

# 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

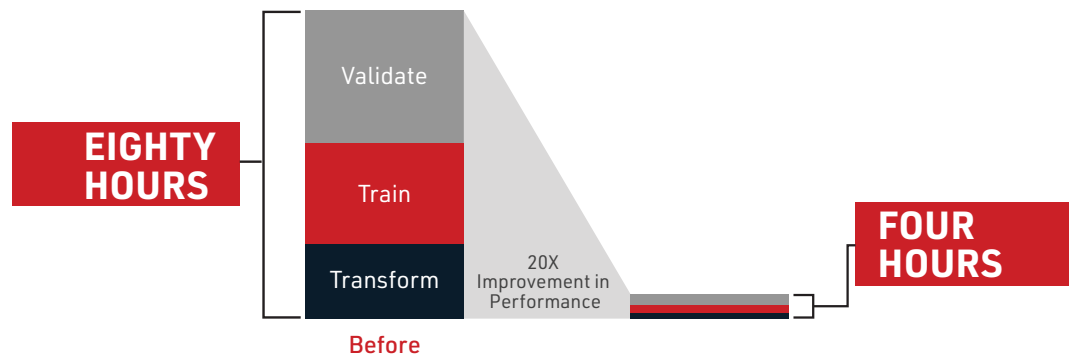
- Lowest latency file system on the market
- Scales dynamically to meet changing workload demands
- Power GPU driven workloads used in genome mapping including NVIDIA® Clara™ Parabricks Pipelines and Google DeepVariant Algorithms
- Shortens turnaround time for scientific research results

## 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

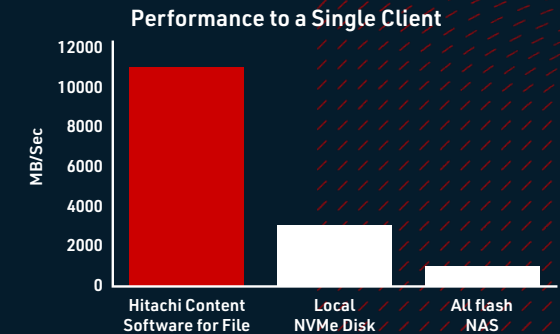
- Multiple protocols to support multiple access methods, improving collaboration across researchers
- Seamless integration with Hitachi's market leading S3-compatible object storage allows seamless connectivity to cloud storage without special software



## More agile, more affordable

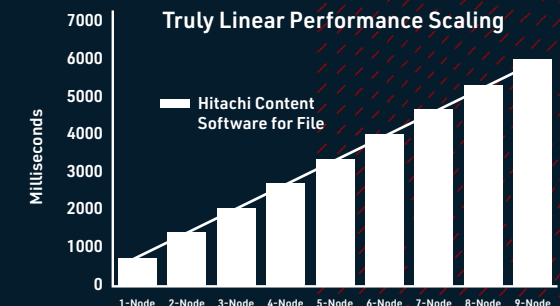
Biogenetics Research and Pharma customers can shorten image processing and modeling times by 60-90% reducing data transfer time; 10x faster than traditional and even scale-out NAS.

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



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.



# 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

Corporate Headquarters  
2535 Augustine Drive  
Santa Clara, CA 95054 USA  
[hitachivantara.com](http://hitachivantara.com) | [community.hitachivantara.com](http://community.hitachivantara.com)

Contact Information  
USA: 1-800-446-0744  
Global: 1-858-547-4526  
[hitachivantara.com/contact](http://hitachivantara.com/contact)



HITACHI is a registered trademark of Hitachi, Ltd. VSP is a trademark or registered trademark of Hitachi Vantara LLC. Microsoft, Azure and Windows are trademarks or registered trademarks of Microsoft Corporation. All other trademarks, service marks and company names are properties of their respective owners. NOTE: Actual trademark text should reflect the real content. Use the trademark guidance in the Hitachi Vantara Brand Guide.