Sustain medical systems’ high availability

HP Converged Medical Infrastructure, with Meditech software
Providing better care, while meeting compliance demands

Hospitals today are responsible for much more than providing direct patient care including disease management, regulatory compliance with JCAHO, HITECH and HIPAA, and physician interoperability.

Adding to the challenge is achieving Meaningful Use of Electronic Health Records (EHR), which is required to be eligible for your share of the over $20 billion in government funds allocated to healthcare IT through the American Recovery and Reinvestment Act (ARRA) of 2009. The IT tasks associated with Meaningful Use assume significant strategic proportion.

Rather than face today’s challenges with yesterday’s IT solutions, you can use a new generation of healthcare technology—MEDITECH 6.0® software. With MEDITECH 6.0, you receive one comprehensive healthcare solution that reflects more than 40 years of product and technology development:

• Merges financial, clinical, and imaging systems into a single, consolidated healthcare solution
• Organizes information into role-based desktops to ensure fast, immediate access to information; workers have the information they want, organized the way they like it
• Streamlines clinical and business workflows; designed to match users’ workflows
• Controls writing data to the database; files are updated by appending, rather than overwriting, existing data; provides an audit trail of updates and protects organizations against failure
• Provides secure access over the Internet so healthcare professionals can access the files they need, when they need them, from the device they choose

But healthcare IT is comprised of more than just software. You must also choose the infrastructure. Many MEDITECH hospitals select HP as their platform of choice.

HP and MEDITECH—committed to your success

For more than 20 years, HP and MEDITECH have shared a collaborative relationship, working together to deliver many successful implementations to healthcare facilities.

Through the experience gained during implementations at hundreds of hospitals, HP designs and delivers joint solutions available in configurations that meet the needs of hospitals of all sizes. Built on modular HP Converged Medical Infrastructure (CMI) components, you can start with your current HP infrastructure and grow as your needs change. HP designed the HP Converged Medical Infrastructure for the MEDITECH 6.0 solution to:

• Virtualize your data center to fully utilize resources and share services company-wide
• Increase availability and efficiency by consolidating your healthcare IT on reliable, scalable HP platforms utilizing design best practices for disaster and operational recovery
• Reduce the high cost of equipment and ongoing operating expenses
• Shorten deployment cycles using pre-tested, certified architectures

In addition, HP supports the HP reseller community in design and delivery of MEDITECH hardware solutions, and works closely with MEDITECH-approved systems integrators during installation (for a list of these approved integrators, please contact your MEDITECH Marketing Consultant).

Offering a healthcare IT solution with performance, reliability, and disaster recovery capabilities is very important to MEDITECH. So is offering the healthcare community a choice. That’s why MEDITECH works closely with HP to test and certify HP Storage solutions with MEDITECH software in a variety of use cases—validating HP as a strong storage platform for MEDITECH 6.0 solutions.
**HP and MEDITECH workflow**

An industry leader with more than 30 years experience in the healthcare industry, HP provides highly reliable solutions that help ensure all patient information remains available all the time. High-performance applications—including MEDITECH 6.0—powered by HP platforms, supported by HP storage, and backed by seamless support from HP services enable healthcare providers to experience IT success while driving down both risk and cost.

**HP Converged Medical Infrastructure** – Delivering the data center of the future, today; helping you overcome IT sprawl using innovations that deliver simplicity, integration, and automation; uniting servers, storage, networking, applications, and power and cooling on one highly efficient platform that can handle any workload, anywhere, anytime.

**HP high performance primary storage** – As a market leader in worldwide disk storage systems, HP has a storage area network (SAN) solution for every need, including the HP P9500 disk array, HP P6000 Enterprise Virtual Array (EVA) disk array, and HP 3PAR disk array. HP storage product families have been extensively tested and successfully implemented with all versions of MEDITECH software in small community hospitals, as well as in large Integrated Delivery Networks (IDNs) and urban medical centers. In addition, 3PAR testing is currently underway at MEDITECH and will be available in the near term.

