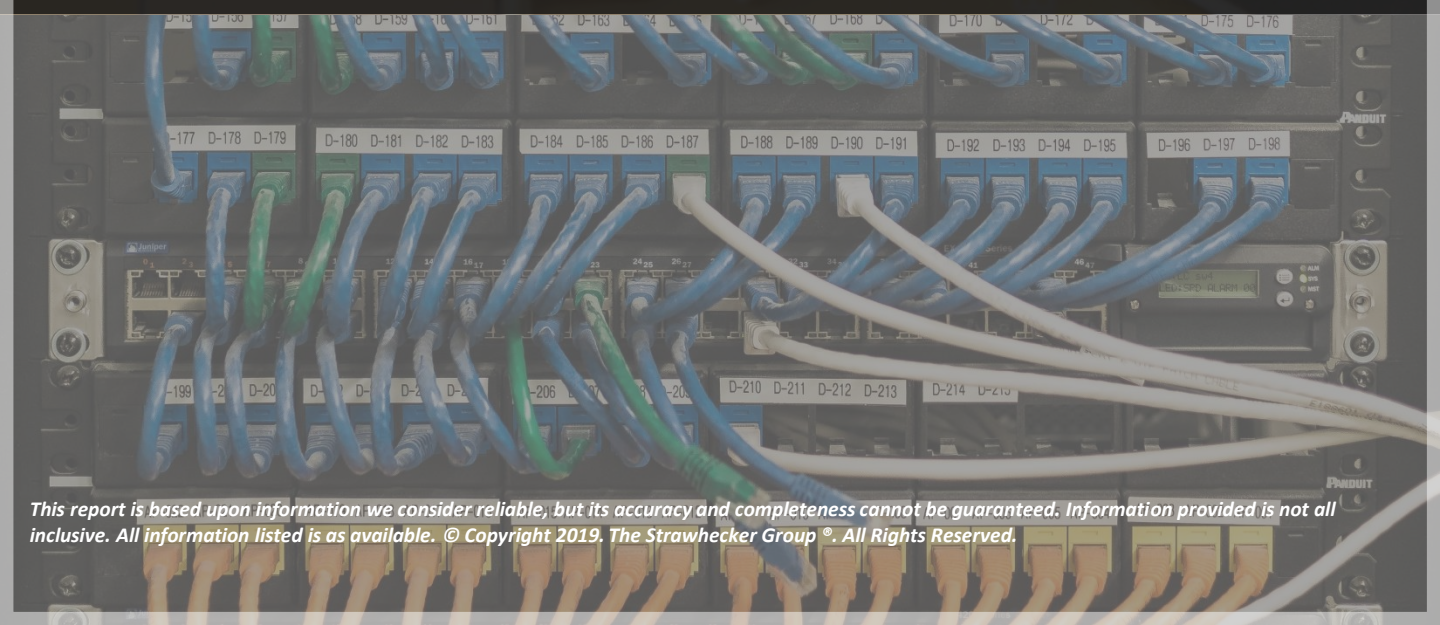
How to Upgrade Your Payment Platform to Guarantee Merchant Growth

Set yourself apart from the competition this year and be an industry leader



The Payment Platform Assessment and About The Strawhecker Group (TSG)

The Payment Platform Assessment

The payments industry is undergoing rapid change and growth. Industry consolidation and new entrants push competition and bring payment providers' performance and solutions to the forefront. Merchants are demanding and subpar solutions lose business to competition. A payment provider's information technology infrastructure is a critical part of merchant retention and keeping pace with or staying ahead of market growth. Furthermore, a payment provider's platform is the front-line tool in providing merchants with the best performance and processing solutions. Because of this, The Strawhecker Group conducted a review and assessment of the best options to upgrade your payment platform now to be prepared for today and tomorrow. One solution, in particular, provides high security and fast performance with minimal time investment and low risk at an affordable cost.

About The Strawhecker Group (TSG)

The Strawhecker Group is a fast-growing analytics and consulting firm focused on the electronic payments industry. The company serves the entire payments ecosystem, from fintech startups to Fortune 500 companies. TSG provides its clients with advisory services, research and analytics to help them plan and execute their strategic initiatives, using its wide breadth of operational expertise. One focus area of expertise is information technology – TSG team members have over a century of combined years of expertise in information technology within the payments industry, including holding various C-level positions. TSG is based in Omaha, a recognized payments industry hub, and is an established leader in this high-growth, ever-evolving space.

1,000+	*40+*	*25+ Years*	*3.7+ Million*	*30+*
CLIENTS ADVISED	*OF THE TOP 50 ACQUIRERS SERVED*	*AVERAGE ASSOCIATE EXPERIENCE*	*U.S. MERCHANTS IN TSG'S ANALYTICS PLATFORM*	*ACQUISITIONS/ INVESTMENT TRANS*

The Payments Industry Is Growing. How Will Your Payment Platform Perform Tomorrow?

The payments industry is growing around 10% in the U.S. and 8% globally per year. In 2018, electronic payments volume was nearly $7 trillion in the U.S. and more than $30 trillion globally. Legacy platforms are struggling to meet growing payment processing demands. **Is your platform ready for growth?** Accelerated industry consolidation and new technology entrants are applying additional competitive pressures and TSG encounters competitors taking advantage of platform performance deficits every day – **are you protecting your future growth?** If the answers to these questions are not yes, it is time to assess your payment platform's performance using four key factors – security, performance, cost and partner choice. Accelerated industry consolidation and change further underscore the need to satisfy these key factors.

In 2018, there were ~250+ billion global card transactions with over 100 data points each. That's more than 25 trillion data points. The industry is growing fast and so is the data, is your payment platform ready for this multidimensional growth?

Security Is Paramount
The number of data breaches and exposed records is increasing. In the U.S., data breaches nearly doubled and exposed records are almost 13 times higher compared to ten years ago. Security regulations are changing – PSD2, GDPR and PCI. Payment platforms need to provide the best security and to be nimble and adapt to changing regulations.

Reputation Is Priceless – Protect it
Competition is fierce and slow performance is visible to the entire ecosystem. Subpar performance is leveraged to steal market share and has other negative implications such as reputation damage, SLA failures and high merchant attrition.

