

THE TOP 10 REASONS TO CHOOSE A PURE STORAGE® ALL-FLASH SOLUTION FOR ORACLE® DATABASE AND ANALYTICS DEPLOYMENTS

Discover smart storage solutions that are effortless,
efficient, and evergreen

DATA ISN'T JUST ABOUT STORAGE AND RETRIEVAL ANYMORE

Storing data is critical. Everyone stores data. Today, it's all about how you use the data you're storing and if you're storing the right data. The right mix of data and the ability to analyze it against all data types is driving markets worldwide in what is known as digital transformation.

Digital transformation requires storing, accessing, and analyzing all types of data as fast and efficiently as possible. The end goal is to derive insights and gain a competitive advantage by using those insights to move faster and deliver smarter products and services than your competition.

Are you analyzing data to provide value to your business? Are you making use of big data, such as audio, video (including surveillance videos), sensor data, social profiling, clickstream logs, location data from mobile devices, customer support emails, and chat transcripts? Are you analyzing big data and structured operational data side-by-side, so your business users can query it and find innovative approaches and solutions faster than ever?

If not, it's time to start, especially if your competitors have already started. Getting there might be easier than you think.

Your Map to Maximizing Data Value

1. Data value starts with operational data (transactions), structured data stored in Oracle® Database.
2. Data becomes more valuable with the addition of data warehousing and business intelligence to provide descriptive analysis of your business based on historical data.
3. Data value is greatest when you combine all of your data assets — structured and unstructured — to gather predictive and prescriptive analytics from different sources, such as the Internet of Things (IoT) and other application data to fully participate in the era of digital transformation.

To support your journey, you need an infrastructure that:

- Is reliable and scalable
- Offers predictable and unprecedented performance
- Lets you consolidate infrastructure
- Is cost-effective
- Is easy to deploy and manage

**// YOU NEED AN ALL-FLASH SOLUTION FROM PURE STORAGE.
HERE ARE JUST TEN OF THE REASONS WHY.**

THE TOP 10 REASONS TO CHOOSE ALL-FLASH STORAGE

Effortless

1. SIMPLICITY

Achieve easy and accelerated access for Oracle solutions

2. ZERO DOWNTIME, ZERO IMPACT

Ensure that Oracle solutions are always on and protected

3. CLOUD CENTERED

Benefit from one-stop management and monitoring in the cloud

Efficient

4. DATA REDUCTION

Increase efficiency and reduce costs for your Oracle database

5. RESILIENCY

Obtain dependable operation and six-nines availability

6. PERFORMANCE

Gain unprecedented performance for your Oracle database

Evergreen™

7. ROI AND COSTS

Realize higher return on investment (ROI) and lower costs

Even More

8. SATISFACTION

Benefit from a solution used by satisfied customers worldwide

9. FLASHBLADE®

Get the storage you need for big data and concurrent workloads at petabyte scales

10. FLASHSTACK®

Access a converged-infrastructure solution for a fully scalable all-flash cloud data center

// **CLICK ANY REASON TO FIND OUT MORE.**

1. SIMPLICITY

ACHIEVE EASY AND ACCELERATED ACCESS FOR ORACLE SOLUTIONS

Quick and Simple to Deploy

All-flash solutions take half as long to deploy as other storage solutions. You can set up and optimize your Pure Storage solution array in hours, not days, and no Oracle database-specific tuning or setup is required.

The Pure Storage all-flash-array solution's simple, rapid deployment has been fully tested, validated, and documented against other all-flash-array solutions by a real-world Pure Storage customer.

50% FASTER TO DEPLOY

—takes hours, not days

ZERO TUNING

or workload-specific
setup needed

Business-Card-Sized Getting-Started Guide

The Pure Storage all-flash array's getting-started guide fits on a business card! And once you're up and running, you enjoy an easy-to-use solution with ongoing low-maintenance requirements.

