Protect, Streamline, and Improve the Efficiencies of Crucial Hospital Systems with MEDITECH Certification on NetApp

Key Benefits

Have Maximum Platform Flexibility

Unify on a single data management platform spanning flash to disk to cloud with the NetApp® ONTAP® operating system to achieve improved operational efficiencies and streamline tasks to protect patient data and availability.

Keep Pace with Growing Clinical Data

Deliver optimal performance and accommodate data growth at a reduced cost by using flash to provide I/O throughput and by combining solid-state drives (SSDs) with hard disk drives.

Meet Stringent Latency Requirements for MEDITECH Workloads

Meet service-level objectives for critical MEDITECH applications with consistent submillisecond latency and a scale-out architecture.

Optimize Performance

Power all-flash and hybrid storage solutions with NetApp ONTAP for faster data access and improved efficiencies for electronic health record (EHR) workloads.

Benefit from Highly Efficient Systems

The solution delivers the industry-leading storage efficiency portfolio that helps reduce cost per effective gigabyte of storage to keep pace with growing volumes of clinical data.

Meet Compliance Requirements

Safeguard clinical data with an Integrated Data Protection suite that helps meet healthcare compliance requirements for data availability and retention.

The Challenge

MEDITECH provides a comprehensive and integrated electronic health record (EHR) system designed to help healthcare organizations increase patient safety, streamline processes, provide advanced healthcare analytics, and improve communication across departments and care teams. Accurate, up-to-the-minute information is available when and where users need it, resulting in more informed and effective treatment and decision-making.

However, with data growing at unprecedented rates, healthcare providers constantly struggle with how to store, process, and manage the explosive growth in patient records. To accommodate this exponential data growth, scalable storage solutions that provide seamless data protection, ease of administration, and unparalleled uptime and availability are now a requirement for EHR systems.

Make Better Decisions for You and Your Patients

NetApp's vision for the future of data management is to create a Data Fabric that spans your entire IT landscape. The Data Fabric enabled by NetApp takes the worry and complexity out of managing and maintaining control of clinical data across private and public cloud resources. This capability enables healthcare organizations to adhere to internal data security policies, maintain compliance with HIPAA and HITECH requirements, and promote greater innovation and IT responsiveness.

NetApp Storage Validated for MEDITECH Environments

Working with NetApp, MEDITECH completed certification of NetApp FAS and NetApp All Flash FAS running the NetApp ONTAP operating system for use in MEDITECH environments. With the addition of NetApp flash technologies, MEDITECH customers can optimize the performance of their critical patient-care environments. Healthcare organizations can now buy with confidence, knowing that the certified solution includes high-performance, reliable storage that delivers an efficient solution for centralized medical data management, sharing, and archiving. With a unified storage architecture, healthcare organizations can achieve cost efficiencies and overcome operational and productivity hurdles.

"With the efficiency, flexibility, scalability, and advanced storage management capabilities offered by NetApp, we've carefully selected and invested in a storage solution that will continue to help us manage steady data growth and respond to the growing needs of our organization."

Stephen W. Clark, FACHE, Chief Information Officer
Albermarle Health

NetApp®

MEDITECH
Reimagining healthcare.
Redefining productivity.

Technology Partner

Scale-Out Architecture

Powered by ONTAP, NetApp storage solutions are key to delivering advanced storage control for clinical workloads. In clustered scale-out configurations, storage systems and components can be replaced or combined with different FAS models. The combination of capacity-optimized FAS drives, NetApp Flash Pool™ intelligent caching, and All Flash FAS can increase storage capacity by 50% while providing comparable performance. Scaling occurs without maintenance windows or the challenge of coordinating downtime across teams. This capability makes it easy to expand the storage infrastructure to meet growing data volumes with performance optimized for specific workloads.

- **Optimized for writes.** NetApp's patented WAFL® (Write Anywhere File Layout) system paired with Non-Volatile Random Access Memory aggregates optimizes MEDITECH write burst cycles.
- **Protects against disk failures without the overhead penalty of RAID 10 mirroring.** NetApp dual-parity RAID DP® technology) provides protection against disk failures thousands of times better than single-parity RAID and without the typical performance penalty of traditional RAID 5 or RAID 6.
- **Efficiently supports exponential patient data growth.** NetApp uses 40% less raw disk while managing the required replications of the MEDITECH database using NetApp FlexClone® volumes, saving upward of 80% of the raw disk space.
- **Provides high availability.** NetApp delivers five-9s uptime in tier 1 environments.
- **Enhances backup and restore processes.** NetApp Snapshot® copies and NetApp SnapMirror® technology augment the shadow copy and nightly backups to clones. Doing so provides the capability to more easily move copies to secondary arrays and provide fast, incremental restores from disk as part of a DR restoration process.
- **Simplifies MEDITECH storage management.** The comprehensive, highly integrated ONTAP toolset delivers ease of administration and efficiency in supporting multiple replications, backups, and disaster recovery.

"By running MEDITECH on NetApp storage, we've enhanced productivity and collaboration among our caregivers, ultimately enhancing the delivery of patient care. They can concentrate on healthcare instead of being distracted by technology."

Adam Lewis, Manager of Technical Services and Telecommunications
Norman Regional Health System

NetApp Flash-Accelerated Storage Portfolio

With today's flash technology, clinicians can accelerate time-sensitive decisions regarding treatment plans by having near-real-time access to critical patient data. Flash storage can improve application performance with greater efficiency and rack density, making it possible to deliver superior speed and responsiveness from clinical operations.