TSG's Gateway Enterprise Metrics (GEM) tool, which tracks, analyzes and benchmarks gateway performance, validates that platforms today have measurable performance variability. TSG's research shows poor performance leads to merchant dissatisfaction and increased attrition.

Cost Extends Beyond Equipment Alone
Payment platform costs go beyond equipment – time, complexity, reliability and scalability. A platform that requires significant time to manage and is complex incurs additional employee, software and hardware costs. A slow and/or unreliable platform bears all the previous costs, plus potential business loss. Without scalability, business growth is not enabled. An outdated payment platform may cost up to five times more to maintain than a modern architecture. Payment providers must find areas like these to manage expenditures while offering merchants more.

Partner for Success
Engaged, payment-knowledgeable partners help reach business goals versus being hurdles.

<u>Evaluate your payment platform today and leverage TSG's assessment, which includes:</u>

- A look at payment platform performance variability using TSG's GEM tool.
- A review of payment platform upgrades.
- Identification of the best payment platform upgrade that provides the best combination of high security, fast performance, low cost, minimal risk and minimal time.
- A dive into the four critical factors to futureproof payment platforms – security, performance, cost and a partner for success.

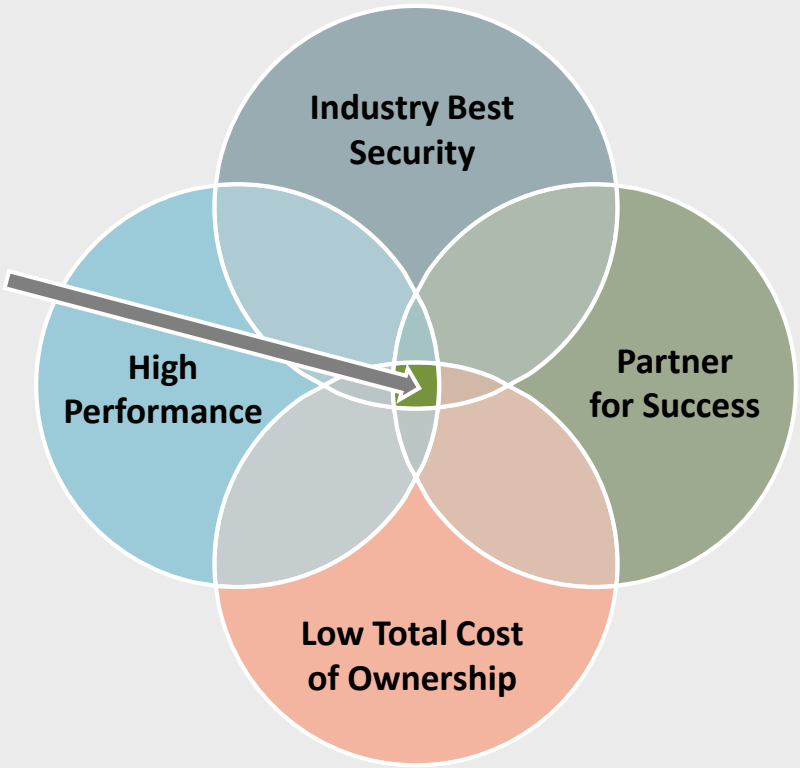
Total global payments industry spend for data centers is ~$13.5+ billion and TSG forecasts it to triple by 2025.

Sources: TSG Institutional Knowledge and Analysis, TSG's Directory of Merchant Acquirers, TSG's AIM, Visa, Mastercard, Statista

Have a World Class, Futureproof Payment Platform Built for Merchant Growth by Addressing These Key Factors

Future Architecture Target

Your payment platform must satisfy all four criteria to be world class



When you reach optimal payment processing architecture each of these are satisfied.

Security

- High data security
- Provides real-time notification of threats
- Up-to-date with regulatory compliance such as PSD2, GDPR, PCI and SOC 2
- End-to-end encryption and encryption of entire environment
- Easy integration into security products
- High resiliency
- Simple data security management

Performance

- Fast transaction speed
- Built for volume growth
- Low latency time
- High uptime
- Meet SLA targets
- Broad interoperability
- Support load balancing
- Support machine learning
- Ability to handle disparate data types
- Support broad POS solutions
- Flexible and efficient APIs

Cost

- Flexible purchasing options
- Futureproof architecture
- Low initial purchase cost
- Low total cost of ownership providing longevity and scalability
- Broad management tools, high ease of management and low maintenance
- Non disruptive upgrades
- Minimal time to implement
- Effective use of capacity

Partner

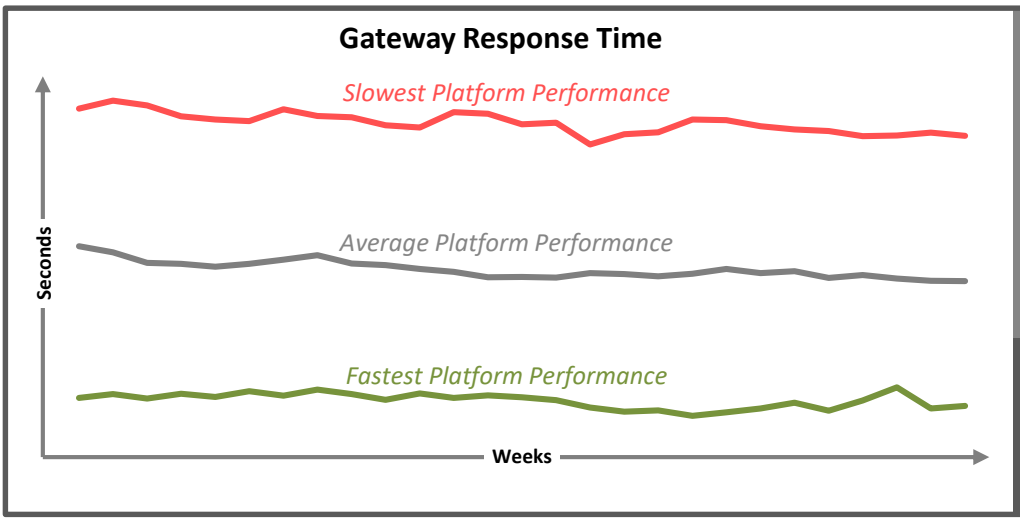
- Established and trusted payments partner
- Good reputation and quality referrals
- Proactive and responsive customer support
- Next gen support
- Innovator