Data Management in a Snap

Fast and efficient Pure Storage snapshots let you automate the copy, clone, and refresh processes of an Oracle database and reduce the time to copy and clone up to 90%.

FlashRecover Snapshots let you automate the backup and recovery process of your Oracle database, so you can achieve low recovery-time objectives (RTOs) and recovery-point objectives (RPOs) — without investing in backup and recovery tools!



UP TO 90% LESS TIME

to copy and clone

Single-Platform Simplicity

Pure Storage solutions let you run Oracle databases for development, test, quality assurance (QA), and production for online transaction processing (OLTP) and online analytical processing (OLAP) workloads on the same Pure Storage platform. You eliminate the need to run mission-critical workloads in silos on separate platforms.

“OUR DATABASE ADMINISTRATORS AND IT STAFF USED TO STAY UP ALL NIGHT FOR BIG PROJECTS AND SPEND HOURS TRYING TO MAKE CRITICAL APPS GO FASTER. SINCE TRANSITIONING TO PURE STORAGE, THEY HAVEN'T HAD TO DO THAT ONCE.”

— Stefanie Thompson, Lead Systems Administrator, City of Garland, Texas

2. ZERO DOWNTIME, ZERO IMPACT

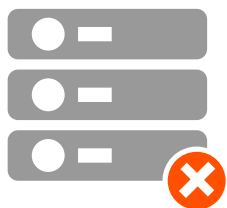
ENSURE THAT ORACLE SOLUTIONS ARE ALWAYS ON AND PROTECTED

Zero Downtime

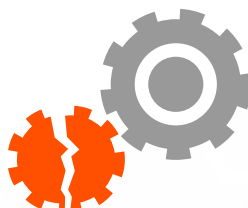
With Evergreen™ Storage by Pure Storage, you access the latest, most efficient, and most modern hardware and software for your data platform to feed data to Oracle tools and applications. Your data, your productivity, and your investment are protected without requiring downtime, disruptions, or data migrations.

Zero Impact

Run your Oracle databases, tools, and applications on a Pure Storage all-flash array without impact to your mission-critical solutions running on top of Oracle. And run Oracle databases for OLTP, OLAP, and predictive-analytics workloads or business solutions in parallel on the same all-flash storage platform with no impact on performance.



ZERO DOWNTIME



ZERO IMPACT



ZERO HASSLE

“WE SET THE SYSTEM UP MORE THAN A YEAR AGO AND HAVEN’T HAD TO TOUCH IT ONCE — NO FAILED DRIVES, NO TROUBLE TICKETS. IT WORKS FLAWLESSLY.”

— Joe Bliss, Virtual Infrastructure Administrator, Davenport University

3. CLOUD CENTERED

BENEFIT FROM ONE-STOP MANAGEMENT AND MONITORING IN THE CLOUD

Complexity-Free Management Anytime, Anywhere

Pure Storage® Pure1® is a cloud-based storage-management and support platform. It makes managing your Pure Storage all-flash solution complexity-free with its cloud-based software-as-a-service (SaaS) model. You can manage your array and get health and performance insights anytime, anywhere, with any iOS® or Android™ device, and without installing a thing.

Pure1® Adds Proactive and Predictive to Support

Because Pure Storage solutions are largely self-managing, with Pure1, you'll mostly watch your solutions work. And the Pure1 Global Insight team watches for you too, so you can choose not to watch at all. The Pure1 Global Insight team:

- Predicts vulnerabilities to known issues
- Detects configuration and environmental changes in real time
- Detects performance and capacity anomalies
- Sends predictive alerts or calls you — with a plan in hand — if your solution needs attention, so you can work on more important things



58%

of support incidents are initiated by the Pure Storage Pure1 Global Insight team

As new upgrades become available, Pure Storage takes care of them for you. Software upgrades are fully managed remotely and are non-disruptive — 100% performance is maintained throughout the process. And 90% of software upgrades are handled by the Pure1 Global Insight team. You don't even need to read release notes.



