MEDITECH and IBM Flash Storage

Delivering high-performance, data-driven solutions for healthcare workloads for fast access to medical information

Highlights

- Accelerate healthcare information systems with MEDITECH and IBM all-flash storage systems to speed access to vital patient data

- Improve efficiency and application productivity to enable better collaboration, insights and quality of care

- Reduce capital and operational expenses while delivering ultra-low latency performance for crucial healthcare applications

- Manage essential and growing medical content with confidence

- Ensure data availability and fast backup of EHR data with minimal to no impact

Data is flowing into healthcare systems at an unprecedented rate. Between electronic health records (EHRs), digitized diagnostics and wearable medical devices, it's estimated that the average person will leave a trail of more than one million gigabytes of health-related data in their lifetime.[1]
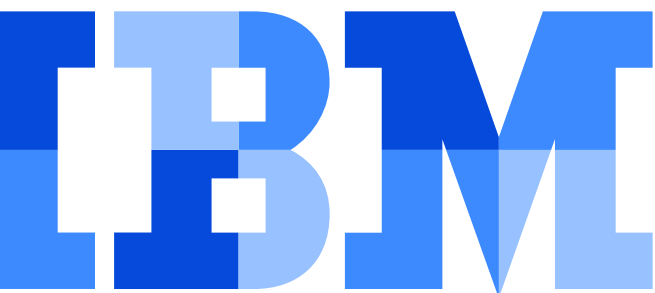
The ability to have fast access and glean insights from this explosion of structured and unstructured data is essential to accelerate decision making and ultimately to improve quality of care and outcomes. Healthcare organizations are quickly realizing that future-ready IT infrastructures are required to support this exponential data growth and digital transformation, while also positioning for cognitive initiatives. And efficient, high-performing all-flash storage systems play a crucial role in modernizing healthcare IT for the data-driven cognitive era.

Tested and proven

IBM works closely with MEDITECH to ensure our storage offerings are fully compatible with their software and meet their performance and user requirements. This includes managing backup of EHR data in conjunction with solutions developed by MEDITECH and BridgeHead Software.

As an example, during early 2018, MEDITECH qualification testing was completed with IBM Storwize® V7000F together with BridgeHead backup software. The test validated the performance of IBM Storwize V7000F by scaling up to 75 virtual MEDITECH application servers and demonstrated successful backup processes using BridgeHead software, which involved creation of multiple sets of IBM FlashCopy® mappings on the storage for consistent data.

By testing and certifying our storage systems with the MEDITECH EHR platform, we are able to offer our joint customers proven solutions, helping them reduce risk, accelerate decisions and actions, improve patient care, and overcome the challenge of massive data growth.
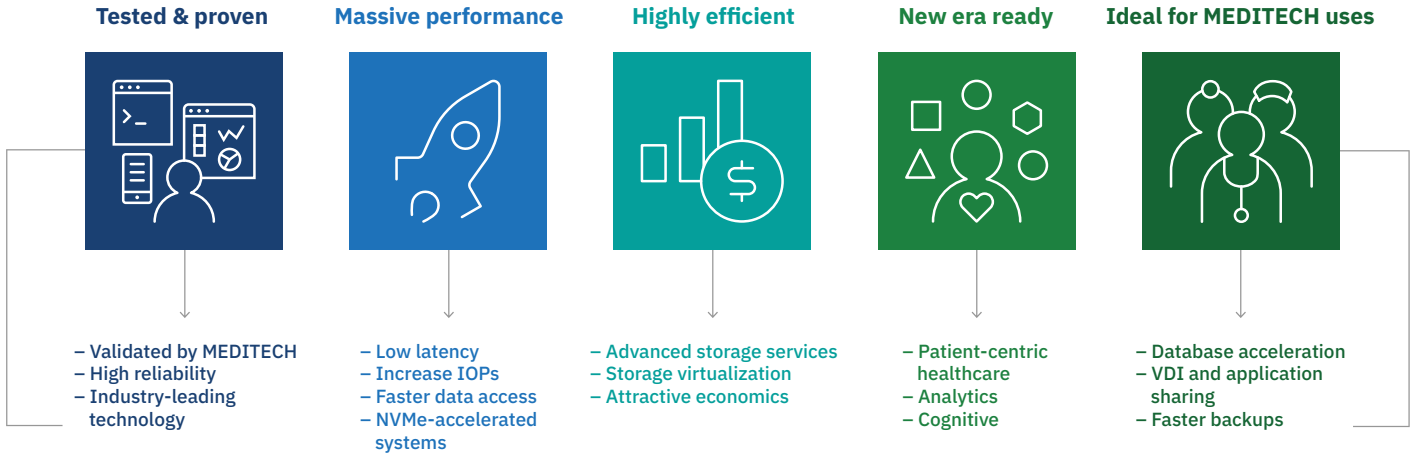
IBM Flash Storage: delivering value for MEDITECH workloads

