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# HPE AND QUMULO FILE DATA PLATFORM

## High-performance scalable storage for healthcare and medical imaging data with Qumulo for PACS and VNA

### HPE Solutions for Qumulo

Provide cost-effective, high-performance imaging data collection and management. These solutions meet leading imaging vendors' single and multi-tier storage requirements and are ideal for healthcare customers' long-term imaging data archive needs. This solution delivers:

- **Enterprise performance at archive prices.** Get the performance benefits of flash with the cost benefits of spinning disks through a flash-first architecture.
- **Data protection and security for all medical imaging and clinical data.** Built-in data protection ensures data is preserved and always available. Confidential data and records are secured through over-the-wire and at-rest encryption. Working with key PACS providers, Qumulo and HPE deliver solutions that assure compliance with government and institutional data privacy and security regulations, meeting HIPAA regulations for compliance, including encryption and off-site copies.
- **Greater true usable capacity: get what you pay for.** Qumulo clusters can be Simplify healthcare IT operations with cloud-scale economics on-premises, at the edge, or in the cloud filled to 100% of usable capacity without performance degradation. The clusters are optimized for mixed I/O environments so high efficiency is maintained across all files large and small.
- **Real-time analytics for visibility and control.** Built-in real-time analytics provide insight across the entire file system regarding storage usage and performance trends. With this superior visibility, organizations can proactively manage current and future capacity requirements.
- **Enterprise-grade features.** Qumulo capacity licensing covers all software features presently available—snapshots, replication, reporting, and more—as well as any future enhancements that are released if the cluster has an active subscription. Additionally, users can move to newer hardware generations or to the cloud using the value of the existing subscription.

## Simplify healthcare IT operations with cloud-scale economics on-premises, at the edge, or in the cloud



### MEDICAL IMAGING TECHNOLOGIES PROVIDE A POWERFUL TOOL FOR CLINICAL DIAGNOSIS AND PATIENT TREATMENT

However, the increasing use of imaging modalities such as MRI, CT, PET scans, and more recently digital pathology, combined with growing file or study sizes, has a direct impact on a provider's image data management infrastructure performance and cost.

Healthcare providers often operate multiple Picture Archiving and Communication Systems (PACS), typically with local siloed storage. Scaling, managing, and maintaining these siloed systems can become complex and costly. Provider mergers or consolidations can further compound these challenges.

Capacity and performance demands, combined with the regulatory patient privacy concerns and the requirement for portable personal health records (PHRs), also increase the need for compliant, secure, consolidated storage.

### PERFORMANCE AT SCALE

Increased frequency of imaging procedures coupled with the rapid growth of file/study size places ever-greater demands on the underlying storage infrastructure.

With some imaging modalities generating GB-sized files, maintaining diagnostic file access performance is key to physician efficiency and workflow performance, ultimately impacting the quality of patient care and organizational efficiency.

## Solution brief

In many cases, proprietary storage can result in vendor lock-in, migration costs, and other challenges, further preventing healthcare organizations from harnessing more recent cost-effective performant storage solutions without the pain and disruption of platform or data migration.

Implementation of a vendor neutral archive (VNA) can unify image file management and access, but ultimately maintaining performance while controlling the cost of imaging data management depends on the efficiency of the underlying storage infrastructure.

## SINGLE-TIER STORAGE

Healthcare provider IT departments are already challenged to provide imaging departments with sufficient storage capacity (potentially PBs) that meets technical, regulatory, and fiscal requirements. Some imaging vendors are moving their storage requirements toward a single-tier architecture that delivers high performance and seamless growth.

Whether single or multi-tier, imaging data management systems should meet imaging vendor requirements and deliver:

- Predictable large file-size performance
- Seamless ability to scale
- Flexible cloud options

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## WHY QUMULO STORAGE FOR MEDICAL IMAGING?

Qumulo is a high-performance cloud-native file data platform that meets the performance and capacity demands of medical imaging data.

### Built for a hybrid cloud

The Qumulo file system is HPE GreenLake IaaS-capable. It provides a single file solution for cloud or on-premises. Healthcare organizations can burst compute and shift primary workloads to the cloud without application changes. These organizations can meet their specific needs for unstructured data and achieve up to 40% savings on capital expenses and up to a 75% reduction in deployment time.

### Real-time analytics for data transparency

Qumulo software assigns the aggregation of real-time metadata to all data as it is ingested, providing real-time insight into crucial information without performance degradation or long file system scans.

## HPE SOLUTIONS FOR QUMULO

Running on HPE Apollo 4000 series storage servers for deep storage and HPE ProLiant DL325 Gen10 Plus servers for dense performant requirements, Qumulo allows healthcare organizations to symmetrically scale capacity and performance in real-time securely on-prem and in the public cloud without disruption.

With industry-leading file system efficiency, Qumulo offers the best raw-to-usable capacity, allowing customers to leverage 100% of usable storage.

Qumulo on HPE solutions delivers a unified, cost-effective, and scalable storage architecture that enables healthcare providers to eliminate silos of expensive, proprietary PACS storage and move to a modern, software-defined, cloud experience model.

### Custom configurations

Density-optimized HPE Apollo 4000 series data storage servers and HPE ProLiant DL325 Gen10 Plus servers provide an optimal platform for Qumulo software and can scale from terabytes to petabytes while meeting single or multisite requirements.

Flexible 2U and 4U form factor HPE solutions can be configured for Qumulo including:

- Custom memory and SSD sizing for large file size imaging applications
- All-flash solutions for up to 54 QLC SSDs in a standard 2U rackmount
- Hybrid-flash for a combination of QLC SSDs and 16 TB HDDs
- Built-in AI-driven HPE InfoSight
- HPE iLO 5 and silicon root of trust technology for firmware protection, malware detection, and recovery
- Optional HPE Smart Encryption for storage controller-based FIPS 140-2 Level 1 data-at-rest encryption
- 2U and 4U form factors
- HPE GreenLake IaaS capability

## SUMMARY

Healthcare providers require modern, flexible storage systems to manage the consolidated imaging output from higher-resolution diagnostic imaging systems. Qumulo software running on HPE Apollo 4000 series storage servers provides a cost-effective, reliable, scalable, high-performance storage solution that meets healthcare providers' and leading imaging vendors' needs.

## LEARN MORE AT [HPE Solutions for Qumulo](#)

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