90%

of software upgrades are handled remotely by the Pure1 Global Insight team

One Team, One Experience Worldwide

No matter where you're located throughout the world, your Pure1 experience is the same. Pure Storage maintains support centers in APJ, EMEA, and North America, and Pure Storage never outsources support to third parties.

“BEFORE WE EVEN KNEW ABOUT IT, PURE STORAGE WAS ON THE PHONE TO LET US KNOW THERE WAS AN ISSUE.”

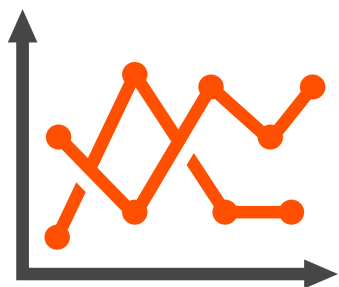
— Steve Young, CTO, Judson Independent School District (ISD)

4. DATA REDUCTION

INCREASE EFFICIENCY AND REDUCE COSTS FOR YOUR ORACLE DATABASE

Deduplication and Compression Increase Data-Management Efficiency

Pure Storage solutions include both in-line lossless deduplication and compression for ultimate data reduction. You can realize data reductions of 3–5 times for conventional Oracle data types — such as number, date, char, and varchar.¹ That's two times better than the next closest all-flash solution available on the market.



3–5X

data reduction for conventional Oracle data types¹

2X BETTER

data reduction than the closest available all-flash solution¹

Built to Save Costs

By running your Oracle solutions on Pure Storage, you not only compress data to lower its footprint and reduce storage needs, you also do away with the need for Oracle compression. Data reduction with Pure Storage solutions is roughly the same as with Oracle compression, so there's no need to spend money on licenses, database-server CPU cycles, or administrative man-hours and headaches.

Pure Storage solutions also dramatically simplify the tuning process to further save on costs. Tuning and configuration items that don't require time or attention with a Pure Storage solution include:

- Database block size-redo log block size
- Automatic storage management (ASM)
- Coarse-grained versus fine-grained striping (ASM)
- Volume count (spindle count)
- RAID level — Pure Storage is RAID 3D all the time
- ASM versus file system

“THE DEDUPLICATION AND COMPRESSION FEATURES LET US DO MUCH MORE WITH THE RESOURCES WE HAVE. ... WE NO LONGER HAVE ANY APPREHENSION ABOUT CAPACITY.”

— David Fuchs, System Engineer, Farmcredit Mid-America

5. RESILIENCY

OBTAIN DEPENDABLE OPERATION AND SIX-NINES AVAILABILITY

Redundancy Equals Resiliency

To Pure Storage, an outage isn't limited to a hard failure. We consider any performance degradation to be an outage. That's why we designed Pure Storage all-flash solutions with resiliency through redundancy, so the failure of any component is undetectable to the application.

Typically, downtime is the result of maintenance rather than an actual failure. That's why Pure Storage performs hardware and software upgrades without outages or data migration — at all, ever. Three years from today, the Pure Storage solution in your rack might be completely different than what it is today, but at no time will you have experienced downtime or had to migrate to new equipment.



ZERO DOWNTIME



ZERO IMPACT



RESILIENCY

Get Six-Nines Availability

Pure Storage® FlashArray//m solutions deliver 99.9999% availability, which means your Oracle database data is always available, always performing, and always protected — and with no performance loss.

- A clustered-controller design allows for the complete failure of a controller or any controller component without impacting operations.
- Flash modules, NV-RAM modules, blades, and controllers are hot-swappable for continuous operation, even when recovering from a failure.
- A stateless-controller architecture means that you can simply unplug a failed controller, cable up a new one, and your FlashArray is back to full-availability — all without any impact on performance.
- **FlashBlade**, used for data warehousing projects, protects data with blades in N+2 redundant fashion to secure against flash or full-blade loss. When blades fail, the system automatically heals around them, returning FlashBlade to full resiliency.

