business demands, the Enterprise Data Cloud (EDC) offers a transformational approach to storage data management. Built for today's hybrid cloud environments, EDC simplifies data management across on-premises and cloud landscapes. It creates a unified, intelligent foundation that reduces operational burden, drives efficiency, and unlocks agility at scale.

### Unify with Your Favorite CSPs

The Pure Storage Platform is uniquely architected to deliver the full value of the Enterprise Data Cloud, especially relevant in the ubiquitous hybrid cloud environments. Unlike traditional storage solutions that layer cloud extensions onto legacy architectures, Pure Storage provides a natively unified platform for all your data, including block, file, object, and cloud storage. This unified approach, all with a single control plane, ensures consistent policies, seamless visibility, and predictable service levels across the entire environment.



With Pure Storage Platform, you don't need to change the public cloud instances that have worked well for you; it integrates with the cloud service providers (CSPs) you already use. Pure Storage is an Amazon Web Services (AWS) Service Ready Partner and Advanced Technology Partner that can serve your needs regardless of your AWS services. With Microsoft Azure, the Pure Storage Platform offers Pure Storage Cloud for Azure VMware Solution (AVS), an Azure Native ISV Service developed with Microsoft and VMware to reduce and simplify operational costs and streamline management. And in addition to being a Google Cloud ISV partner, Pure Storage is also a part of the Google Cloud Anthos Ready Storage Initiative, enabling seamless integration of containerized applications on the Google Anthos platform.

### Standardize Management to Give Ease Back to IT

Just as you've experienced with public cloud services, the Enterprise Data Cloud is a virtualized cloud of data delivered through a single management experience across all environments. By eliminating manual, siloed workflows and replacing them with fleet-wide operations driven by automation and real-time intelligence, EDC helps you shift from reactive support to proactive service delivery.

Management is standardized across the entire data estate, improving operational resilience, infrastructure efficiency, and governance. Portworx, part of the Pure Storage Platform, epitomizes this unified management experience. For your teams working on developing and releasing applications, Portworx provides a consistent DevOps experience across all environments, making it easy to move your apps between different environments as they grow or their requirements change.



## Replace Manual Work with Smarter Automation

Automation is deeply integrated across the platform. Policy-based operations replace manual tasks such as provisioning, tuning, and performance optimization. Industry-leading telemetry and AI-driven insights, available through Pure1 continuously monitor and analyze system performance and data usage. This enables smarter workload placement, dynamic balancing of capacity and performance, and faster troubleshooting without needing constant manual intervention. Simultaneously, real-time analytics optimize resource usage, improve sustainability, cut operational costs, and eliminate overprovisioning across the hybrid cloud environment. With more IT work automated, the platform helps you both reduce human error and give IT teams more time to deal with their most difficult tasks.

## Stay Modern No Matter What

Continuous modernization is a fundamental advantage of the Pure Storage Platform. Your platform evolves along with your needs, with scaling aligned to service-level objectives rather than hardware limitations. With Evergreen architecture, you can avoid disruptive forklift upgrades and costly rebuys. Instead, just like in a cloud environment, hardware and software upgrades are non-disruptive so that you can keep your environments on the cutting edge of modernization without downtime or migrations. These continuous upgrades are backed by Evergreen//One, offering guaranteed performance, availability, and efficiency SLAs.

## Pay for Only What You Use

The platform also extends cloud economics across the entire hybrid environment. Instead of balancing CapEx for on-prem hardware purchases and OpEx for cloud purposes, everything is a flexible subscription-based consumption model, meaning you only pay for the resources used. Combined with reductions in data center footprint, power consumption, and cooling requirements, the Pure Storage Platform helps enterprises scale sustainably and predictably, without unexpected costs. Requirements for space, power, and cooling are lowered so significantly that you can consume up to 80% less power in 20% of the data center space.<sup>13</sup>

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## The Bottom Line

**Success depends on a unified cloud operating model in today's hybrid cloud world.** The Enterprise Data Cloud, powered by the Pure Storage Platform, delivers consistent control, seamless mobility, and intelligent automation across your environments. With a single operating model for managing data everywhere, you can reduce complexity, optimize resources, and accelerate innovation at the speed your business demands.



