

Meeting Healthcare IT Requirements with Datrium DVX



SOLUTION BRIEF

Highlights

- Improve performance of Epic systems by 78%
- Get integrated data protection for PACS / VNA to safeguard PHI
- Comply with regulations, including HIPAA, HITECH, and other national healthcare system requirements
- Increase purchase predictability and reduce Total Cost of Ownership (TCO)
- Failproof Disaster Recovery (DR) with built-in backup on premises or in the cloud

The Challenge

As the healthcare industry evolves, data management and security needs are also changing due to policy changes, societal shifts, and technological advances. Top priorities of healthcare IT CIOs include increasing security (for data protection against modern threats like ransomware), reducing infrastructure costs, and improving customer experience.

As healthcare institutions work to provide and improve patient care, providers worldwide are facing financial and regulatory pressures. With the widespread computerization of patient health records and the adoption of digital imaging, traditional paper and film-based documents have been replaced with Electronic Health Records (EHRs) and Picture Archiving and Communication Systems (PACS). Healthcare IT departments have been forced to piece together custom infrastructure solutions to support EHR and PACS while managing data protection, availability, and performance.

Furthermore, healthcare providers are turning to virtualization and cloud as a way to give clinicians access to patient data in real time – without providing proper consideration to security regulations.

The Solution

For organizations that are virtualizing core applications or adopting virtual desktop environments (VDI), Datrium provides the optimal data management platform for delivering world-class performance for healthcare applications with simplified management and HIPAA compliant standards. Datrium DVX, built on the Automatrix platform, integrates into existing healthcare environments and provides the flexibility to address unexpected growth and performance demands.

DVX is the first and leading disaggregated HCI (DHCI) solution that provides the industry's highest performance for virtual workloads. It combines the fastest recovery time and simpler management of data centers with integrated DR and built-in backup. It has the smallest footprint due to always-on efficiency and data protection, and it eliminates storage administration with VM-centric management.

Run and protect any workload at any scale – on premises or in the cloud. DVX combines compute and data components to deliver an extremely resilient and secure infrastructure that will run the most critical healthcare applications.

DVX aligns with healthcare system requirements by improving flexibility and performance, reducing complexity, and supporting HIPAA compliance efforts while lowering initial and long-term costs.



Key Benefits:

Leading Performance for Electronic Medical Records (EMR)

The Datrium DVX architecture works flawlessly with EMR/EHR and PACS demanding performance requirements. Validation by IOmark ranks it as the fastest and most scalable platform in the industry. Global deduplication, compression, encryption, and triple-mirror data protection are built into the platform. Each host can achieve up to 140K IOPS at ultra-low latencies, providing the best EHR and PACS user and patient experience. It supports mixed Healthcare workloads (OLTP/OLAP) with improved latency and higher performance without creating application silos.

Security and Compliance with NIST FIPS 140-2 Certification

Datrium's Blanket Encryption is already an industry first, providing software-based end-to-end encryption (without self-encrypting drives or hardware dependencies). The encryption uniquely secures Protected Health Information (PHI) data running on hosts, host SSDs, data nodes, and data in flight between hosts and data nodes. DVX encryption uses the FIPS 140-2 AES-XTS-256 military-grade crypto algorithm and leverages the Intel Intelligent Storage Acceleration Library (Intel ISA-L) with Intel AES new encryption instructions set (Intel AES-NI). This security helps healthcare organizations satisfy regulations, including HIPAA, HITECH, PIPEDA, and national healthcare system requirements.

Scalable Storage for PACS and VNA with Integrated Data Protection

DVX accelerates and modernizes PACS and VNA deployments without IT infrastructure complexity. It enables healthcare IT teams to seamlessly grow infrastructure from a few terabytes to petabytes while lowering expenses and management overhead of traditional SAN and NAS arrays. Combining primary and secondary data management, DVX is a comprehensive data center protection platform with the ideal component granularity and control features to secure an application for longer-term retention, including replication and backup to HIPAA-compliant clouds.

Increased Purchase Predictability and Reduced TCO

DVX deploys in minutes with new or existing servers. Its simplicity provides healthcare organizations that don't have onsite IT specialists, with an easier way to manage their environment. DVX is also ideal for multi-site health systems with thousands of sites. Its simple pay-as-you-grow model allows healthcare IT teams to add resources one node at a time, so infrastructure grows to match business demands. A leading Midwestern hospital was able to reduce costs by 44% with DVX.

Data Resiliency and Reduced Risk of Ransomware

IT teams can maintain mission-critical levels of availability using DVX and DRaaS with built-in backup. IT teams can protect critical data with granular, policy-driven snapshots, and replication that provide millions of point-in-time consistent backups. Snapshots are immutable, which reduces the risk of ransomware. IT teams can restore from recent snapshots or deep backups, which is critical as ransomware attacks are often not discovered until months after the initial breach.

Failproof Automated Disaster Recovery

Datrium delivers failproof DR with instant Recovery Time Objective (RTO) both on premises and in the cloud. For cloud DR, Datrium Disaster Recovery as a Service (DRaaS) with VMware Cloud on AWS delivers one-click failover and failback for all VMware workloads. With instant RTO and RPO of a few minutes, critical data restarts quickly, so the business impact is small. Continuous compliance checks every 30 minutes ensure that there's been no configuration drift, and the DR plan will work when needed. Costs are 10x lower using on-demand DRaaS with VMware Cloud on AWS and failback because it only sends changed data after global deduplication.



Simplified Management and Unparalleled Support

Datrium solutions are easy to operate. DVX requires zero storage overhead. IT teams can quickly and easily provision, operate, and expand systems. DRaaS enables teams to use the same VCenter tools to manage their on-premises storage and their cloud resources, so teams get a consistent operating environment, and there's no learning curve. And with a 93 Net Promoter Score (NPS), organizations get unparalleled support from the Datrium Support team.

Conclusion

With Datrium DVX and DRaaS, healthcare IT teams can rest easy knowing they have the best application performance, highest availability, industry-leading data protection, failproof DR, easiest management, and infrastructure economics to meet the demanding requirements of modern healthcare organizations.

Best Return on Investment (ROI)

IT teams can use their existing servers and flash, while reducing their data center footprint, to ensure minimum infrastructure costs. They can reduce IT management time and speed deployment for IT productivity gains while improving application response times to delight customers and increase revenue. Many customers get their investment back in five months. With DRaaS, customers can eliminate secondary physical DR sites, and they only pay for DR when disaster strikes.