Sources: TSG Institutional Knowledge and Analysis

The Strawhecker Group's GEM Tool Shows Significant Differences in Payment Processing Performance

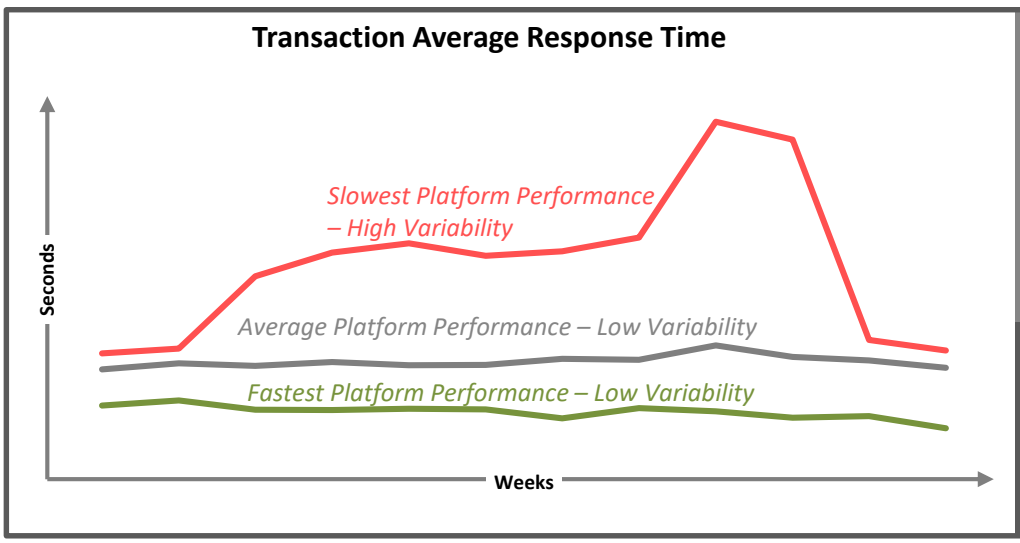
TSG is the global leader in measuring and reporting on payment platform performance and availability with TSG's GEM product and tools – the only independent payment performance and measuring tool available that benchmarks real transactions. To test gateway performance, TSG captures real transaction metrics by sending actual transactions from multiple locations and pinging 24/7/365 from over 20 different global locations. TSG reviews data in real-time to uncover and report platform issues to the various gateway providers, often before they know an issue exists.

Outdated platforms have slower performance and significant individual performance variability. The top chart shows a 3.5 fold performance difference between the best and worst performing platforms and the bottom chart shows a 2.5 fold performance variation within an individual platform. TSG's research shows performance issues lead to merchant dissatisfaction and increased attrition.



Best performing platform > 3.5X faster than the worst performing platform and > 2.2X faster than the average

Slow performance = merchant attrition



Worst performing platform > 2X variation when compared to itself – occurred during peak retail season

High variability = merchants shifting volume to a reliable platform

Sources: TSG's GEM, TSG Institutional Knowledge and Analysis

A Modern Payment Platform Is a Front-Line Tool for More Satisfied Merchants and Growth – Assessment of Different IT Infrastructure Upgrades

When making payment platform infrastructure upgrades, there are four meaningful components to analyze:

- Software and database efficiency
- Improved connectivity and network performance
- Server upgrades
- Storage upgrades

For each of the four component upgrades, TSG took a detailed look at the following areas:

- Security improvement
- Performance increase
- Cost effectiveness
- Complexity
- Associated risk
- Amount of time spent planning, testing and preparing

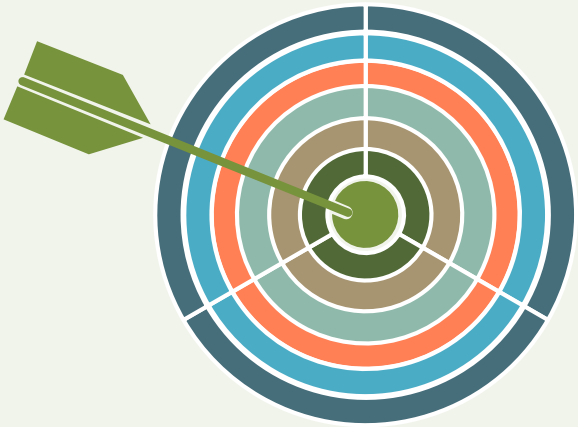
Each area was scored as follows:

- The four component upgrades were evaluated using the six areas above and received a total score. The six areas were individually scored as favorable (highest score), neutral or unfavorable (lowest score), depending on the degree each of the following could be achieved: high security, fast performance, cost effectiveness, high simplicity, high risk mitigation and high time efficiency.

Sources: TSG Institutional Knowledge and Analysis

Payment Platform Infrastructure Upgrades – Storage Upgrades Have the Highest Return and Lowest Risk

Storage Upgrades Hit the Mark



- High security
- Fast performance
- High cost effectiveness
- High simplicity
- High risk mitigation
- High time efficiency

Areas Assessed

- High Security
- Fast Performance
- High Cost Effectiveness
- High Simplicity
- High Risk Mitigation
- High Time Efficiency