Predictive support lets Pure Storage anticipate vulnerabilities to known issues and take pre-emptive action to minimize downtime risks.

99.9999%
availability

100%
performance

“OUR AVERAGE TIME BETWEEN OUTAGES WAS 19 HOURS. AFTER IMPLEMENTING PURE STORAGE, WE HAVEN'T BEEN DOWN ONCE IN 102 DAYS.”

— Idaho Transportation Department

6. PERFORMANCE

GAIN UNPRECEDENTED PERFORMANCE FOR YOUR ORACLE DATABASE

Get Performance without Disruptions

Pure Storage all-flash solutions improve performance by orders of magnitude, with sub-millisecond latency, no disruptions, and no effect on performance for upgrades or maintenance. You can easily consolidate OLTP and data-warehouse workloads and achieve performance that legacy disk solutions can't come close to — and all for lower costs and with simpler management and higher availability.

Leave Latency and Delta Lag Behind

Pure Storage uses flash instead of disks, which eliminates the performance delays caused by the inherent latency of disk storage. With latency out of the way, you can run Oracle OLTP and OLAP solutions in parallel on the same Pure Storage all-flash storage platform — all while reducing physical storage requirements by 5–10 times for better performance than disk arrays.



0.001 SECONDS
to complete physical input/output (I/O)

1.8 MILLION **=** **300,000**
transactions per minute for OLTP workloads
I/O operations per second (IOPS)
at sub-millisecond latency

“PURE STORAGE’S PERFORMANCE IS GREAT. IN FACT, IT’S OVER-PERFORMING — DOING EVEN MORE THAN WHAT WE NEED.”

— Bret Allen, Director of Infrastructure, Skullcandy

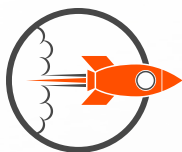
7. ROI AND COSTS

REALIZE HIGHER ROI AND LOWER COSTS

Achieve One of the Lowest Total Costs of Ownership (TCOs) Available

Pure Storage delivers one of the lowest total costs of ownership (TCOs) of any all-flash-array solution with Evergreen Storage, an all-inclusive subscription model that lets you deploy your Pure Storage solution once and upgrade when you need for a decade or more. Available with every Pure Storage all-flash solution, with Evergreen Storage you never need to deploy your Oracle environment on an undersized or over-utilized storage infrastructure. You can mix and match components online without performance disruption to keep storage dense, efficient, and modern. Evergreen Storage:

- Includes the Right-Size Guarantee, which guarantees effective capacity, risk free and in writing, for six months²
- Helps reduce power, cooling, management, and space expenses
- Gives you continuous access to the latest storage infrastructure without added costs
- Offers automated built-in backup and restore capabilities through snapshots to reduce the need for added software



1X

deploy once and upgrade as needed for 10 years or more

With the Evergreen Storage model, Pure Storage solutions pay for themselves. Looking at just storage investment and refresh over six years, Pure Storage solutions save 33%.³ Factor in additional savings from always-on storage that takes 10 times less space, power, and cooling while offering two times better data reduction and eliminating storage re-buys, and the total savings over six years climbs to nearly 50%.

33%

savings on CAPEX and M&S over 6 years³



50%

savings on power, cooling, and space with data reduction³

Cost Reduction in a Snap

If a solution meets the following criteria, Oracle supports third-party snapshot technology for backup, restore, and recovery operations without placing the database in backup mode:

- The database is crash consistent at the point of a snapshot.
- Write ordering is preserved for each file within a snapshot.
- A snapshot stores the time at which it is completed (Oracle Database 12c and above).

Pure Storage solutions and Pure Storage snapshots meet these criteria to provide a simple, cost-effective way of creating full application backups in your Oracle environment.

6 MONTHS

guaranteed-capacity risk-free²



“EVERGREEN STORAGE WAS A HUGE REASON WE WENT WITH PURE.”