Tested & proven	Massive performance	Highly efficient	New era ready	Ideal for MEDITECH uses

– Validated by MEDITECH
– High reliability
– Industry-leading technology

– Low latency
– Increase IOPs
– Faster data access
– NVMe-accelerated systems

– Advanced storage services
– Storage virtualization
– Attractive economics

– Patient-centric healthcare
– Analytics
– Cognitive

– Database acceleration
– VDI and application sharing
– Faster backups

Figure 1: IBM Flash Storage offerings provide a wide variety of benefits for MEDITECH users.

IBM Flash Storage: An offering for every need

IBM offers a broad portfolio of all-flash storage systems designed for high-performance needs. Since MEDITECH EHR deployments span all shapes and sizes of healthcare environments, this diversity of offerings is key in our ability to support as many different MEDITECH users as possible.

The IBM Flash portfolio includes solutions for:
• Entry-level and midrange:
    – IBM Storwize® family
• Enterprise-level:
    – IBM FlashSystem® family including the NVMe-accelerated IBM FlashSystem 9100
    – IBM DS8000 family

IBM all flash systems can also be deployed with VersaStack,™ a pre-integrated infrastructure solution that combines IBM Storage and Cisco server, networking and software components. VersaStack simplifies IT management and supports a wide range of high-performance, market-leading IBM Storage options to address any size healthcare environment.

High performance and operational efficiencies for MEDITECH

IBM Flash Storage drives value across a number of healthcare use cases, empowering medical teams to deliver quality care. Whether the need revolves around integrating information, simplifying storage management, database acceleration, supporting virtual desktop infrastructure (VDI)

deployments, reducing costs or optimizing data protection, IBM Flash Storage is engineered to meet these modern healthcare IT requirements.

Database acceleration is a key reason to use IBM Flash Storage for MEDITECH mission-critical workloads. IBM flash technology with ultra-low latency can accelerate performance of MEDITECH-related databases. In fact, when compared to traditional disk drive technology, IBM Flash Storage delivers up to 7X higher performance and up to 15X lower latency for similar EHR workloads.[2] IBM Flash Storage also speeds retrieval of binary web objects — which may include scanned documents, dictation, discharge instructions and EKGs — from non-EHR applications into EHR workstreams.

"We had a report that ran in 2 hours, and it finished in 10 minutes...they had some reports that had been running in 5 1/2 hours and they were down to 1 1/2 hours... Everybody was incredibly impressed..."

— Paul Jones, CTO, Sisters of Charity Health System, 2017 refresh of end-of-life storage systems with IBM Storwize V7000F for MEDITECH environments.

Another area where IBM Flash Storage shines is with backups. Faster processing of backup logs, tablespaces, databases, and temporary files with IBM Flash Storage can save critical time and reduce your backup windows.

IBM Flash Storage systems use advanced storage capabilities to optimize efficiency and drive higher performance. IBM Flash Storage solutions also support storage virtualization for both IBM and third-party storage systems, thereby reducing costs, simplifying management, and integrating medical information for deeper analytics and faster data access.