Score

- Favorable
- Neutral
- Unfavorable

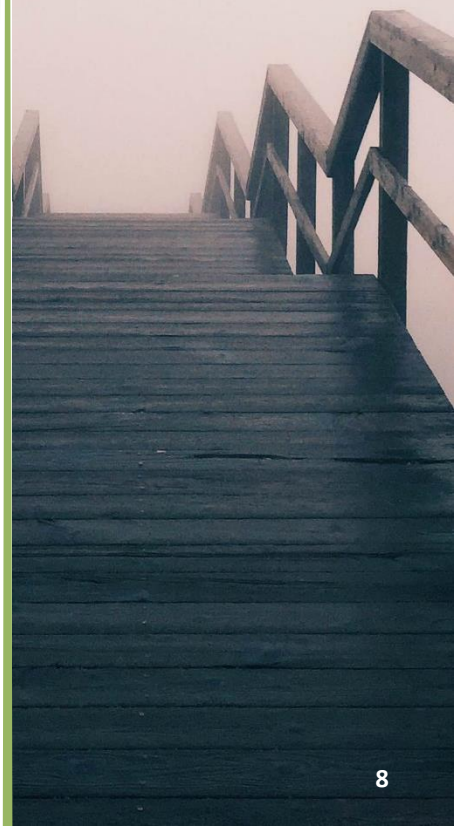
Server Upgrades	Improved Connectivity & Network Performance	Software & Database Efficiency
		

Sources: TSG Institutional Knowledge and Analysis

To Ensure a High Performing Platform, TSG Found Storage Upgrades Provide the Highest Immediate and a Long-Term Return for Growth

- ✓ Review your current solution utilizing the checklist provided on page 10.
- ✓ Evaluate your current data storage solutions – are your needs being met today and are will they be met tomorrow?
- ✓ Is all your data as secure as it can be? Have you had a data breach? Are you confident you are doing everything possible to minimize data security risk?
- ✓ Are you losing business because of your performance? Are you prepared for industry growth? How is your performance compared to competitors? Are you competitors processing transactions faster than you? How stable is your solution?
- ✓ Is your solution cost effective? What is the total cost of ownership?
- ✓ Does your data storage partner know payments, support your business needs and enhance your operations? Does your partner provide top-notch customer support?

If you are not 100% confident in any of your answers to these questions, now is the time to find the right partner and to manage each proactively rather than reactively.



A Storage Upgrade to All-Flash Arrays Positions Your Payment Platform for Happier Merchants and Growth

All-flash arrays – storage systems using multiple high-speed solid-state drives that are synonymous with solid-state arrays – stood out as the best choice for a storage update. All-flash arrays provide high security, faster transaction time, lower cost (as hardware prices continue to decline), minimal implementation time, lower platform risk and low complexity. For a payment provider, this translates to a high-performance payment platform that is built for merchant and industry growth, higher ability to meet service level agreements (SLAs) and ultimately, happier merchants and lower attrition.

In contrast to the overall technology market being mature, the all-flash arrays market is not on the same trajectory. Legacy disk storage providers have maximized their offerings – features, guarantees, reliability and service – within the limitations of what this technology is able to deliver. However, the all-flash arrays market is rapidly changing and technology is improving to better serve payment providers and customers. Particular areas of rapid change include storage array designs, native security enhancements, performance improvements, features and price competitiveness. Purpose-built all-flash arrays are in a continual phase of rapid improvement and there are many players driving innovation.

TSG research has clearly shown that all-flash arrays and providers are not created equal, and choosing the right partner is crucial to a successful and futureproof payment platform architecture. TSG created a list of top items to consider when choosing all-flash arrays and provided details on solutions from Pure Storage® – a leading storage provider who checks all the boxes.

A top U.S. merchant, with approximately $100B in sales, was unable to process cards for hours, linking the issue to their payment provider's data center. This outage caused the merchant tens of millions of dollars in lost revenue. Events like this lead to merchants finding a new payment provider.

A modern-day, high-performance data storage solution is critical to be a payments industry leader.

Pure Storage Meets All the Critical Requirements for Payment Platform Growth

Use checklist to compare storage providers.

	All-Flash Arrays Checklist	PURESTORAGE®	Current Provider
Security	Minimizes data security risk	✓	
	Provides real-time notification of threats	✓	
	Easily adapts to new or changing regulations	✓	
	High resiliency	✓	
	End-to-end encryption	✓	
	Encryption of entire environment	✓	
	Simple data security management	✓	
Performance	Low latency	✓	
	High uptime	✓	
	Supports flexible and efficient APIs	✓	
	Broad interoperability	✓	
	Supports load balancing	✓	
	Supports machine learning solutions	✓	
	Ability to handle disparate data types	✓	
	Supports broad POS solutions	✓	
Cost	Offers flexible purchasing model	✓	
	Futureproof architecture	✓	
	Low initial purchase cost	✓	
	Low total cost of ownership – longevity and scalability	✓	
	High ease of management	✓	
	Non disruptive implementation	✓	
	Low implementation time/risk	✓	
	Data reduction by deduplication and compression	✓	
Partner	Established and trusted payments partner	✓	
	Positive reputation and quality referrals	✓	
	Proactive and responsive customer support	✓	
	Next gen support	✓	
	Ongoing innovation	✓	

Sources: Pure Storage, TSG Institutional Knowledge

In the Payments Space and Broader Storage Market, Pure Storage Is the Recognized Leader

About Pure Storage
Pure Storage provides all-flash based data storage technology, allowing payment providers to achieve industry-leading performance and efficient end-to-end encryption at a low total cost.

