

CACHEfx™ is a multi-terabyte, scalable caching appliance delivering high I/O operations per second and extremely low latency



Highlights

- Accelerate storage performance and eliminate “hotspots”
- Complement existing infrastructure
- Scale to millions of IOPS
- Simplify configurations

Industries and Applications

- Electric design
- Financial analytics
- Energy and exploration
- Web applications
- Media delivery
- Biotechnology
- Animation
- Government

Characteristic Environments

- Large data sets
- Random access
- Concurrent clients
- Transaction intensive
- High peak loads
- Required service levels

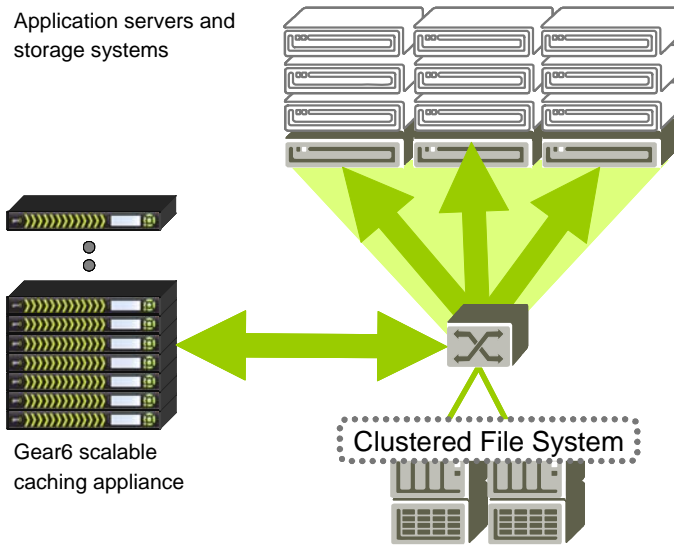
The Challenge: Closing the Server-Storage Performance Gap

Enterprise data centers worldwide face a widening gap between decades of CPU advances that have outpaced the data delivery capabilities of disk-based storage. Applications with terabyte size data sets requiring large numbers of I/O operations per second (IOPS) face I/O bottlenecks from disk based storage systems that cannot keep pace.

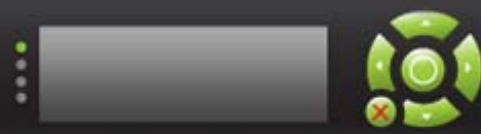
The Solution: Centralized Storage Caching

Centralized storage caching delivers high capacity, high performance memory-based cache as a shared network service to dramatically accelerate data center performance. CACHEfx scalable caching appliances connect to the network via standard Gigabit Ethernet, complementing existing NFS storage to provide very high throughput and real time data access; no changes to current applications or infrastructure are required. Centralized storage caching reduces the need to over-provision storage, provides protection from peak load disruptions, and ensures high quality of service.

Serving requests from high speed memory provides applications a massive throughput increase and real time access to data. Large files, data sets, and entire databases are reliably cached to accelerate I/O performance between 10 to 50 times.



**Cached data served
10-50x faster from memory**



Reflex OS™ Software

Reflex Operating System Software delivers value added features for CACHEfx appliances

- Cache services
- Performance
- Virtualization

Appliance Performance

- Starting at 250,000 IOPS
- <1/2 millisecond response time

Network Connectivity and Performance

- 2-16 1000BaseT connectivity
- 2-4 10GBaseT connectivity (optional)
- Starting at 800 Megabytes per second throughput

Capacity

- Starting at 128GB cache capacity. Real time compression increases virtual capacity

High-availability

- N-way, active-active cluster
- Modular, redundant network connectivity
- Redundant power

Protocols and File Systems

- NFSv3 over TCP
- Clustered file system support

Scalability

- Support thousands of concurrent clients
- Add additional appliances on-the-fly

Up to millions of IOPS

Performance and scalability equivalent to multiple high-end storage systems frees I/O constrained applications

SimulServe™ Parallel I/O Engine

Throughput scales linearly with increasing load to support large numbers of clients by delivering data in parallel

Real time data access

Ultra low latency responses (less than .5 milliseconds) ensure data delivery to application in real time

Terabyte scale cache capacity

CACHEfx appliances scale to multiple terabytes of memory-based cache capacity

Scalable performance

Scale IOPS, throughput, and cache capacity by adding additional appliances on-the-fly with no downtime

Investment protection

CACHEfx appliances operate with all existing NFS-based storage systems, protecting and extending existing investments in hardware and related storage software

Appliance Form Factor

Easy to deploy appliance streamlines installation and requires minimal management attention

Enterprise Class Availability

Highly available clustered architecture utilizes redundant network connectivity and power sources for maximum reliability and uptime

Product Configurations

CACHEfx	G100	G200	G400
Performance	125,000 IOPS	250,000 IOPS	500,000 IOPS
Throughput	800 MB/s	1.6 GB/s	3.2 GB/s
Response time*	< ½ ms	< ½ ms	< ½ ms
Capacity	128GB	256 GB	512 GB
Size	12RU	27RU	42RU
Weight	600 lbs	750 lbs	1050 lbs
Peak Power	1,815W	3,255W	6,115W
Max Thermal	6,196 BTU/hr.	11,113 BTU/hr.	20,877 BTU/hr.
Dual PDUs	240VAC, 30A. 2 x L6 NEMA connectors.		

* with 1KB byte I/O size