

Top 10 Things SaaS Providers Should Demand From All-Flash Storage Solutions

All-flash storage has become a cornerstone technology for companies in the business of providing software as a service (SaaS). IT leaders in SaaS companies have embraced all-flash storage because it is the only storage technology that enables them to achieve their most strategic business goals, which are:

- **Advancing service levels:** Customers rely upon the IT infrastructure to consume SaaS services. With all-flash storage as a foundation, organizations can deploy an exceptionally dependable, high-performance, secure and easy-to-manage infrastructure so they can expand their customer base and go after new business opportunities.
- **Accelerating time to revenue:** It's a simple formula: The faster the company can develop, improve and upgrade its products, the more revenue it will generate. The IT infrastructure must support the tools and data accessibility requirements of modern agile DevOps environments.
- **Achieving operational advantage:** For the SaaS provider, the cost of IT is the cost of doing business. IT teams can give their businesses an edge by selecting and deploying infrastructure solutions that are uniquely cost-efficient to own and manage.

For IT leaders, it's not a question of whether to use all-flash storage; it's a question of which all-flash architecture does the best job of enabling their organization to achieve its business goals. Here are the top 10 features to look for, along with some of the reasons why Pure Storage has become one of the industry's leading suppliers of all-flash storage arrays to the SaaS industry:

No. 1 – High performance: Performance is typically the first reason a SaaS company will explore the use of all-flash storage. SaaS providers must be able to achieve higher IOPS and lower latency, and legacy spinning disk technologies are not up to the task. All-flash storage delivers at least 10X greater performance than spinning disks. With a Pure Storage all-flash array you will be able to perform up to 100,000s of 32K IOPS with an average latency of less than 1 millisecond.

No. 2 – Consistent performance: When you think about performance, don't focus solely on IOPS; it's also about consistency. Make sure you deploy an all-flash architecture that delivers consistent performance across all workloads, particularly if you are thinking beyond a single application or set of applications. For example, Pure Storage all-flash arrays are engineered from the ground up to deliver consistent submillisecond latency (even in mixed-workload environments). For SaaS providers, high and consistent performance enables customer expansion as well as upsell and cross-sell opportunities.

No. 3 – Reliability: An all-flash array can deliver greater than 6-9s availability with 100% performance during maintenance and failures.

Pure Storage all-flash arrays utilize a stateless controller architecture that separates the IO processing plane from the persistent data storage plane. This architecture provides high availability with nondisruptive operations. You can update your hardware and software and expand capacity without reconfiguring applications, hosts or IO networks, and without disrupting applications or sacrificing performance. Reliable infrastructure minimizes SaaS customer churn and avoids the magnified and damaging consequences of that churn on the rest of the business.

No. 4 – Security: Security and compliance with respect to customer information are fundamental concerns for SaaS companies. If data is lost or there is a breach, it can be crippling to the business, not just from the standpoint of lost revenue, but also in damage to goodwill. A modern all-flash storage array can support the highest levels of security protection in a variety of ways, including encryption at rest;

support for IPV6; and proven adoption with PCI, FIPS and other compliant environments.

No. 5 – Management simplicity: An all-flash storage array should be simple to deploy, manage and scale. Pure Storage all-flash arrays are virtually plug-and-play solutions that can be installed in less than an hour. They are so easy to deploy that storage administrators typically don't have to worry about configuration tuning and tweaking. In addition, they are simple to scale and upgrade: You can easily swap older technologies and replace them with newer technologies, online and without impacting performance.

No. 6 – Efficient snapshots: Snapshots have become important tools in all-flash storage because they make backup and recovery far more efficient, and they also provide support for DevOps teams to leverage copies that are produced often, easily and cost-efficiently. Integrated accessibility to data copies maximizes developer resources and enables bugs to be found earlier, as opposed to later when they become costlier to fix. Snapshots are another area where Pure Storage has been an innovator. The company's FlashRecover Snapshots operate with zero performance penalties, zero recovery restrictions, zero data duplication, zero space overhead and zero complexity.

No. 7 – Support for development tools: In addition to efficient snapshots, development teams rely on tools and APIs that allow them to do their jobs efficiently, collaboratively and productively. With Pure Storage all-flash arrays, SaaS DevOps teams can take advantage of features such as replicated snapshots, integrations with containers and databases, software development kits for tools such as PowerShell and Python, as well as automation and orchestration tools that integrate tightly with leading virtualization platforms such as VMware.

No. 8 – Lower TCO: As the price of solid-state storage has come down, all-flash arrays have become much more competitive with traditional spinning disk arrays from a simple cost standpoint. When you look at other aspects, however, all-flash arrays offer lower total cost of ownership (TCO). Key factors include lowering energy consumption and floor space, reducing software licensing fees and

reducing the storage footprint through deduplication and compression over more applications and workloads. In dense mixed-workload applications, the TCO of using a Pure Storage FlashArray will typically be 50% to 80% lower than a comparably configured spinning disk solution.

No. 9 – A smaller storage footprint: Through industry-leading inline deduplication and compression—along with thin provisioning, space-efficient snapshots and clones—Pure Storage all-flash arrays can reduce the storage footprint by a ratio of 5:1 and more, depending upon the application and workload. This saves money, improves performance and eases the pressure on backup and recovery resources.

No. 10 – Operational innovation: Pure Storage has pioneered a new model for purchasing, upgrading and migrating storage. Called Evergreen Storage, it leverages the modular and stateless design of Pure Storage all-flash arrays. With this model you purchase a maintenance contract that includes controller upgrades every three years. In an all-flash array, fresh controllers not only provide greater performance, but also greater scale and density due to the ability to address more and denser flash. With Evergreen Storage, customers can also upgrade to denser capacity technologies at any point in the lifecycle, with a trade-in credit for existing capacity. Thus, unlike the typical upgrade and replacement cycles for storage, Evergreen Storage allows a customer to never rebuy the same terabyte of storage. SaaS customers can always stay current with the latest technology at a fraction of the cost it would require to purchase new equipment every three or four years, the traditional lifecycle for storage solutions.

Taking the next step

SaaS is a highly competitive, fast-moving industry. Companies have to adapt quickly to customer demands, support mobility, drive innovation, eliminate downtime, ensure security and continually upgrade performance—all while satisfying the needs of customers 24/7 year-round. The pressure on IT in these companies is enormous and relentless. Any failures on IT's part can have a devastating impact on the business.

That is why SaaS providers' IT professionals have to be meticulous in the technologies they deploy and the partners they choose. All-flash storage has become a foundational technology for these companies: It is nearly impossible to conceive that they could survive without it.

But there are differences among the all-flash arrays available in the marketplace, so it is important that IT professionals understand those differences and what they can mean for their organizations. When it comes to meeting the specific needs of SaaS companies—performance, reliability, security and all of the other criteria outlined in this white paper—Pure Storage offers unique value versus other all-flash storage providers.

Pure Storage all-flash arrays have been designed from the ground up to meet the demands of the cloud era. Moreover, Pure Storage has been an innovator in designing storage solutions and business models, such as Evergreen Storage, that help SaaS customers achieve their critical goals of advancing service levels, accelerating time to revenue and achieving operational advantage.

For information on how your organization can leverage all-flash storage to support its business needs, please visit Pure Storage at purestorage.com/SaaS.