— Michael Richardson, System Administrator, Smithville Fiber

8. SATISFACTION

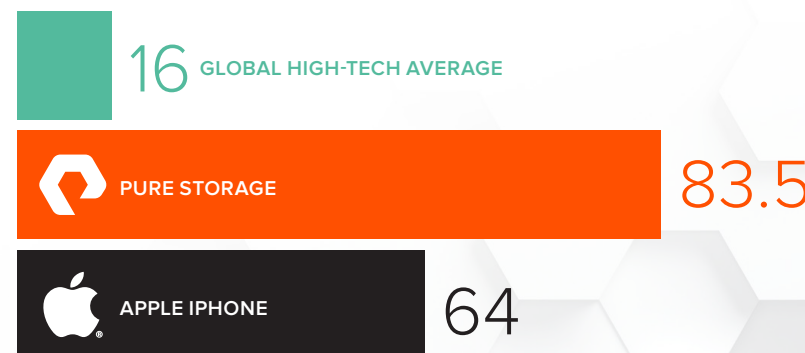
BENEFIT FROM A SOLUTION USED BY SATISFIED CUSTOMERS WORLDWIDE

Don't Take Our Word for It, Take Our Customers' Words

Thousands of customers deploy and run Oracle Database solutions with Pure Storage.

Consider a 2016 Net Promoter Score (NPS) of 83.5

With a Satmetrix® 2016 NPS of 83.5, Pure Storage is the number-one recommended technology vendor by a wide margin.⁴



(As measured by Satmetrix 2016 NPS Global B2B Benchmarks.)

Find customer success stories at www.purestorage.com/customers.html.

“THE SUPPORT WE RECEIVE MAKES PURE STORAGE AN EXTENSION OF OUR TEAM. WE DON'T HAVE TO THINK ABOUT STORAGE ANYMORE.”

— Matt Harris, Head of IT, Mercedes AMG PETRONAS Formula One™ Team

9. FLASHBLADE®

GET THE STORAGE YOU NEED FOR BIG DATA AND CONCURRENT WORKLOADS AT PETABYTE SCALES

Capacity

FlashBlade delivers huge storage capacity and real-time all-flash analytics. Use it to transform your business with simple, effortless, accelerated throughput for Oracle data-warehousing and analytics solutions.

UP TO 10s

- of petabytes
- of billions of files and objects
- of thousands of connected clients

in one 4-unit chassis that runs on the same wattage as a hair dryer and takes up less space than a traditional data center.

With FlashBlade, you need fewer server cores, so you can reduce licensing costs. Multiple chassis can be connected to build larger systems and achieve better performance.

Performance

Oracle direct network file system (dNFS) is faster than traditional network file system (NFS) and, with FlashBlade, is easy to configure. You access a single, unified connectivity model for both storage and networking needs across all hardware and operating-system platforms. And you save the cost associated with Fibre Channel while accessing massive parallelism to gain extreme scan rates and fast data ingestion.

FlashBlade accelerates large- and small-block I/O, in addition to I/O and metadata operations. It requires no caches or tiering to manage operations.

Multipathing capabilities enable parallel network paths for scalability and high availability. Oracle dNFS delivers optimized performance by automatically load balancing requests across specified paths. If one path fails, the Oracle dNFS client reissues commands over remaining paths to help ensure fault tolerance and high availability.

More Benefits

- **ELASTIC SCALE-OUT** — Add hot-pluggable, ultra-low latency 8-TB or 52-TB blades to scale out instantly online without disruption to your Oracle data warehouse.
- **FLASHBLADE STORAGE** — Storage optimized to consolidate large volumes of structured and unstructured data; compression is always on to optimize space usage without sacrificing performance.
- **SIMPLICITY** — Like Pure Storage FlashArray//m, FlashBlade is **simple to deploy** and manage and includes **Evergreen Storage for rapid ROI and lower TCO**; a single administrator can manage a FlashBlade deployment of any size.
- **COMPATIBILITY** — FlashBlade is fully compatible with the **Pure Storage FlashStack solution**, so you can run all your OLAP Oracle solutions using the speed and simplicity of Pure Storage all-flash technology.