## Meeting Today's Cybersecurity Challenges

### Why New Security Risks Require a Revolutionary Approach

Today, your data is your most critical strategic asset, making it a target for cyberattacks. You're operating in an evolving threat landscape, with bad actors innovating as quickly as modern businesses. Ransomware is now available as a service, AI-generated text in phishing emails is common, and 20% of security breaches last year came from exploiting vulnerabilities.<sup>14</sup> The risks of cyberattacks have never been more urgent: Last year, the average cost of a data breach soared to a new high of \$4.88M.<sup>15</sup>

# 40%

**40% of those breaches  
involved data that was stored  
in multiple environments.**

**That's why it's critical to prioritize security at every level of your infrastructure, including storage.** Unfortunately, a piecemeal traditional storage infrastructure isn't up to the task. In a 2024 survey of organizations struck by data breaches, 40% of those breaches involved data that was stored in multiple environments.<sup>16</sup>

In traditional storage architectures with multiple isolated systems, the lack of a unified control plane is more than a management challenge; it's also a security issue. IT teams, already stretched thin, must implement the same security fixes multiple times across different management interfaces, increasing the risk of human error (not to mention costs). Plus, having to monitor multiple interfaces with no global visibility makes it more likely that your team will miss security-related red flags.

For attackers, however, this fragmented architecture is a dream come true. With multiple systems comes a widened attack surface, offering more entry points for bad actors. It worsens when you consider that security policies and protections are inconsistent across the infrastructure. Each silo of traditional storage might have its own set of security policies, which invariably means gaps in coverage. Without a single control plane and policy-based controls, it's nearly impossible to implement comprehensive security measures across storage systems of varying types and ages. In fact, McKinsey listed compatibility challenges, including integration with legacy systems, as a key uncertainty affecting cybersecurity last year.<sup>17</sup>

Now let's imagine that an attacker succeeds, getting into your infrastructure and deleting data or holding it hostage. With traditional storage, restoring data is a nightmare all on its own. The more fragmented your infrastructure, the less likely your backups are to be comprehensive, and the more likely that restoring data will be time-consuming, laborious, and ultimately incomplete.

Many, if not all, of your most business-critical initiatives rely on your data. That means data security is too important to ignore. However, traditional storage makes it incredibly difficult to address security in the ways modern threats require. You need a different paradigm.





## Making Security a Priority

Where should you turn if a traditional storage infrastructure isn't up to today's security requirements? You need a storage platform that builds in modern security from the ground up. Of course, the top requirement of any security solution is keeping data safe, from both bad actors and well-intentioned human error. But the ideal approach should go further. It should be flexible yet consistent, offering comprehensive control and governance across every system, every dataset, and every workload. Your platform's security features should be able to meet your compliance requirements, reduce risk, and help you save time. Equally important are proactive support and world-class data backup and recovery, just in case disaster strikes.

To that end, make sure to think through the following considerations as you plan your investment:

- How much security-related management work can you offload via automation, freeing your IT team for innovation?
- What SLA requirements and governmental regulations must your organization comply with, and what attributes of a storage solution can help you meet those requirements?
- How can you identify and eliminate hidden gaps in security?

**In the following section, we dive into the key security features of a modern storage platform.**

### One Unified Control Plane

As we've already discussed, a single unified control plane has many benefits for IT teams, saving them time and helping to integrate all infrastructure elements. But it's just as much of a boon for security. By centralizing management, the ideal storage platform gives IT a single pane of glass to monitor data, manage security updates and policies, ensure compliance, and closely track any early warning signs of security issues. Instead of keeping track of multiple disparate systems, IT can assess security comprehensively in one place.

### Global Security Policies

A modern storage platform should integrate policy-based security across the entire infrastructure. This is especially critical if your business must maintain compliance with regulatory standards such as the National Institute of Standards and Technology (NIST) framework, the General Data Protection Regulation (GDPR), or the Digital Operational Resilience Act (DORA).

With global security policies, you can ensure consistent security and regulatory compliance no matter where your data lives. Always-on encryption and ransomware protection should also extend to all infrastructure elements to protect your data from bad actors.

### Automated, Always-on Data Protection

Your security approach isn't viable if IT admins require frequent manual intervention. To maintain resilience and compliance at a large scale, security should be the default: Even if your team hasn't set a specific policy or initiated the right automations, your data should still be protected. In addition to this always-on security, your storage platform must have native, automated data protection features such as intelligent ransomware safeguards, automatic security enforcement, consistent backups, and multi-layered resiliency.

### AI-driven Security Insights

Applying AI technologies to security can help you stay one step ahead of attackers, as the AI systems evolve and improve along with threats. Your storage platform should offer AI-driven tools to identify suspicious patterns, such as ransomware signatures or access anomalies, and deliver proactive and effective risk mitigation. The use of AI in security has never been more critical: According to a 2024 survey, organizations that extensively incorporated AI and automation into their security strategies saved \$2.22M compared to those that didn't.<sup>18</sup>



