The World's Fastest File System for Life Sciences & Genomics Research

Hitachi Content Software for File

Accelerate Discovery and Scientific Competitive Advantage with Hitachi Content Software for File's Next-Generation Storage

Life sciences organizations are often hampered in overcoming the limits to their productivity due to data pipeline challenges. To increase discovery, innovation, and to compete more effectively, organizations must establish an optimized, flexible, and resilient infrastructure foundation to improve clinical development processes, analytics and outcomes.

So just imagine how much more you could do with more data, speed, and agility.

Hitachi Content Software for File is a modern file system that is uniquely built to solve your big problems. It gives you an easy-to-deploy cost-effective storage solution, with the scale and high performance you need to make precision medicine possible. **And Hitachi Content Software for File is fully integrated with Hitachi Vantara's Object Storage, so you fully benefit from the cost and scale of the cloud—*without* the complexities and compromises.**

Hitachi Content Software for File:

- protects your critical healthcare data

- delivers the level of performance that changes lives

- lowers your total cost of ownership compared to traditional or competitive offerings

Here's what Hitachi Content Software for File can help you do:

Accelerate Genomics Research and Outcomes

- Lowest latency file system on the market

- Scales dynamically to meet changing workload demands

- Power GPU driven workloads used in genome mapping including NVIDIA® Clara™ Parabrick Pipelines and Google DeepVariant Algorithms

- Shortens turnaround time for scientific research results

Super-Charge Cryo-EM Processing

- Dynamically support the variability in access patterns and data size

- Host petabytes of clinical research data from a single system, utilizing object storage to provide access to all data, when needed. Removing Lifecycle management

- Give the performance needed for HPC GPU clusters to operate efficiently and as fast as possible, shortening image processing time by 60%-90%

- Support both on-premise and cloud-based environments for hybrid workloads, seamlessly
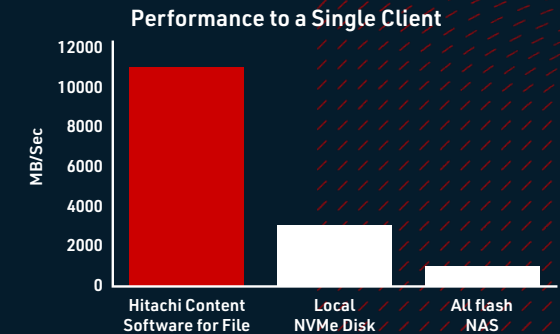
Increase Collaboration

- Multiple protocols to support multiple access methods, improving collaboration across researchers

- Seamless integration with Hitachi's market leading S3-compatible object storage allows seamless connectivity to cloud storage without special software

EIGHTY HOURS

Validate

Train

Transform

20X Improvement in Performance

FOUR HOURS
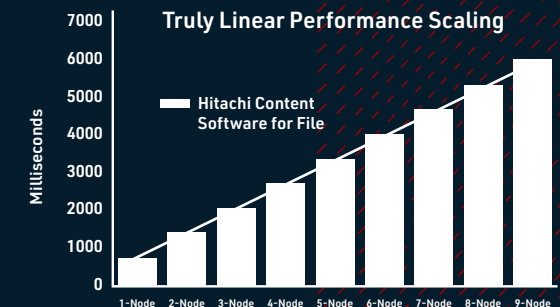
Before
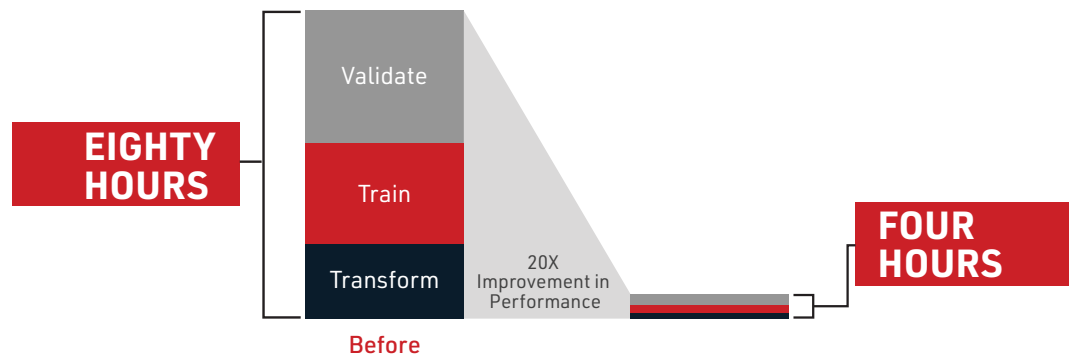
More agile, more affordable

Biogenetics Research and Pharma customers can shorten image processing and modeling times by 60-90% reducing data transfer time; 10x faster than traditional and even scale-out NAS.

And support is included with your subscription, so it's worry-free.

Performance to a Single Client

MB/Sec

12000
10000
8000
6000
4000
2000
0

Hitachi Content Software for File | Local NVMe Disk | All flash NAS

GPU centric scale testing is the proof! Delivering 162GB/Sec & 970K IOPs of performance to a Single GPU client!

Hitachi Content Software for File delivers TRUE linear scalability, and is exactly the solution required to handle the scaling complexities found in many Life Sciences workloads like Genomics and Cryo-EM where the variability in Data Size & Access Patterns at scale reveals the need for efficient and secure Data Management. A high-performance but cost-effective solution is critical in order to move past traditional Compute Limitations and towards GPU powered research.

Truly Linear Performance Scaling

Milliseconds

7000
6000
5000
4000
3000
2000
1000
0

☐ Hitachi Content Software for File

1-Node | 2-Node | 3-Node | 4-Node | 5-Node | 6-Node | 7-Node | 8-Node | 9-Node

Hitachi Content Software for File Value

World's Fastest Shared File System

Validated on SPEC SFS 2014, IO-500 and STAC M3 benchmarks

Platform Agnostic

Supports bare-metal (commodity hardware), containerized, virtual, and cloud environments

Flexible Deployment Models

Converged, dedicated storage server, or native in the cloud

Multi-Protocol

Flexible application storage access: POSIX, NFS, SMB, S3 support, and NVIDIA® GPUDirect® storage

Mixed Workloads

Supports small and large files simultaneously in the same file system, with both mixed random and sequential I/O patterns

Linear Performance Scaling

Application-level 4K I/O, sub-250μ second latency, unlimited random OPS

Automated Tiering

Expand the namespace from fast flash to hard disk storage via on-premises or cloud object storage

Distributed Storage

Fully distributed data and metadata to ensure that there are no hotspots in the storage cluster

Data Security

Distributed resilience that eliminates the bottlenecks of traditional data protection

Life Sciences Use Cases

Next-generation *Omics Sequencing & Analytics
- Genomics
- Proteomics
- Metabolomics
- Whole Genome and Exome Analytics
- RNA

Bio-Computational Imaging
- Cryo-Electron Microscopy
- Digital Pathology

Pharmaceutical Research & Development
- Biotechnology
- Drug Discovery
- Vaccine Creation

Clinical Research
- Structural Biology

Medical Manufacturing
- AI Enabled Medical Devices and Instruments
- Smart Hospitals

Informatics

Take the Next Step

To get more insight on this solution, download our datasheet.

Discover all that Hitachi Content Software for File has to offer you or contact your Hitachi Vantara representative today.

We Are Hitachi Vantara

We guide our customers from what's now to what's next by solving their digital challenges. Working alongside each customer, we apply our unmatched industrial and digital capabilities to their data and applications to benefit both business and society.

Hitachi Vantara