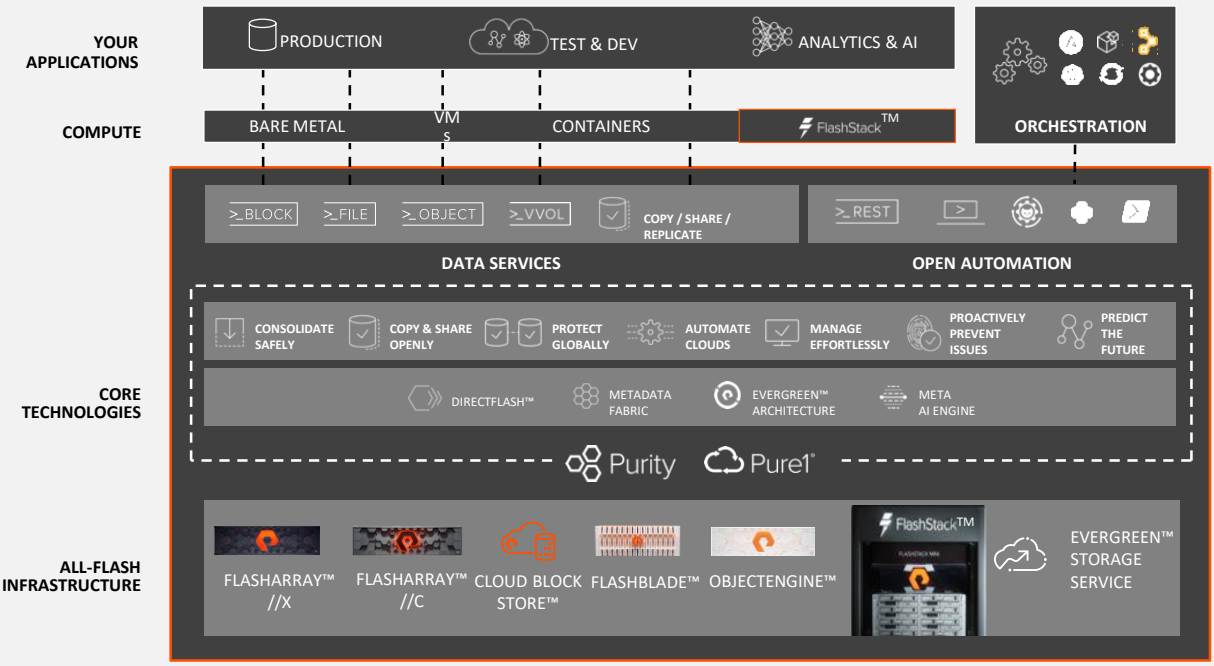
Pure Storage delivers a modern data experience that is:

- **Simple:** API-defined storage services, common management tools and actionable analytics.
- **Seamless:** storage services that can handle any protocol, any tier and multiple clouds in a single environment.
- **Sustainable:** payment providers buy only what is needed, when it's needed, and can upgrade to the latest innovation without pain or penalty.

Pure Storage's All-Flash Infrastructure

- **FlashArray™//X:** end-to-end NVMe and NVMe-oF storage array designed for the most demanding enterprise and next-gen web-scale applications.
- **FlashArray™//C:** industry's first capacity-optimized all-flash array.
- **Pure Storage Cloud Block Store:** bridges the cloud divide with industrial-strength block storage and allows teams to run mission-critical enterprise apps seamlessly in the cloud.
- **FlashBlade™:** one of the most advanced storage solutions for unstructured data, consolidating complex data silos to optimize infrastructure.
- **FlashStack™:** converged infrastructure solution with components from Cisco and Pure Storage.
- **ObjectEngine™:** flash-to-flash-to-cloud data protection solution that modernizes the existing model of disk-to-disk-to-tape.

Pure Storage's Product Suite



Source: Pure Storage

PURESTORAGE®

Pure Storage's Modern Data Solution Is Secure, High Performance, Cost Effective and a Partner for Success

Security
Pure Storage partners with leading hardware, software, and multi-cloud vendors to deliver fast and reliable solutions that unlock business value and decrease deployment risk. One of the key partnerships is with Thales, enabling the Pure EncryptReduce feature. This is an industry first feature, which provides end-to-end encryption and data reduction.

Performance
Pure Storage delivers high performance with latencies as low as 100 microseconds (µs)[1] and 99.9999%[2] availability. Their data solutions enable payment providers to deliver real-time, secure data to power mission-critical production, DevOps and modern analytics environments in a multi-cloud environment.

Cost
Pure Storage's Evergreen™ subscription model is an industry first that is a combination of a 100% non-disruptive product architecture and a flexible buying program. This model frees payment providers from the legacy storage approach of forklift upgrades and data migrations every three to five years and replaces it with a subscription-based storage experience, all while keeping data in-place. Pure1® provides simple cloud-based management and effortless predictive support with full-stack analytics and the AI-driven power of Pure1 Meta™.

Pure Storage is the first data storage partner to offer its core products as a service. The Pure as-a-Service family is a full portfolio of integrated solutions, providing a choice of CAPEX or OPEX business models. This service provides data storage for any data center, deployment (hybrid, on-prem or cloud-only) and data (Block, file or object) storage.

Partner for Success
Pure Storage's Satmetrix-certified Net Promoter Score of 86.6 proves this and puts them in the top 1% of B2B companies. In addition to satisfied customers, Pure Storage's technology is leading the competition. Gartner named Pure Storage as a leader in the 2019 Magic Quadrant for Primary Storage.

Pure Storage Consistently Stands out as a Leader in the Payments Space
When Pure Storage's solutions are built into a payment platform, the four key building blocks for a world-class, futureproof platform are met – high security, fast performance, low total cost and a partnership for success.

- Pure Storage is recognized as one of the best all-flash arrays by leading global research firms.
- Customers are happy – Pure Storage has a Net Promoter Score of 86.6, top 1%, compared to the average of 24.
- Pure Storage delivers high performance with latencies as low as 100 µs[1] and 99.9999%[2] availability, while providing efficient end-to-end data encryption and operational advantages by driving down CAPEX and OPEX IT costs.
- **Pure Storage is already leveraged by many of the fastest-growing and industry-leading global payment processors.**

Sources: Pure Storage [1]FlashArray™//X with DirectMemory™ technology; [2]99.9999% availability with FlashArray™

Pure Storage Simultaneously Provides Data Security and Storage Efficiency – an Industry First

Minimize Data Security Risk, Receive Real-time Notifications of Threats and Easily Adapt to New or Changing Regulations

Pure Storage provides a high level of security through encryption at rest, KMIP support, IPV6 support, SOC2 support, and proven adoption in PCI, FIPS, GDPR and additional compliant environment support. Partnerships are leveraged to bolster security solutions, such as EncryptReduce – marriage of data security and storage efficiency – through a partnership with Thales.

