

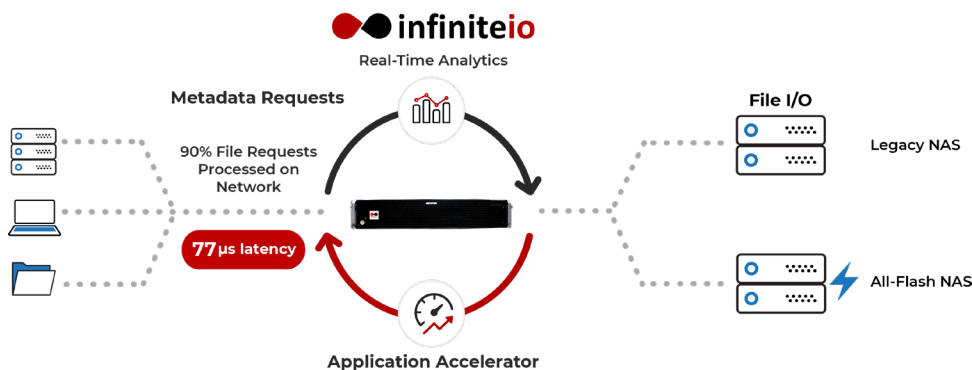
Application Accelerator

DATA SHEET

Reduce Latency to Boost Application Performance

Today's data-intensive applications are increasingly sensitive to time-to-data. With workloads such as AI/ML, IoT, genomics, and chip design driving millions to billions of small files, the latency of finding and accessing the right files is crucial for high performance operation. Applications and end-users experience poor and unpredictable performance as storage system resources are overwhelmed by requests—up to 95% are really requests for file metadata (such as directory lookups and access privileges). File systems continue to treat metadata operations as if they were data operations, increasing time-to-data as unnecessary latency is applied to every metadata operation.

The InfiniteIO Application Accelerator delivers dramatic performance improvements for mission-critical applications by processing all file metadata independently from on-premises or cloud storage. This frees up storage system resources such as CPU and memory for reads and writes, which eliminates bottlenecks and enhances the performance of existing network-attached storage (NAS) systems, even all-flash and NVMe-based arrays.





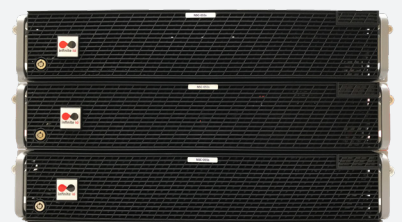
Improve performance by up to 50X without requiring access to the original file, storage or file system.

Dramatically Reduce Application Run Time

For any application, InfiniteIO provides the lowest possible latency for file metadata. Built on the InfiniteIO Metadata Engine (IME) architecture, the InfiniteIO Application Accelerator responds to file metadata requests directly from the network instead of the NAS system. InfiniteIO serves file metadata at the speed of DRAM to reduce latency from milliseconds to microseconds, and improve metadata performance up to 50X, faster than any other technology. The combination of this acceleration and offload of file metadata can reduce application run times by 50% or more.

Delivering the Lowest Possible Latency

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Superior Performance
 Improves performance for applications by delivering 3.2 million metadata operations per second with average latency of 40-100 microseconds.
- 
Independent Metadata Processing
 Separates metadata processing from file I/O to deliver the lowest latency for performance-intensive applications, reducing product development cycles and increasing worker productivity.
- 
Simple Deployment
 As simple to install as a network switch – deploys in minutes with no downtime or workflow changes.
- 
Totally Transparent
 Access to files remain unchanged, with no new mount points, file systems or virtualization.
- 
Highly Compatible
 Works with all NAS systems supporting NFSv3.



Get started today for free

<https://infinite.io/free-trial/>

Accelerate All NAS-based Apps

The IME collects metadata for all of the files from storage systems and stores it in a memory-based metadata map. All metadata is always hot, unlike a cache, for the fastest response. After a one-time scan of the file system, InfiniteIO's deep-packet inspection technology keeps metadata current in real time. InfiniteIO accelerates application performance regardless of the underlying NAS vendor or storage technology, including all-flash or NVMe arrays, by serving metadata requests out of memory as fast as 40 microseconds and up to 3.2M metadata operations per second.

Easy to Manage and Deploy

Installing in the network in front of existing NAS systems like an ethernet switch, the Application Accelerator is invisible to existing apps, servers and clients. No changes to workflows or storage are required. The embedded Infiniview software enables web-based management; IT admins can view real-time analytics of all file operations including which metadata operations are being off-loaded and accelerated by InfiniteIO across all NAS systems. File access remains unchanged regardless of deployment mode.

Specifications	Application Accelerator on NSC-055s-1610B Appliance	Application Accelerator on NSC-055s-1610-3 Appliance
CPU cores	40	120
DRAM	768GB	2304GB
SSD flash	5TB	15TB
10Gbps Ethernet port pairs	8	24
Total rack space	2U	8U
Deployment modes	inline passive, inline active or inline bypass	inline passive or inline active

Why Metadata?

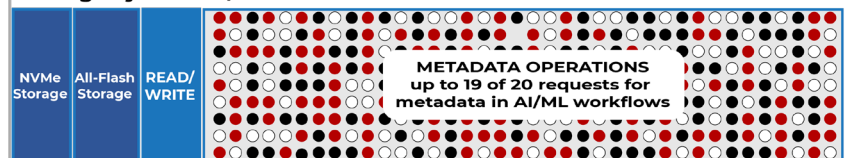
Metadata requests are a large part of file system latency—up to 95% of all file requests to a storage system or cloud are for metadata.

As file counts and storage utilization grow, the file metadata activity also increases, resulting in slower application performance.

Separating metadata processing from file I/O delivers the lowest latency for today's performance-intensive applications, which translates into reduced product development cycles and greater productivity.

TOTAL APPLICATION LATENCY

Storage Systems w/o InfiniteIO



METADATA OPERATIONS
100% Offloaded

Up to
50X
Reduction in Latency

Fault-Tolerant

- Clusterable for system fault-tolerance and port scaling

Connectivity

- 8 x 10Gbps port pairs per accelerator
- 24-port pairs in a 3-node cluster

Agency Approvals

- UL60950
- CSA 60950
- EN60950
- FCC /ICES-003
- CE – EMC Directive

Non-Disruptive Modes

- Out-of-band (simulation)
- Inline (passive)
- Inline (active)

InfiniteIO provides the lowest possible latency for file metadata, enabling applications to run faster, reduce development cycles and increase data productivity. Based in Austin, Texas, InfiniteIO independently processes file metadata to simultaneously accelerate application performance and hybrid-cloud data tiering for global enterprises, research organizations and media companies. Learn more at www.infinite.io, [@infiniteio](https://twitter.com/infiniteio) and [LinkedIn](https://www.linkedin.com/company/infiniteio).

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