“FLASHBLADE ADDS A DENSE, HIGH-PERFORMANCE ALL-FLASH SYSTEM FOR BIG-DATA ANALYTICS TO PURE STORAGE’S LINEUP.”

— Garry Kranz, Staff Writer, TechTarget⁵

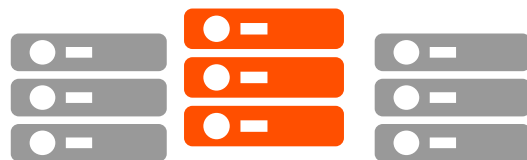
10. FLASHSTACK®

ACCESS A CONVERGED-INFRASTRUCTURE SOLUTION FOR A FULLY SCALABLE ALL-FLASH CLOUD DATA CENTER

Bring Power and Efficiency to Your Entire Data Center

FlashStack is a flexible, all-flash converged-infrastructure (CI) solution that brings the flash revolution to your data center. It combines the latest in compute, networking, storage hardware, and virtualization software into a single, integrated architecture that speeds time to deployment, lowers overall IT costs, and reduces deployment risks.

**9U–160
SERVERS**



**1 PB+
STORAGE**

FlashStack CI:

- Scales from 9U to 160 servers and to more than a petabyte of storage
- Is available as a Cisco® Validated Design for Oracle Database 12c Real Application Clusters (RAC) on Oracle Linux®6
- Is validated on Oracle, Microsoft® SQL Server®, SAP® solutions, Microsoft® Exchange, VMware vSphere®, VMware® Horizon™, and Citrix® XenDesktop®
- Is designed from the ground up with the capability to scale capacity and performance for mission-critical Oracle workloads
- Works with **FlashBlade**

“[PURE STORAGE IS] A HIGHLY AVAILABLE AND RELIABLE STORAGE SOLUTION THAT DELIVERS CONSISTENT PERFORMANCE DURING OUR BUSIEST TRAFFIC TIMES.”

— Dan McCormick, COO, Shutterfly

START ANALYZING THE VALUE OF YOUR DATA IN A FLASH WITH PURE STORAGE

Pure Storage offers an all-flash point-storage solution to power any database and to meet the needs of every organization

Call or click the link below to talk with your Pure Storage sales team or Pure Storage's Oracle specialists and to request a demonstration of FlashBlade or FlashStack in action.

800-379-PURE (7873) // sales@purestorage.com

¹ Pure Storage. "Simplify and Scale Oracle." www.purestorage.com/solutions/applications/oracle-database.html.

² Pure Storage. "Introducing the Newly Expanded Evergreen Storage – Guaranteed Capacity That Stays Modern and Dense." June 2016. <http://blog.purestorage.com/introducing-the-newly-expanded-evergreen-storage-guaranteed-capacity-that-stays-modern-and-dense/>.

³ Pure Storage. "What If Your Storage Got Better with Age?" www.purestorage.com/why-pure/evergreen.html.

⁴ Pure Storage. "#1 Recommended Technology Vendor." www.purestorage.com/microsites/pure_leaderboard.html. As measured in the Satmetrix 2015 NPS global B2B benchmarks.

⁵ TechTarget. "Dense Pure Storage FlashBlade Storage Zeroes in on Web-scale Analytics." January 2017.

<http://searchsolidstatestorage.techtarget.com/news/450411738/Dense-Pure-Storage-FlashBlade-storage-zeroes-in-on-web-scale-analytics>.

⁶ Cisco. "FlashStack Data Center with Oracle RAC 12c on Oracle Linux." October 2016.

www.cisco.com/c/en/us/td/docs/unified_computing/ucs/UCS_CVDs/ucs_flashstack_oracleRAC.html.



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