HealthStore™ for FlexPod®

The Integrated Infrastructure from Cisco and NetApp

An end-to-end solution for your hospital's data, delivering the right information, from the right place, at the right time.

Business Value

- Simplifies administration of hospital data with a fully-integrated solution combining best-of-breed storage and software

- Ensures scalable, cost-effective operation of all solution components with a pre-validated Purpose-Built Appliance approach for hospital data protection

- Enables an integrated care strategy, helping to smooth the pathways and facilitate effective clinical decision making at the point of care

- Supports always-on operations, 24x7, with continuous access to data as is demanded by modern healthcare facilities

- Provides a meaningful first step towards an effective cloud strategy, whether your intentions for cloud are modest or broad

- Delivers a cost-effective and seamless method for dealing with exponential growth of patient data

- Establishes a comprehensive platform for meaningful business intelligence to be obtained from analytics

- Preserves business flexibility for hospitals by avoiding the constraints which are normally associated with IT infrastructure

- Improves patient care by enabling clinical access to data with assured availability

- Lowers risks surrounding compliance, implementation, constraints, integration, data protection and security which are all addressed

- Lowers maintenance impact by making data independent of the physical infrastructure it sits on

- Facilitates the effective sharing of all hospital data, including DICOM images, non-DICOM images, and EMR data, along with structured and unstructured files

- Extends the life of expensive assets with better return on your storage investment

- Ensures budget spend is efficient and smart, by optimizing and smoothing the curve of storage use to help large CAPEX spikes to become a thing of the past

The Challenge

30% of the world's stored data is now devoted to healthcare[1], largely as a result of the huge upsurge in electronic patient data, increased regulation and new technologies. If your hospital is like most, your team is struggling to keep pace with data growth within your IT budget and your hospital floor space.

As data growth continues to break through these constraints, a solution which simply plugs the holes in current approaches is not sufficient. To stay afloat in 2014, you need a modern data management approach with a unified healthcare foundation. Why? Because you can't afford the extra time needed to learn and manage different systems for each type of application and data in your environment.

Unifying your approach solves immediate problems by lowering costs for data management, and ensuring availability of that data to those who need it in your hospital. A unified foundation also prepares your data for modern approaches like cloud storage, recovery in the cloud, along with SaaS and hosted applications in the cloud. Also, a unified approach ensures secure, compliant handling of all your hospital data.

[1] *"Survey on the Government of Unstructured Data" 30 June 2008, Ponemon Institute*

The Solution

HealthStore combines the best in storage hardware and healthcare-integrated software to create a pre-validated, best-of-breed foundation for data management in hospitals. This solution delivers the cost-efficiencies of a Purpose-Built Appliance but with the flexibility of software.

Hospital data stored on the FlexPod component of the solution is protected, consolidated and migrated based on policies, onto NetApp E-series storage. This process includes reduction of primary storage requirements by reduction of the primary data footprint, effectively extending the life of your primary storage system – all while preserving transparent data access to healthcare applications and clinicians. Protected data can be stored locally and remotely, to ensure availability through all levels of failures.
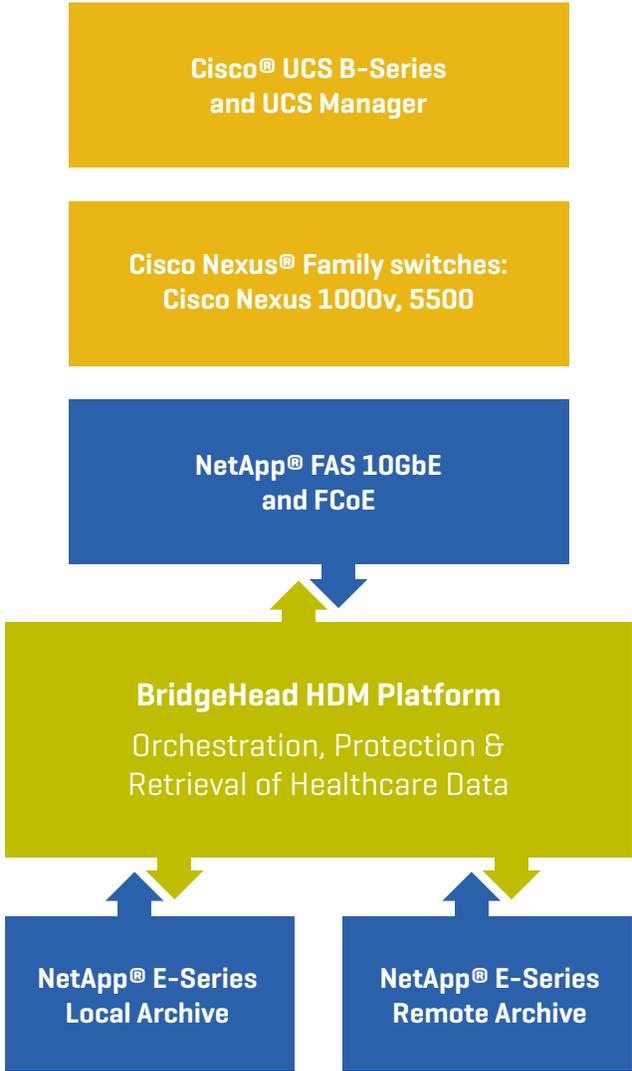
Cisco® UCS B-Series and UCS Manager

