

Extreme Storage Performance with Extreme Efficiency: Oracle ZFS Storage Appliance

Hardware and Software, Engineered to Work Together



Hardware and software—engineered to work together—delivering unmatched customer value throughout the technology stack, and bringing extreme storage capabilities to enterprise applications, virtualization, storage consolidation, cloud deployments, and data protection.

As the industry's first application-engineered storage system, Oracle ZFS Storage Appliance is engineered together with Oracle software to deliver fast, efficient, and robust data storage. Designed for extreme performance, Oracle ZFS Storage Appliance is

- The only storage system with high performance and price/performance results in top storage benchmarks, including streaming I/O and file sharing¹
- The only network-attached storage (NAS) system with Oracle Hybrid Columnar Compression technology for Oracle Database that enables data reduction of 10x to 50x for data warehouses and in-database archiving and 5x performance gains
- The only storage with Oracle Intelligent Storage Protocol, a direct communication path to Oracle Database 12c, which dynamically tunes and configures the storage specifically for the database

Optimize Your Data Center

With less hardware, a smaller footprint, streamlined operations, and leading price/performance numbers, Oracle ZFS Storage Appliance is perfect for consolidating storage in the data center, helping Oracle customers

- Maximize Oracle Database efficiency
- Deliver maximum application performance for all workloads
- Support heavily virtualized environments
- Simplify development, test, and QA environments to simplify storage management
- Reduce management costs, decrease data center resource consumption, and cut Oracle Database 12c administrative efforts for storage configuration and tuning
- Meet service-level agreements (SLAs) and backup windows with confidence

Database-Aware Storage Configurations

With the Oracle Intelligent Storage Protocol feature in Oracle ZFS Storage Appliance, you can eliminate as much as 65 percent of the manual processes needed for database storage configuration and ongoing tuning. With this direct line of communication between the database and storage, your DBAs can focus on revenue-generating activities instead of constantly responding to database changes that can affect storage performance.

THE BEST STORAGE FOR ORACLE DATABASE

Oracle's application-driven storage systems are engineered to work together with Oracle Database and Oracle Applications to

- » Compress data as much as 50x
- » Eliminate as much as 65% of manual tuning
- » Increase speeds for Oracle Database queries as much as 5x

The result of this coengineering is a synergy—a database-to-storage awareness—that's not available on any other general-purpose storage systems.

The bottom line? Faster queries, greater automation, and a smaller footprint—results that translate into reduced costs in the data center and a lower total cost of ownership (TCO).

¹ Visit oracle.com/us/solutions/performance-scalability/sun-storage-gateway-160373.html to learn more about Oracle ZFS Storage Appliance benchmarks.



FACT: Oracle ZFS Storage Appliances provide more than 200 PB of storage to support Oracle Managed Cloud Services (27 million users and more than 3.2 billion database transactions per hour) and Oracle IT (more than 22,000 developers building more than 3,000 applications globally and more than 10,000 servers executing more than 90,000 jobs per day).

“Thanks to Oracle ZFS Storage Appliance, we are ready for the future. We can easily scale for data capacity growth without having to compromise on performance.”

Marnix Maes, Corporate Director, Information Technology, Hansen Transmissions

Unprecedented Performance

To deliver superior performance, Oracle ZFS Storage Appliance leverages a multithreaded operating system and a scalable, high-throughput, Flash-optimized hybrid design that’s able to service 70 to 90 percent of data from DRAM.

In other words, it’s extremely fast.

In fact, Oracle ZFS Storage Appliance achieves high performance results in the industry-standard benchmarks for price/performance, file serving, online analytical processing, and high-bandwidth streaming I/O workloads.

Simplified Management

Oracle ZFS Storage Appliance includes highly granular and robust storage analytics to provide comprehensive information about any area of your storage system.

With this intuitive management interface and industry-leading software for storage system visibility, it’s easy to keep your storage running efficiently—saving time and lowering costs. The storage management interface takes the guesswork out of system installation, configuration, and tuning while providing outstanding, fine-grained visibility into storage operations.

With Oracle ZFS Storage Appliance DTrace Analytics, your IT group has all the tools to

- Quickly identify, diagnose, and resolve system performance issues
- Perform capacity-planning and provisioning
- Address real-time storage and networking issues
- Analyze VM-level storage interactions

With this valuable resource, administrators can quickly identify the source of performance bottlenecks and take action to resolve them. Administrators get customizable, at-a-glance dashboard views of their environment and can rapidly assess potential issues by drilling down into specific areas of interest.

Extreme Protection, Best Value

Oracle ZFS Storage Appliance products are the ideal data protection companions for both Oracle engineered systems and high-performance server environments.

- Meet critical backup and restore SLAs with direct InfiniBand connectivity and an innovative, Flash-optimized architecture that drives extremely high backup and restore rates—without the risk of costly third-party systems.
- Simplify IT by using Oracle ZFS Storage Appliance products in development, testing, and QA environments—a big contrast to the single-purpose backup systems of the competition.
- Avoid overprovisioning your storage just to accommodate backups and get a smaller footprint in the data center—Oracle ZFS Storage Appliance products preserve Oracle Hybrid Columnar Compression throughout the backup process.
- Experience a TCO that’s significantly lower than that of the competition.

Future Forward

Oracle ZFS Storage Appliance has superior performance and utilization rates and is perfect for consolidating storage in the data center. Oracle ZFS Storage Appliance also provides the extreme storage performance you’ll need as you move to a virtualization-driven private cloud environment.

With less hardware, higher performance, and a smaller footprint, Oracle ZFS Storage Appliance addresses the immediate challenge of how to increase storage performance while managing storage to minimize administrative time and reduce expenses.

To learn more, visit oracle.com/storage or call +1.800.ORACLE1 to speak to an Oracle representative. Outside North America, visit oracle.com/corporate/contact/global.html to find the phone number for your local Oracle office.



Oracle is committed to developing practices and products that help protect the environment

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