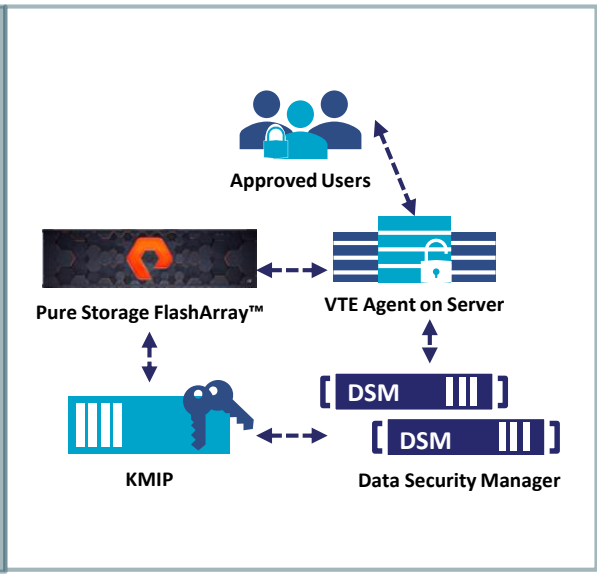
Beyond EncryptReduce, Pure Storage continuously emphasizes simplicity and has implemented rigorous security measures, including AES256 bit encryption, data erasure, rapid data locking technologies, key management, and a robust encrypt/decrypt process. These features meet or exceed security standards such as FIPS 140-2, NIAP/Common Criteria and PCI-DSS. Coupled with comprehensive organizational security measures, FlashArray™, first enterprise-class all-NVMe and NVMe-oF flash storage array, helps payment providers meet security requirements and data compliance regulations around the world – including the recent GDPR. This is achieved without compromising product serviceability, performance, or data reduction capabilities.

Resiliency

Pure Assure delivers greater than 99.9999%[2] availability – generational upgrades, maintenance and failures – for FlashArray™ over a two-year period. Pure Storage's FlashArray™ is "non-disruptive everything" and maintains 100% performance. This is achieved through clustered controller design, mirrored NV-RAM, hot-swappable components and stateless controller architecture.

EncryptReduce Eliminates the Choice Between Data Security or Storage and Achieves Both

- **End-to-end encryption** – encryption of the entire storage environment (not only databases); encrypt inflight and at rest
- **Storage efficiency** – storage footprint decreased up to 10X (capacity, space, power and cooling); data reduction preserved though unique data compression and deduplication
- **Data security regulation** – all data on the array is encrypted using FIPS 140-2 certified AES256 encryption; complies with mandates for data-at-rest by securing files with encryption, access controls and data access audit logging
- **Data security administration** – centralized key management, encryption, access policies and Privileged Access Management controls



[1]FlashArray™//X with DirectMemory™ technology; [2]99.9999% availability with FlashArray™

Source: Pure Storage

PURESTORAGE®

Pure Storage's All-Flash Arrays Maximize Performance

Latency and Uptime

Pure Storage all-flash arrays achieve as low as 100 µs[1] latency with no delta lag in a mixed-workload environment and six 9s availability[2], translating to faster transactions and more easily meeting SLAs. Pure Storage's 100% NVMe FlashArray™//X delivers at least 10X greater performance compared to legacy data storage solutions. A leading global payment provider switched to Pure Storage and had a 500 times reduction in latency when compared to their previous legacy solution.

Tier 1 applications benefit from latencies as low as 100 µs with plug-and-play storage class memory – DirectMemory, bringing read-caching to FlashArray™//X. For Tier 2 applications, FlashArray™//C provides steady all-flash performance at disk economics with FlashArray™//X simplicity, resiliency, and efficiency for capacity-optimized use cases.

Consistent low latency is achieved by using a 512-byte variable internal block size. A variable block size enables Pure Storage flash arrays to process I/O operations from 4 K to 32 K as "one I/O." Comparatively, fixed-block architectures divide and process blocks separately into multiple 4 K or 8 K units. Because of variable block sizes, the time to complete physical I/O for online transaction processing (OLTP) workloads in databases run is much lower.

With Pure Storage, a fast-growing, industry-leading, global processor achieves sub-second transaction time in a unified commerce environment, while performing extensive real-time fraud detection, using machine learning.

FlashArray™ is "non-disruptive everything" – achieved with stateless architecture, active/active high availability, mirrored NVRAM, and hot-swappable components. DirectMemory™ modules can be popped into //X70R2 and //X90R2 storage arrays customers in a non-disruptive fashion.

QoS is kept high by always-on QoS to protect workloads against noisy neighbors, plus the ability to configure performance classes, allowing for differentiation between Bronze, Silver, and Gold workloads. Policy limits can be set to enable fine-grained control of performance on a per-volume basis, ideal for service-provider and multi-tenant cloud deployment.

Flexible and Efficient APIs

Pure Storage offers a complete and fully RESTful API. PowerShell®, Python®, and Java® software development kits (SDKs) are available along with integrations with Ansible®, OpenShift®, Docker®, and Kubernetes®. Pure Service Orchestrator™ allows delivery of container storage-as-a-service, so developers can build and deploy scaleout, microservices applications. Pure Service Orchestrator™ is a software layer that allows fleets of Pure Storage FlashArray™ and FlashBlade™ storage to be federated together and consumed through a storage-as-a-service API.

Source: Pure Storage

Pure Storage's Solutions Remove Bottlenecks

Broad Interoperability

Pure Storage solutions are built for interoperability, supporting all solutions ranging from machine learning fraud to POS, to support flexible and efficient APIs, load balancing and mixed workload environments. Pure Storage partners with hardware, software and multi-cloud vendors. Furthermore, Pure Storage empowers IT teams to consolidate tier-1 and tier-2 applications, databases, big data, analytics, development, test, quality assurance, production and virtualization workloads. Microsoft, Oracle, SAP, and other workloads can be run on a single data architecture. It eliminates the need to run and manage mission-critical workloads in silos.

FlashArray™//X

FlashArray™//X is built on Pure Storage's DirectFlash™ Fabric. The 100% NVMe DirectFlash™ Fabric delivers 2X performance and latency as low as 100 µs[1]. New controllers are NVMe-oF-ready, come with 25 Gb/s Ethernet and can be configured with NVMe-oF Ready 16/32 Gb/s Fibre Channel or 50 Gb/s Ethernet.