Cisco Nexus® Family switches: Cisco Nexus 1000v, 5500

NetApp® FAS 10GbE and FCoE

BridgeHead HDM Platform
Orchestration, Protection & Retrieval of Healthcare Data

NetApp® E-Series Local Archive

NetApp® E-Series Remote Archive

Figure 1. The HealthStore solution alleviates stress on FlexPod for healthcare applications with BridgeHead HDM software

A FlexPod® powered solution

"FlexPod – a world leader in Converged Infrastructure…"

Data Management, Protection & Compliance – BridgeHead's Healthcare Data Management software provides the data management layer in HealthStore, allowing hospitals to identify and move content that could be better and more efficiently managed elsewhere onto more cost effective technology. This extends the life of more expensive primary storage components and ensures that they are dedicated to serving clinical applications.

Data is protected, backed up and archived in a granular and efficient way, leveraging point-in-time copies (only storing delta changes) to facilitate aggressive retention policies. In turn this enables adherence to aggressive SLA's, as the time taken to recover data, and the point from which it can be recovered, is significantly improved. Data can be securely locked down, separated and located in all based on policies to maintain compliance.

The solution can also interface with a wide range of storage media, meaning that data can be archived to tape, third-party cloud storage, disk or optical depending on what is required. Archived data is kept highly available with a single searchable repository for your hospital's DICOM medical images, scanned paper records, emails, files and all other types of data.

DICOM data management – This solution has DICOM-aware management of image files created by PACS applications. Commonly known as VNA (vendor-neutral archive) capabilities, the solution enables multiple brands of PACS applications to share images across hospital departments (or sites) using a single easy-to-manage repository. This repository lowers general and administrative costs because **data migration is massively** reduced when PACS applications are retired or replaced.

Non-DICOM image data – Modern patient records include many non-DICOM image files, such as scanned insurance cards, admissions paperwork and even digital photographs. In most hospitals, scanned images of this type number in the millions and have challenged traditional approaches to data management, not only by consuming capacity quickly but by requiring daily file manipulation by administration teams. This solution provides a modern and fully-integrated approach to backup and archive, protecting and preserving such images.

Flexibility – The storage hardware underpinning this solution scales seamlessly by enabling components to be added **non-disruptively** to increase performance or capacity when needed, giving true 24x7 operations. The solution includes multi-protocol capabilities required to securely partition environments with Multi-Tenancy, delivering quality of service to all workloads/applications. In short, this solution is designed to grow with your hospital without reaching hard-stops in storage capacity.

Efficiency – The solution is a best-of-breed approach using NetApp storage and Cisco compute and networking to create a single shared pool of resource. It can be managed from a central point and ensures the continued high utilisation of all components and resources. Efficiencies that reduce the actual data footprint also mean that less disk and compute hardware are purchased. Because data is on the correct storage tier at all times, the solution also delivers appropriate and cost effective performance.

Simplicity – All requirements for data accessibility, delivery and storage are delivered from a single and centrally managed architecture. This architecture is pre-validated, fully integrated and optimised for the complete data needs of a modern hospital.