Today's EHR users expect their data to be available when and where they need it, which means there's simply no room for downtime. IBM Flash Storage offerings are designed to be highly resilient, based on IBM's extensive first-hand experience addressing issues that frequently lead to downtime. In fact, IBM offers an All-flash Array High Availability Guarantee for designated Storwize and FlashSystem offerings.[3] MEDITECH users that take advantage of this guarantee will feel confident they will avoid the downtime that is costly and damaging in healthcare environments.

"I wish all of my projects went as smooth as this one."

— Paul Jones, CTO, Sisters of Charity Health System, 2017 refresh of end-of-life storage systems with IBM Storwize V7000F for MEDITECH environments.

IBM Storage addresses top priorities of security, cost, and capacity

- Solutions are designed to securely store and deliver data with encryption for data at rest and data in motion across all-flash and hybrid systems, software, tape and networking.
- Efficiency-rich systems lower CapEx and Opex with the latest data reduction and auto-tiering technologies plus intuitive and easy-to-manage user interfaces.
- Capacity planning is made easy with intelligent storage management tools plus a utility pricing model that flexes, allowing storage capacity to be billed based on actual monthly usage.
- IBM's broad portfolio of all-flash arrays are designed to meet the data and budget requirements for every workload, application, and use case.

- IBM Storage offers an NVMe-accelerated all-flash system along with a well-defined roadmap and published Statement of Direction.
- IBM's software-defined solutions can be delivered through a range of deployments including cloud, appliances, and software-only models.
- Multi-cloud integration is seamless with transparent cloud-tiering in many of IBM's software defined storage (SDS) solutions including IBM Spectrum Virtualize, IBM Spectrum Scale,™ and IBM Spectrum Protect.

Why IBM Storage and MEDITECH

IBM has been partnering with healthcare leaders for the majority of its 100+ years in business and is proud to work with MEDITECH, systems integrators, and customers by enabling systems of health to become smarter, more efficient and uniquely personalized. IBM's healthcare solutions, technology and consulting enable organizations to achieve greater efficiency within their operations, collaborate to improve outcomes, and integrate with new partners for a more sustainable, personalized and patient-centric system.

IBM Storage, Software Defined Infrastructure and converged infrastructure solutions are all integral components of the healthcare IT ecosystem. Developed with innovative, industry-leading technology, IBM's world-class offerings provide a high-performance and high-availability foundation. With IBM's award-winning storage offerings, organizations can store, manage and protect critical healthcare data. Year over year, industry analysts recognize IBM as a premier provider of storage solutions. In 2017, Gartner placed IBM in the Leaders quadrant for its Magic Quadrant for Solid-State Arrays for the fourth consecutive year,[4] and for its Magic Quadrant for General-Purpose Disk Arrays[5] for the fifth consecutive year.

For more information

To learn more about IBM Flash Storage offerings for your MEDITECH environment, contact your IBM representative or IBM Business Partner. In addition, visit **ibm.com**/storage/flash to learn more about the IBM Flash Storage portfolio.

To learn more about MEDITECH software, visit http://ehr.meditech.com.

1 Fortune, *IBM's new health care prescription: A stand-alone business unit.* (www.fortune.com/2015/04/13/ibms-healthcare-prescription)

2 IBM lab simulations and results, 2017.

3 Guarantee only valid for eligible, newly purchased storage systems utilizing IBM HyperSwap.® The HyperSwap implementation must also be performed by IBM System Lab Services or a qualified IBM Business Partner.

4 *2017 Magic Quadrant for General-Purpose Disk Arrays* (Published October 31, 2017, ID: G00319539) (ibm.com/systems/storage/disk-arrays)

5 *2017 Magic Quadrant for Solid-State Arrays* (Published July 13, 2017, ID: G00315723) (ibm.com/systems/storage/flash/magic-quadrant)

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