Speed

- 100% NVMe DirectFlash™ Fabric
- Up to 2X faster than previous generations of all-flash arrays
- Latency as low as 100 µs[1]
- Full data services

Simplicity at Scale

- 99.9999%[2] availability
- Full software services built-in
- API automation and AI-driven cloud management

Dense Consolidation

- 3PB effective in 6U
- 10:1 average total efficiency compared to 5:1 industry average
- Always-on QoS

Evergreen Storage™ Subscription Model

- Mix NVMe and SATA
- Upgrade online from any FlashArray™
- NVMe-oF and future media ready
- No cost parity – leverages raw NAND, allowing delivery on potential of NVMe

FlashBlade™

For payment providers placing emphasis on centralizing the ownership of data and data infrastructure, FlashBlade™ provides the needed performance and scalability for advanced, massively parallel applications like data analytics, artificial intelligence and deep learning.

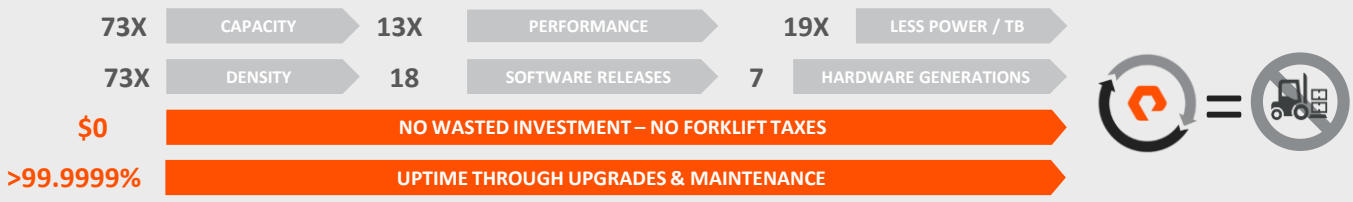
[1]FlashArray™//X with DirectMemory™ technology; [2]99.9999% availability with FlashArray™

Source: Pure Storage

Pure Storage Offers a Modern and Sustainable Data Experience Through Flexible Purchasing Models

Flexible Purchasing Models – Evergreen Storage™ Program and Pure as-a-Service
Pure Storage pioneered a new model for purchasing, upgrading and migrating storage – Evergreen Storage™ subscription model. Evergreen Storage™ enables storage that is deployed once and non-disruptively upgraded, as needed, for a decade or more, without the need to re-buy a TB already owned by the payment provider.

Pure Storage Invests in Innovation



Evergreen Storage™ Futureproofs Architecture
The Evergreen Storage™ business model was created around a product architecture built to continuously upgrade controllers and flash to keep up with fast advancements of each. Since 2015, the Evergreen Storage™ subscription model has provided over 2,500 controller upgrades, and upgrades that did not require downtime or additional resources and were done online with data in place. Despite attempts, the Evergreen™ architecture has not been successfully replicated by competitors. The Evergreen Storage™ Program makes upgrades possible and continues to expand offerings.

Pure-as-a-Service
Pure as-a Service is a single subscription for on-premises and public cloud storage-as-a service. It is more flexible than leasing, and simpler – allowing payment providers to focus on driving business value with data and apps rather than managing storage.

Source: Pure Storage

PURESTORAGE®

Pure Storage Provides Futureproof Architecture with Ease of Management and Data Reduction

Average Data Reduction Rate

(Deduplication & Compression Only)

5 : 1

Pure Storage all-flash arrays have 2X better data reduction when compared to competitors.

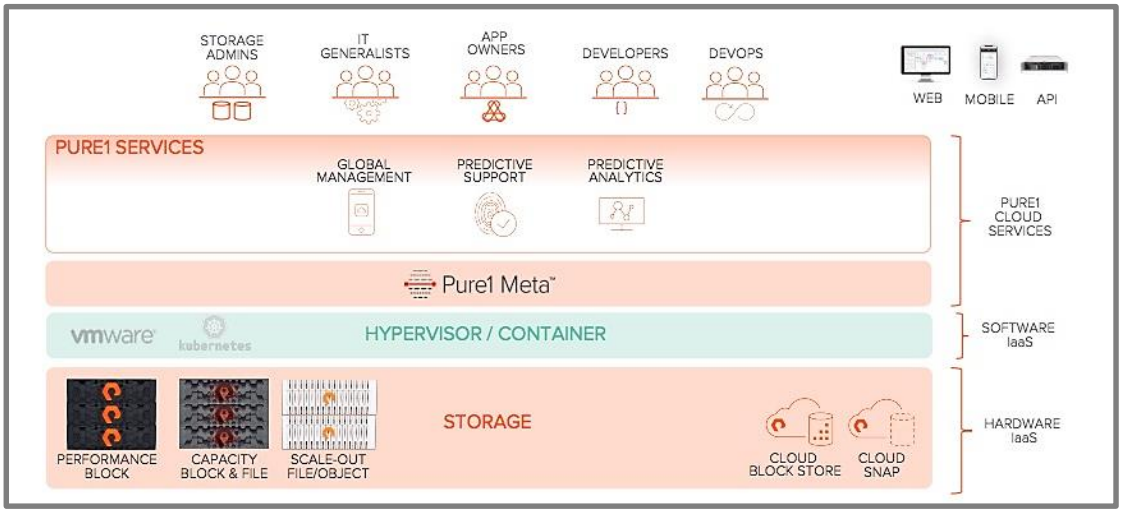
Initial Purchase Cost and Total Cost of Ownership – Longevity & Scalability

The price of all-flash arrays is decreasing and becoming more competitively priced when compared to legacy disk solutions. When total cost of ownership (TCO) is considered, all-flash arrays are more cost-effective versus payment providers' legacy solutions. Key factors in Pure Storage's low TCO include lower energy consumption and floor space, reduced software licensing fees, reduced storage footprint through deduplication and compression, and flexible purchasing options. In dense mixed-workload applications, the TCO of Pure Storage's FlashArray™ is typically 50% to 80% lower than a comparably configured spinning disk solution. When compared to other NVMe-based solutions, Pure Storage's in-house engineering provides a cost advantage.

Ease of Management, Non-Disruptive Implementation, Implementation Time/Risk

There are cost savings from an operations perspective. Pure Storage's all-flash arrays are virtually plug-and-play solutions – installation in less than an hour. They are easy to deploy and storage administrators generally do not need to deal with configuration tuning and tweaking. A payment provider can easily swap older technologies and replace them with newer technologies online. Hardware and software can be updated and capacity expanded without reconfiguring applications, hosts or IO networks, and without disrupting applications or sacrificing performance.