## Proactive Support

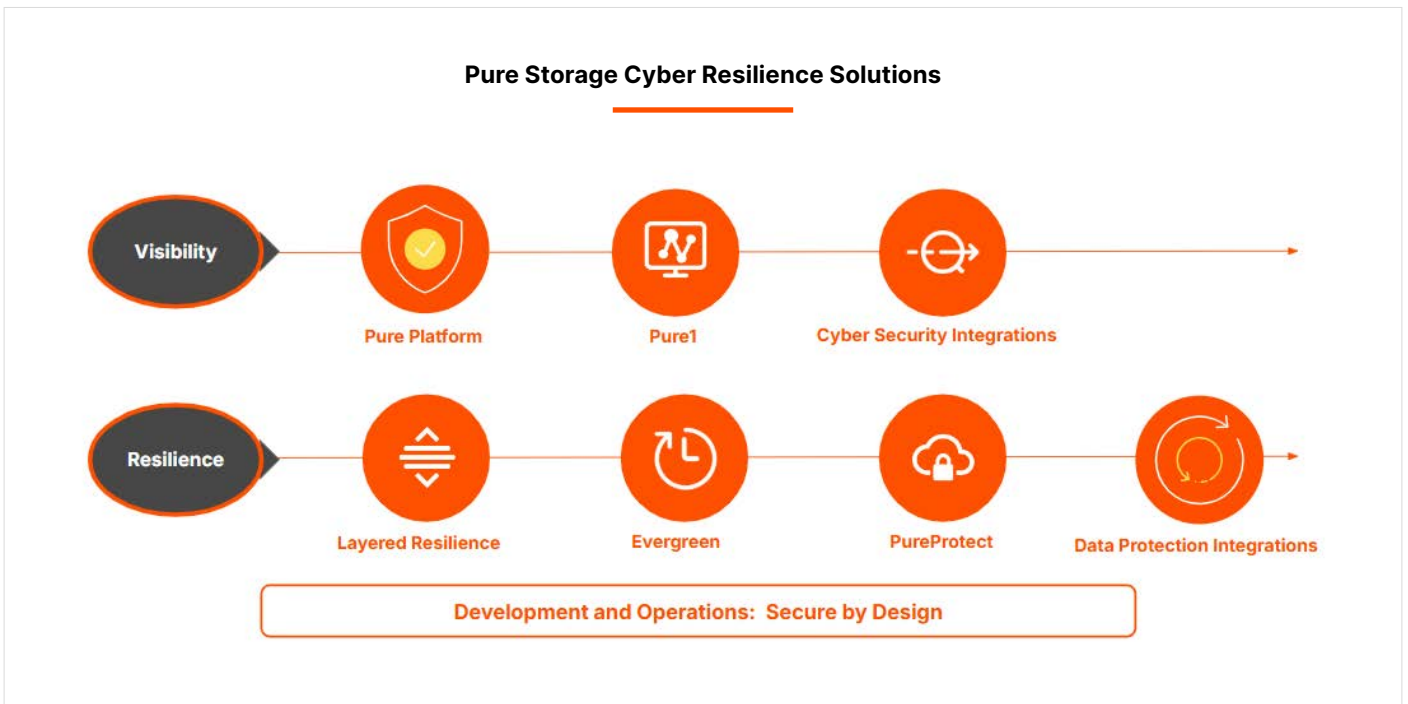
Downtime is the enemy of productivity. It interrupts workflows, disrupts both staff and customers, and incurs enormous costs. 84% of organizations in one recent survey lost at least \$10,000 in revenue in an outage, and a third experienced between \$100,000 and \$1,000,000 in revenue loss due to an outage.<sup>19</sup> To avoid downtime, your storage platform should have proactive, predictive support capabilities, so you can resolve issues before they affect your users. Integrating security information and event management (SIEM) and/or security orchestration, automation, and response (SOAR) solutions can help give you the full picture of your infrastructure security and enable effective, automated responses for an improved security posture. For additional assistance, professional support should be available every day to prevent issues and answer your questions whenever you need to make operational changes.

## Strong Recovery Capabilities

No security solution is 100% impenetrable, and no organization is safe from becoming a target for a cyberattack, changing the narrative from if to when a cyberattack occurs. A major result of these incidents is data loss, whether due to a security breach, a natural disaster, or simple human error, and your storage platform must have robust backup and recovery features. Immutable backup snapshots, continuous replication, automatic failover, and point-in-time recovery can help you mitigate the impact of a disaster and get back to normal operations faster.

## Why Choose the Pure Storage Platform for Security

To face increasingly sophisticated threats, you need to create a cyber-resilient enterprise. The Pure Storage Platform has built-in security from the ground up, empowering you to protect your data and avoid business disruption. The Pure Storage Platform is more secure than a traditional storage platform due to its design. With a traditional, siloed approach, every system's security is in a different state, inevitably creating data exposure and vulnerabilities, which are ideal for bad actors. The Pure Storage Platform solves this problem by unifying all your data and eliminating those gaps.



