



PROHEALTH PHYSICIANS

# ProHealth Physicians

A patient-focused, physician-owned operation, ProHealth Physicians relies heavily on a stable, available network to ensure the best patient care possible. Its patient scheduling and practice management software is the heartbeat of operations — downtime can lead to scheduling havoc, mismanaged offices and unhappy patients. To ensure continuous uptime at an affordable price, ProHealth turned to NEC fault tolerant servers.

## CHALLENGE

As the largest group practice of primary care physicians in Connecticut, ProHealth Physicians operates 80 locations in four counties and serves over 300,000 patients. Its nearly 200 providers, consisting of over 150 physicians, and over 40 mid-level providers (APRNs and PAs) specialize in internal medicine, pediatrics and family practice. A large volume of patient data and mission-critical office management tasks necessitate a reliable server solution with continuous availability and uptime.

With patients' health at stake, ProHealth's IT department needed a fault tolerant server solution that would keep its practice management application, SSIMED, up and running 24/7. SSIMED, a third-party application developed by a Connecticut-based provider, does not allow for server clustering; consequently, finding a reliable fault tolerant solution posed a significant challenge. ProHealth needed a hardware solution that could handle large volumes of patient data, while providing full redundancy for continuous uptime. It also needed to support the company's long-term goal of implementing a disaster recovery plan.



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## SOLUTION

Since SSIMED could not accommodate clustering configurations, a hardware solution was a must. After being introduced to NEC's fault tolerant servers during a Microsoft's Customer Event, ProHealth chose NEC's Express5800/320Lb fault tolerant (FT) server. The Express5800/320Lb features 2 Intel® Xeon™ MP 2.4 GHz processors, with a 512KB cache. The configuration enables expansion of up to 6GB of memory and up to 311.1GB of hard disk drive space. These components are duplicated in separate CPU and PCI modules for synchronized operation, with a total of two modules each, housed in a 4U chassis. All components are hot-swappable, so failed modules can be replaced without interrupting business operations.

ProHealth was able to deploy the FT server and have it up and running within a couple of days. The company uses Microsoft SQL as the backend database application. ProHealth also deployed additional NIC cards to increase communication support and provide faster response times to those accessing the system.

No other solutions provided ProHealth with the level of hardware redundancy and performance of the Express5800/320Lb. ProHealth had purchased the server with a 30-day proof-of-concept trial period and used it simultaneously with the existing server. During the trial period, IT staff attempted to make the server fail but couldn't. They pulled and replaced various components, yet experienced no downtime. "We even failed over our hard drive during business hours," said Rick Schubach, director of IT at ProHealth. "Typically, if you have to re-mirror your drive set, it takes a long time to get the system back up and running, especially with 300GB of data. With the Express5800/320Lb, we had no downtime at all."

## BENEFITS

The Express5800/320Lb's redundant 2-CPU server provides enough performance to run a large, mission-critical application such as SSIMED in a fault-tolerant environment. It provides up to 99.999% hardware uptime, with no single point of failure, to prevent data loss. Instantaneous failover for processors, memory, hard drives, network cards, and all other components ensures continuous uptime, a critical attribute in a medical environment where patients' health is at risk. The system's FastSync journaling capabilities minimize resynchronization time, so components can be replaced on the fly, without interrupting operations.

"Ultimately, it comes down to improved patient care," said Rick Schubach. "Continuous uptime means our patients receive better, faster service because our physicians' offices are running smoothly. We don't have to worry about our server going down during peak office hours. And our doctors have faster access to patient data when they need it, so they're able to deliver the level of care our patients expect and deserve."

Additionally, NEC's FT solution surpasses the performance of a clustering configuration because it's an all-in-one solution, which eliminates the need for multiple redundant servers and the associated cost and maintenance.

ProHealth is also evaluating the Express5800/320Lb's disaster recovery capabilities for its long-term recovery strategy. The solution allows for Active/Active clustering across distances from 200 to 2000 miles with less than 2 minutes of failover time. This ensures applications remain available, even if a data center goes down. WAN connectivity synchronizes the databases for complete redundancy in case of environmental disasters. "NEC's ExpressCluster solution can be an integral part of our long-term disaster recovery strategy," said Schubach.

NEC Solutions (America), Inc.  
2890 Scott Blvd.  
Santa Clara, CA 95050  
General inquiries, contact (800) 632-7003  
[www.necsam.com](http://www.necsam.com)

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