Pure1®, an AI-driven, cloud-based infrastructure management and support platform, gives payment providers better visibility and self-driving storage in any environment. With Pure1®, organizations spend less time managing infrastructure. To reduce cost, Pure1® helps providers integrate applications in virtualization and cloud computing environments and effectively replaces dedicated storage management servers at each site where arrays are located.



Source: Pure Storage

Pure Storage Is a Partner with a Proven Track Record

Established and Trusted Payments Partner
Pure Storage is used by several of the fastest-growing, industry-leading, global processors and has experience securely handling a large volume of payments data with virtually no downtime. A few key areas payment providers have seen improvement are with faster transaction time, data reduction, SLAs, running fraud detection solutions and support.

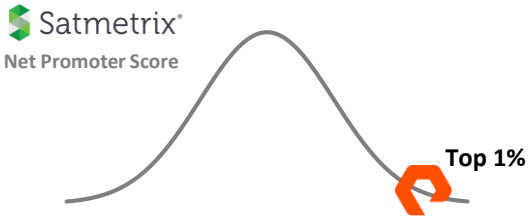
Examples of Business Outcomes

- By partnering with Pure Storage, a fast-growing, industry-leading, global processor is able to offer merchants a unified commerce solution that creates frictionless checkout experiences across all channels. This processor has numerous technology partners, such as POS providers, and regularly releases new offerings. For every transaction, sub-second transaction time is achieved while conducting real-time fraud detection.
- After transitioning to Pure Storage, one global payment provider achieved consistent transaction times that were three times faster, a data reduction of 4.6:1, and decreased capital expenditures.
- A global payment provider partnered with Pure Storage to implement long-term storage solutions. Their average latency significantly decreased and they have had 100% uptime since installation.

What a Leading Payment Provider Says About Pure Storage
Pure offers non-disruptive upgrades with unmatched performance with resilient, reliable and scalable solutions that are secure and provide the best data reduction in the industry.

Vendor Reputation and Quality Referrals
Pure Storage is used by 5,800+ customers in 80+ countries and has been consistently gaining market share since 2014. Even with continued growth, Pure Storage successfully continues to put customers first, reflected by their Net Promoter Score (NPS) of 86.6. Pure Storage's NPS has increased over the past four years and is now in the top 1%.

Pure Storage – Happy Customers



Proactive Customer Support and Next Gen Protocol Support
Pure1® continuously monitors rich telemetric data from 1000s of cloud-connected arrays – more than 1 trillion data points a day and 7 PB of total data. The data analysis by Pure1 Meta™, including machine learning and artificial intelligence, enables Pure1® Support to predict vulnerability to known issues and proactively alert customers before problems develop. All Pure1® support plans include managed upgrades. Software upgrades are fully managed remotely by support personnel, and are non-disruptive – with 100% performance maintained throughout the process. 90% of software upgrades are handled remotely by Pure1® Support staff.

FlashArray™//X is the first all-flash, 100% NVMe storage solution designed for all apps – mainstream enterprise and next-gen web-scale. Delivering up to 3PB effective in 6U with support for FC, iSCSI, and NVMe-oF connectivity via DirectFlash™ technology, //X is more efficient and includes an Evergreen™ upgrade.

Source: Pure Storage

A Partnership with Pure Storage Takes Security, Performance and Low TCO to the Next Level

Analytics and Artificial Intelligence
Pure Storage supports payment providers' artificial intelligence (AI) and machine learning solutions. This allows for personalization of the user interface for payment providers and merchants. AI can be used to better manage SLAs through better, faster and customized customer service. Pure Storage supports predictive analytics that could be used for fraud solutions and automatically managing and understanding security threats. AI can also be used to enhance development by discovering bugs and validating that code is built to scale and enable machine-written code.

API Support
Pure Storage enables agility by offering a complete and fully RESTful API. PowerShell®, Python®, and Java® software development kits are available, along with Ansible®, OpenShift®, Docker®, and Kubernetes® integrations. With Pure Service Orchestrator™, container storage-as-a-service can be delivered to empower developers to build and deploy scaleout, microservices applications. Pure Service Orchestrator™ is a software layer allowing fleets of FlashArray™ and FlashBlade™ storage to be federated together and consumed through a simple storage-as-a-service API.

Data Protection
Data protection is about more than backup. It's about rapidly restoring critical data exactly where it's needed and within an SLA. Whether recovering key applications or enabling new use cases for data, legacy D2D2T architectures can not keep up. By contrast, an F2F2C architecture, powered by Pure Storage ObjectEngine™, helps organizations modernize data protection while innovating for the future.

Efficient Snapshots
Payment providers need a streamlined backup solution that delivers snapshots both for fast local restores and for longer-term, cost-effective retention in the cloud. Purity snapshots deliver simple, built-in local and cloud protection for FlashArray™ via snapshots that are portable, incremental, and self-describing. All snapshots – on-premises and to the cloud – are the same, so they can freely move space-efficient snapshots within their clouds. Purity CloudSnap™ – cloud backup software – eliminates the complexities and challenges of typical cloud data protection solutions by making it simple for payment providers to leverage the cloud with built-in functionality in FlashArray™ and at no additional cost.

Purity CloudSnap™ delivers a solution that maximizes the cloud's potential for backup storage by providing intelligent and efficient data transfer to and from the cloud. Additionally, Purity CloudSnap™ offers rapid recovery on-premises (or in cloud via Pure Cloud Block Store™) to help payment providers meet SLAs and compliance policies. Purity CloudSnap™ works with both AWS and Azure.

Pure Storage – a Partner for Success
When Pure Storage's solutions are built into a payment platform, a payment provider is set up for success to not only keep current merchants but to grow their market share. Pure Storage meets the four key factors – high security, fast performance, low total cost and a partnership for success – and more.

To learn more:

- https://www.purestorage.com/solutions/industries/saas.html
- Saas-team@purestorage.com
- 833-371-7873

Source: Pure Storage