## Save Time and Succeed with Policy-driven Security

With Pure1, you get comprehensive security oversight in a single control plane covering infrastructure and data security. Pure1 offers assessments on system health and security posture, real-time monitoring, and seamless integration with data recovery. Gone are the days of tracking and updating 12 different systems' security policies every week. Instead, the Pure Storage Platform takes a unified, policy-driven approach to security. Your entire infrastructure is governed in one place, so security policies are always consistent and up to date.

## See Threats Coming from a Mile Away

The Pure Storage Platform automates security to enhance it. Security assessments run continuously, identifying common vulnerabilities and oversights and providing recommendations for plugging the holes in your security infrastructure. Advanced behavioral analysis tools, driven by AI models trained on historical security data, monitor across the infrastructure for anomalies in activity that could indicate a security breach. The platform continuously learns and adapts to predict and prevent security threats, making it more resilient and efficient than a traditional architecture. These intelligent capabilities increase security while saving time for IT and reducing the risk of human error.

## Stay Ready for the Worst

What happens if you *do* experience a cyberattack? The Pure Storage Platform incorporates automated, immutable backups via auto-on SafeMode™. With SafeMode, a policy-based feature that creates a secure enclave for backup snapshots, only authorized parties can modify the policies that govern snapshots. Cybercriminals can neither alter nor delete snapshots, and they can't hold your data hostage, even if admin credentials become compromised. This virtual air gap approach protects production and backup data, enabling near-instant recovery while supporting rapid forensic analysis and faster threat detection.

## Recover at the Speed of Business

The Pure Storage Platform provides on-demand disaster recovery-as-a-service (DRaaS) via Pure Protect™. If disaster should strike, Pure Protect enables seamless failover and data recovery across the platform, no matter where the data lives. With Pure Protect, you don't need standby hardware on hand for disaster recovery, like with a traditional storage approach. You get business continuity and flexible, automatic recovery as a service, just like everything else with the Pure Storage Platform. This approach gets your critical workloads and data back in production dramatically faster than traditional arrays. You meet your SLAs, and your users return to productivity with minimal downtime.

## Get Enterprise-grade Support

The Pure Storage Platform is built to maximize automation and minimize demands on IT, but your IT team may still have the occasional cybersecurity question. We offer unparalleled support for any challenges you can't handle by yourself. Our integrated support and professional services are here for you 24/7/365. Taking a proactive approach, our Pure Technical Services team has a customer satisfaction score of over 97%.<sup>20</sup>

Of course, your goal is for infrastructure issues never to require you to pick up the phone. Pure1 AI-driven monitoring predicts failures and helps address issues proactively, while predictive support teams fix problems before they impact operations. We have a strong track record: Our technical team detects and resolves 80% of issues before they affect users, leading to 30x fewer service calls.<sup>21</sup> As an added option to enhance security, Pure Storage offers quarterly resilience assessments that find your security gaps and remediation services to fix them.

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## The Bottom Line

**A 2024 Statista survey showed that almost 90% of organizations were at risk of a cyberattack in the following year.<sup>22</sup>**

Cyber resiliency has never been more important. By unifying your data, the Pure Storage Platform also unifies and strengthens your security, keeping your data safer and giving you faster backup and recovery options.



## Conclusion: Evolve Beyond Legacy Before It Holds You Back

Legacy storage architectures can't meet the demands of a modern enterprise. Designed for a slower, more siloed world, they add risk, inflate costs, and hinder your ability to keep up with today's business pace. As your AI, application modernization, hybrid cloud, and security needs intensify, the operational burden of fragmented infrastructure only grows heavier. So does the opportunity cost of standing still.

The truth is clear. Traditional storage isn't just slowing esoteric initiatives in the data center, and it's putting the success of your entire digital strategy at risk. Every modern solution, every customer-facing innovation, and every operational improvement depends on fast, reliable, and scalable access to data. If your storage can't keep up, neither can your business.

The Enterprise Data Cloud model delivers the foundation you need to move forward. It unifies data and storage management under a single cloud operating model, replacing manual workflows with intelligent, autonomous operations that scale seamlessly across environments. Governance, cyber resilience, and resource efficiency are built in, not bolted on.

And only the Pure Storage Platform brings the Enterprise Data Cloud to life. Purpose-built to unify, automate, and continuously modernize, it enables you to power not just AI initiatives, modern apps, hybrid cloud, and security, but every critical solution your business depends on, both today and into the future.

With the Pure Storage Platform, you can stop managing around limitations and start building the infrastructure your business needs to lead. The future demands more than legacy can deliver. The Enterprise Data Cloud, powered by Pure Storage, is how you stay ready for tomorrow and everything that comes after.

 Learn more at <https://www.purestorage.com/pure-advantage/platform.html>.

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