**Data backup and long-term archiving** – To ensure your data remains available all the time, HP and MEDITECH work with BridgeHead Software to jointly develop Integrated Serverless Backup (ISB) and Integrated Disaster Recovery (IDR) solutions. These unique technologies work with MEDITECH software to create application-aware, point-in-time copies of MEDITECH data that can be either backed up or replicated to secondary storage.

HP and BridgeHead engineers leverage their laboratory experience with HP technology solutions to design highly available, quickly recoverable MEDITECH infrastructure platforms that meet a wide variety of customer Recovery Point Objective (RPO) and Recovery Time Objective (RTO) requirements. In addition to BridgeHead software, HP technologies such as MSL tape, VTL, StoreOnce D2D, iSCSI, and NAS have been fully tested with and are supported by MEDITECH for backup and scanning/archiving requirements.

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**HP SAN Solution with MEDITECH 6.0**

- **High performance primary storage**
  - HP P10000 3PAR
  - HP P9500 XP
  - HP P6000 EVA
  - FCoE currently supported on P6000 EVA, future support on HP P10000 3PAR

- **Data backup and long term archiving**
  - HP StoreOnce D2D virtual tape library
  - HP MSL modularity libraries
  - Enterprise scalable library
  - HP P4000 scale-out ISCSI storage

- **Client access endpoints and peripherals**
  - HP scanners
  - HP desktop PCs and thin clients
  - HP laptops and mobile thin clients
  - HP printers

MEDITECH back-up uses tape and/or VTL over Fibre Channel. Long-term archiving supports NAS and/or iSCSI.
HP ProLiant and blade servers – Offering scalability and innovation, these high-performing servers and solutions deliver confidence and reliability, and are available in rack-mount, tower blade, and scale-out form factors. HP also offers HP BladeSystem server blades to simplify your IT infrastructure, allowing you to mix and match server, storage, and networking blades all in one compact enclosure. And now, HP has partnered with ENERGY STAR® to offer energy-efficient servers, starting with the HP ProLiant DL3x0 G7 Server and server blade featuring Thermal Logic technology. HP and MEDITECH work individually with each customer to arrive at an optimal server design that incorporates VMware’s ESX and vSphere hypervisor technology as a standard component of their MEDITECH Reference Architecture (MRA) for HP.

Client Access Endpoints and Peripherals – HP scanners, printers, desktops/laptops, and thin clients are perfect add-ons to your clinical environment, providing secure solutions for clinical information scanning, printing, and access. Combined with HP management tools, HP client devices can lower your total cost of ownership by reducing implementation, management, and support costs.

HP Services – Every HP/MEDITECH technology solution works seamlessly with HP Services. HP Services provides depth of expertise and responsive on-site service for a broad array of healthcare IT infrastructure requirements.

HP technology configured in the MEDITECH Reference Architecture helps MEDITECH customers minimize risk through enhanced:

- **Compatibility** – Across all active MEDITECH software releases
- **Scalability** – From easy-to-manage rack servers to blade solutions to modular MEDITECH-certified storage arrays, HP makes it easy for MEDITECH customers to grow their technology infrastructure as their needs change.
- **Upgradeability** – Many HP technology solutions can be upgraded with little or no downtime; with the addition of the VMware hypervisor, you can manage applications without impacting live applications.
- **Data mobility** – Using software tools from HP and BridgeHead, engineers can help you easily migrate data across different HP storage arrays and versions of MEDITECH software.
- **Data protection and archiving** – HP storage technologies can be fully incorporated into designs that support MEDITECH Scanning and Archiving, as well as other healthcare archives such as PACS and file systems.
- **Solution support** – Provided by the experts at HP Services
- **Data tiering** – Use the right storage solution at each stage of the information lifecycle
- **Disaster recovery** – Implement a plan that will operate in the real world using fully certified HP storage solutions for MEDITECH ISB and IDR

**HP P9500 Disk Arrays**

Providing outstanding reliability, availability, performance, and capacity, HP P9500 disk arrays are designed to handle business-critical applications like MEDITECH 6.0. A great choice for advanced clinicals, HP P9500 disk arrays are:

- **Fast** – P9500 provides the exacting real-time transactional performance required by MEDITECH’s 6.0 database technology.
- **Reliable** – P9500 is well known for system and component-level redundancy, providing in excess of 99.999% availability.
- **Scalable** – P9500 offers massive scale-out capacity, and is certified for 115 simultaneous MEDITECH database servers.
- **Online-upgradable** – All P9500 hardware and firmware can be upgraded online for zero system downtime, zero impact on users, and zero degradation in productivity.
HP P6000/EVA disk arrays
A proven choice for virtualized storage—with more than 120,000 EVA arrays shipped by HP since 1994—the HP P6000/EVA disk arrays are powerfully simple, enterprise-class storage solutions. Certified to run with MEDITECH 6.0, these affordable, virtualization-ready storage solutions boast high standards of reliability, availability, and ease of use. You can trust P6000/EVA disk arrays to help you save on common, everyday storage administrative tasks and lower your costs by right-sizing your storage environment.

HP 3PAR disk arrays
Ideal for server virtualization with VMware vSphere, HP 3PAR Utility Storage meets the specific challenges of today’s medical data centers with a range of unique software and technologies. While legacy storage has failed to keep pace with the changes and demands of virtualized environments, next-generation HP 3PAR Utility Storage delivers transformative levels of agility, efficiency, and simplicity for desktop and server virtualization deployments. Exclusive virtualization and automation features built into HP 3PAR Storage Systems and HP 3PAR InForm operating system software deliver unique benefits that take server and storage virtualization to the next power, enabling you to:

• **Consolidate**: Buy 50% fewer physical servers
• **Simplify**: Spend 90% less time managing storage
• **Save**: Reduce storage capacity requirements by 50% ¹

¹ Source: HP use-case test results
StoreOnce Disk-to-Disk Backup Systems

Designed for businesses looking to improve IT utilization, the HP D2D Backup Systems with HP StoreOnce deduplication provide disk-based data protection for data centers and remote offices. With HP D2D Backup Systems, you can automate and consolidate the back-up of multiple servers onto a single device while improving reliability by reducing errors caused by media handling.

All HP D2D Backup Systems feature HP StoreOnce deduplication software for efficient, longer-term data retention on disk and enabling network efficient replication for a cost-effective way of transmitting data off-site for disaster recovery purposes. The D2D Backup Systems integrate seamlessly into your current IT environment, and offer you the flexibility of both virtual tape library and NAS targets.

• StoreOnce deduplication, store more data on disk: reduces the disk space required to store back-up data sets by typically 20x without impacting back-up performance
• Rapid restore of data for dependable, worry-free data protection: offering immediate access to back-ups for rapid restores; proven RAID 5 and 6 technology reduces the risk of data loss due to failures
• More affordable disk-based data protection: twice the price-performance of comparable products with deduplication and replication; offer scalability to 36 TB of usable capacity
• Automates, simplifies, and improves the back-up process: hands-free, unattended daily back-up is especially valuable for environments with limited IT resources such as remote or branch offices.

“MEDITECH’s relationship and collaboration at all levels with HP enhance our ability to better serve our joint healthcare customers. The combination of our two companies: MEDITECH, as visionaries in the EHR space, and HP, bringing solid technology and skills for a Converged Medical Infrastructure, are providing a solid foundation on which our customers can run their healthcare businesses and provide better patient care.”

–Mike Belkner, Associate Vice President, System Technology, MEDITECH
Service options

HP provides a comprehensive array of solutions across services, software, servers, storage, and networking. In addition, HP’s services expertise can bring all your solutions together and deliver them any way you want. You can use these services to help keep patient information always available, and business-critical systems always on.

- Integrated support
- Mission-critical services
- Multi-vendor support services
- Security, compliance and continuity services
- Server services
- Service management services
- Storage services
- Support services

You can also choose from these storage services:

**Storage Infrastructure Optimization Services**
- Storage Consolidation
- Data Protection and Replication
- Storage and Data Migration
- Storage Management

**Storage Technology Services**
- Storage Support
- Storage Installation and Implementation
- Scalable Event, Technical, and Solution Services

**Related Services**
- Data Center Transformation
- HP CarePack Services for Storage
- Mission-Critical Services
- Virtualization Support

**Resources**

hp.com/storage

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