NetApp takes advantage of the company's full portfolio and partner ecosystem to deliver the right flash solution for the right workload, with over 200 flash-related patents and over 210PB of flash installed to date. Healthcare organizations benefit from low-latency performance with enterprise-class RAS to improve the speed, responsiveness, and value of the applications that control key clinical and business operations.

- Increase I/O throughput and eliminate performance bottlenecks.
- Lower costs while increasing performance with a minimal footprint.

NetApp OnCommand® Performance Manager, included with ONTAP, automatically monitors and analyzes performance to simplify performance management for NetApp FAS and All Flash FAS systems. By using built-in system, dynamic, and user-defined policy thresholds, OnCommand Performance Manager detects and alerts on performance incidents.

NetApp All Flash FAS

NetApp All Flash FAS is a robust scale-out platform built for virtualized environments, combining low-latency performance with best-in-class data management, built-in efficiencies, Integrated Data Protection, multiprotocol support, and nondisruptive operations. The All Flash FAS system delivers 4 to 12 times higher IOPS and 20 times faster response for databases than traditional HDD systems. And it can be deployed as a stand-alone system or as a high-performance tier in a clustered ONTAP configuration.

NetApp Flash Pool

Flash Pool technology improves performance for workloads that are random-read intensive, such as file services, messaging, OLTP databases, and server or desktop virtualization. With Flash Pool, workloads can complete faster by replacing HDD operations with SSD operations for both reads and writes. This benefit enables the use of fewer disks or SATA instead of SAS disks and results in cost efficiency.

Low-Latency Performance

Including NetApp flash solutions in MEDITECH environments is an excellent way to maintain submillisecond response times for demanding clinical workloads. These systems optimize I/O and maximize application throughput while running leading data management functions. The systems also meet the required response times of 5ms read latency and less than 1ms write latency as defined by MEDITECH for meeting application-level performance.

Security

NetApp, working with partners, delivers a comprehensive portfolio of encryption solutions to secure confidential data at rest. NetApp does so while centralizing and simplifying encryption key management across physical and virtual data centers, disaster recovery sites, and cloud infrastructures.

State-of-the-Art Data Protection

NetApp Integrated Data Protection is a core component of ONTAP. This protection provides availability, backup, compliance, and disaster recovery services right from the storage platform. NetApp storage efficiency technologies and techniques are designed to reduce unchecked storage growth. These technologies include deduplication, compression, thin provisioning, and thin replication. They help lower costs and accelerate business performance, making it possible to store, replicate, and recover data faster while storing more backups longer.

Cost-Effectiveness

NetApp All Flash FAS for MEDITECH environments reduces physical space requirements and costs associated with over-provisioning. By eliminating disk drives that are not needed for storage capacity, healthcare providers can reduce the purchase price of a storage system and can obtain ongoing savings by consuming less power, cooling, and rack space.

Snapshot Copies

NetApp Snapshot technology protects data—from a single file to a complete disaster recovery solution—by creating point-in-time copies of file systems. Snapshot technology can be used while applications are running, creating Snapshot copies in less than a second, regardless of volume, LUN size, or level of activity on the NetApp system.

NetApp SnapMirror

NetApp SnapMirror software is a cost-effective, easy-to-use DR solution. SnapMirror replicates data at high speeds over LAN or WAN. You get high data availability and fast DR for critical applications in both virtual and traditional environments.

Extend Access to Patient Records with Clinician Mobility

Virtual desktops are an important consideration for MEDITECH customers. NetApp's easy-to-manage virtual desktop infra-structures deliver reliable, secure access to critical data, images, and files for thousands of users anytime, anywhere. NetApp's partnering with companies such as VMware and Citrix allows workflows to be coordinated and streamlined through virtualized desktops to improve productivity and efficiency.

NetApp file-level FlexClone volumes can lower the cost of storage for VMware and VDI. This benefit allows customers to instantly make as many copies of virtual machines and virtual desktops as needed, with zero performance impact and minimal capacity use.

Increase the Value of EHR Investments

Advances in technology and cloud computing provide key capabilities to help the healthcare industry redesign storage systems to keep pace with the tremendous growth in clinical data. These advances also help you to do more within tight budgets. MEDITECH's certification of NetApp FAS and All Flash FAS gives healthcare providers a unified storage architecture that supports the most demanding workloads. The flexible design helps reduce storage costs across existing storage infrastructures and provides organizations with the ability to quickly respond to changing business needs. Cost-effective scale-out storage solutions from NetApp, validated by MEDITECH, are an excellent fit for new installations or when upgrading sites. And the seamless integration with Bridgehead Software helps providers automate backup and recovery processes across MEDITECH environments.

A worldwide team of experts is ready to help maximize the value of your MEDITECH EHR investment. Get a proven solution with worldwide installation and support. By adding NetApp storage solutions, healthcare organizations will continue to see increased value across EHR investments for years to come.

MEDITECH integrated data protection provided in collaboration with BridgeHead Software. www.bridgeheadsoftware.com

BridgeHead

About NetApp

Leading organizations worldwide count on NetApp for software, systems and services to manage and store their data. Customers value our teamwork, expertise and passion for helping them succeed now and into the future.
www.netapp.com

HA to all disks (SAS or SSD)

NetApp® ONTAP®

NetApp ONTAP

NetApp® FAS or AFF80xx

NetApp FAS or AFF80xx

HA Pair

FCP Data

FCP

**Server Environment
Virtualized & Physical**

File
Servers

Background
Job Servers

Transaction
Servers

Data
Repository

Scan &
Archive

Connection
Servers

App
Servers

Backup
Servers