



Hospital System Brings Patient Data Together for Secure Access Across Multiple Locations

"When hospitals are brought into the Maine Medical healthcare system, we spend enormous amounts of time and effort trying to figure out how to merge images, patient data, and clinical information from hospital A and hospital B. Merging the two can be quite difficult and daunting."

Chris Johns, Systems Architect, Maine Medical Center



Maine Medical Center
MaineHealth

The Maine Medical Center Imaging Informatics development team focuses on improving patient care by managing their records data and making them available while ensuring patient privacy. As Maine Medical Center went through the process of bring hospitals into their healthcare system, the team was challenged with the complexity of merging patient records, data integrity, and overall data security. With Microsoft® development technologies and the integrated developer tools created by PreEmptive Solutions, the Imaging Informatics team at Maine Medical Center was able to improve patient care by ensuring patient data was accurately migrated, secure, and available when and where they needed it.



Business Challenge

Maine Medical Center (MMC), rated the fourth safest hospital in the U.S., serves as a community hospital for the people of Portland, Maine, and as the premier tertiary care center for northern New England. It has more than 600 licensed beds and provides comprehensive inpatient services in all medical specialties.

When Maine Medical Center brought a new hospital into their care system, they were faced with a challenge that had the potential to diminish their quality of patient care. Each hospital has its own format for recording data, along with their own database systems for storing patient records; when two hospitals come together these discrepancies in data recording can cause patient histories to be disconnected from ongoing visits and exams.

Within Maine Medical Center, the Imaging Informatics development team focuses on improving care by managing patient records data. Their goal is to make patient records available to healthcare providers, without compromising patient privacy. Chris Johns, System Architect at Maine Medical Center explains, "When Maine Medical Center brings two hospitals in their system together, we spend enormous amounts of time and effort trying to figure out how to merge images,

patient demographics, and clinical information."

The challenge then, for the MMC Imaging Informatics development team, was to create a system that would connect information across disparate databases to bring patient images and data together into the correct patient's record. This system would need to be able to put all relevant patient data, no matter how historical or trivial that might be, into the hands of a doctor seeing a patient for the first time—ultimately providing a seamless transition for patient and physician without compromising data integrity and security.

Solution

Based on Microsoft development technologies and integrated developer tools from PreEmptive Solutions, Maine Medical Center has been able to implement a robust solution that hosts a Picture Archive and Communication System (PACS)—which allows a healthcare group to capture, store, distribute and view medical imaging. This system is equipped with essential distributive capabilities that allows it to communicate with the growing consolidated imaging group of hospitals and imaging centers throughout Maine and New Hampshire.

"All of these strategies and data solutions developed at MMC incorporate the latest in data security hardening. We used tools from PreEmptive Solutions, which has been a tremendous help—in not only security and privacy, but also analytics data collection for trend analysis and usage."

Chris Johns
System Architect
Maine Medical Center

Each new facility that is brought into the hospital system via PACS introduces new challenges and poses additional risks to patient privacy; however, the MMC Imaging Informatics development team uses these challenges as opportunities to create highly refined custom solutions to better meet the needs of consolidated imaging customers and ultimately improve patient care.

"All of these strategies and data solutions incorporate the latest in data security hardening. We use tools from PreEmptive Solutions, which has been a tremendous help—in not only security and privacy, but also analytics data collection for trend analysis and usage, and also troubleshooting," explains Chris Johns.

Overview

Customer: Maine Medical Center
Website: www.mainemedicalcenter.com
Country or Region: United States
Industry: Healthcare

Customer Profile

Maine Medical Center, recognized as the number-one ranked hospital in Maine by U.S. News and World Report for 2015-2016, is a complete health care resource for the people of Greater Portland and the entire state, as well as northern New England. Incorporated in 1864, MMC is the state's largest medical center, licensed for 637 beds and employing nearly 6,500 people.

With the knowledge that their patient data is protected, the MMC Imagine Informatics development team doesn't have to waste a thought on security—allowing them to put all their development and creative powers towards efficient innovation. Johns said, "The success of these solutions rely heavily on Visual Studio® 2015, .NET Framework, Team Foundation Server, SQL Server®, and most importantly Dotfuscator®, PreEmptive's data security hardening product."

Benefits

With the solution provided by Main Medical Center, healthcare providers and patients in northern New England will be able to access their medical records, imaging, and data from anywhere within the PACS network. Ultimately this reduces the number of lost images and data that could be critical in accurate diagnoses and comprehensive care.

PreEmptive Dotfuscator has made it possible for the MMC Imaging group to transform the hospital and patient data merging process so that it is no longer a "daunting task." Although it

still takes time to connect data from different databases and information types, the integration of Visual Studio 2015 and PreEmptive's data security hardening allows Maine Medical Center to successfully navigate the process of merging hospital records and making the information available to healthcare providers throughout the system.

"With the security hardening capabilities that PreEmptive integrates into Visual Studio 2015, MMC developed an application that goes through the process of merging hospital records and then allowing healthcare providers to access patient record data from multiple places, painting a more complete picture of the patient's situation."

Chris Johns
System Architect
Maine Medical Center

Partner Overview

Partner: PreEmptive Solutions
Partner Website: www.preemptive.com
Country or Region: United States

Partner Profile

PreEmptive Solutions' software and managed services monitor, measure and protect applications across cloud, on-premises, Internet and mobile platforms. Leveraging PreEmptive's application analytics and protection solutions, development organizations materially improve application quality, user satisfaction and development ROI across today's distributed and increasingly heterogeneous computing architectures.

Software

- Microsoft Visual Studio 2015
- Microsoft Visual Studio Online
- Microsoft .NET Framework
- Microsoft SQL Server
- Microsoft Windows Server
- PreEmptive Solutions Dotfuscator