

Altamonte Springs Police Department

Challenges

- Keeping up to date on the latest information technology and tools to make their departments run more effectively.

Solution

- The NEC Fault Tolerant Express 5800/320 Server continuously available server offered the ASPD Chief of Police a far simpler and less costly solution for high availability with none of the overhead costs associated with clusters.
- The newly designed innovative chassis houses 4 x 1U redundant blade-like modules that fit in any standard 19" server rack.
- There are two CPU modules and two I/O modules running in lockstep - all instructions run simultaneously on both sets of hardware.
- Should any hardware component within a module fail, processing continues uninterrupted on the redundant hardware.

Results

- In a short time they had a single copy of the application running on the NEC Fault Tolerant Express 5800/320 Server with no porting or conversion issues.



Altamonte Springs Police Department - 911 Dispatch on a Continuously Available Server from NEC

Altamonte Springs, Florida Police Department (ASPD) had an emergency personnel dispatch application based on a pair of software-clustered servers that gave them administrative and technical headaches. They solved their application availability and management issues by hosting their application on the NEC Fault Tolerant Express 5800/320 Server.

The Challenge

The job of being a Chief of Police has changed over the years. Today, Chiefs of Police are responsible for more than just administering the law and personnel in their department, they must also keep up to date on the latest information technology and tools to make their departments run more effectively.

To that end, Robert C. Merchant, Jr., the Chief of Police of the Altamonte Springs Florida Police Department (ASPD) attended a Chiefs conference in West Palm Beach, Florida in June of 2002. One of the exhibitors was Questinghound Technologies, a reseller of NEC servers based in Lighthouse Point, Florida. Questinghound was demonstrating the NEC Fault Tolerant Express 5800/320 Server and its ability to keep applications running at 100% even when half the CPUs are removed from the system. This caught the Chief's attention and he asked his IT Manager, Terry Rains to follow up and get more product details.

Altamonte Springs Police Department has a computer-aided police dispatch application used to deploy and track all police personnel sent to emergency 911 calls, accidents,

traffic stops, etc. This mission-critical application required 99.999% uptime and to achieve this, the ASPD was running the application on a pair of software-clustered servers. The cluster presented the Tech Support group with setup problems as well as failover issues when a server went down. In addition, the 2-node software cluster required two copies of the operating system and of the application which also had to be cluster-aware (more complexity and costly vs. standard applications).

The Solution

The NEC Fault Tolerant Express 5800/320 Server offered the ASPD Chief of Police a far simpler and less costly solution for high availability with none of the overhead costs associated with clusters. The newly designed innovative chassis houses 4 x 1U redundant blade-like modules that fit in any standard 19" server rack. There are two CPU modules and two I/O modules running in lockstep - which means that all application instructions run simultaneously on both sets of hardware. Should any hardware component within a module fail, processing continues uninterrupted on the redundant hardware. The failed module can be replaced while the server remains fully operational without interruption of application processing, loss of data or performance.

The Results

Terry Rains worked closely with Questinghound to review the attributes of the server and placed an order for the Express 5800/320 with 6 x 36GB hard disk drives and 1 GB of memory in each CPU module. In a short time he had a single copy of the application running on the NEC Fault Tolerant Express 5800/320 Server with no porting or conversion issues.

"It was very easy to install and setup," reported Lance Bryant, Tech Support for the Altamonte Springs Police Department. "The application came up right away and there have been no issues. With the NEC server, we no longer have to take our clustered servers down every few weeks to reset the application."

Lance did admit to some "unfair" testing of the server. "Prior to bringing the application on line we played a bit with the server by removing different modules to see how it reacted. It was cool to see how the server failed over when we pulled individual modules and then how it returned to lockstep when they were replaced. That really proved the concept to me."

Altamonte Springs is located about 20 miles due north of Orlando, Florida. Their website is <http://www.aspd.org/main.html>.

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