

## A FORSYTHE CASE STUDY

# Highly Available Server Infrastructure

## A Large Police Department

### Business Challenge

Many police forces today rely heavily on advanced technology for their mission-critical operations. For example, at a large police department in the Southeastern U.S., each officer is assigned a laptop computer, which is used in the police vehicle while the officer is on duty. Each of its 500 officers logs all police reports into an electronic form on the laptop. With the click of a key, the information is transmitted via wireless technology into the database back at headquarters. This centralized database handles the information from all the department's 26 precincts.

The technology also provides the department with a real-time picture of every police vehicle's location at any given moment. Additionally, this department's geographic information system (GIS) enables its officers to analyze events within a particular geographic area, look for relationships between quality of life issues and crime, and compare multiple issues and how they contribute to problems or crime.

At the same time, every officer's ability to connect to the central database allows immediate access to information that aids in problem-solving, suspect identification, or other needs during patrol. Communication and information are powerful tools that improve dispatching, responsiveness, decision-making, and safety—for the police officers, and for the community they serve.

Technology of this sort must be supported by an IT environment with very high levels of availability. This department's aging IT environment was having problems supporting its mission-critical technologies. The system was marginally meeting its needs, but it had become prohibitively expensive and cumbersome to manage. Worse, the system was experiencing unplanned downtime. In addition, it wasn't scalable, and there was concern about its recovery capability.

### Solution

Forsythe began by interviewing the police department's IT team to determine its specific technical requirements, which differ from those of highly available environments for commercial enterprises. Forsythe then worked alongside the department to architect a clustered high availability solution. At the deployment stage, Forsythe was careful to ensure that the department's IT team was an integral part of the deployment, and that they fully understood the architecture as well as each step of the process. Forsythe also made sure the department had comprehensive documentation, so that they would understand precisely how the environment is configured, how it works, and how to implement any changes that might be needed in the future.

Once the deployment was complete, a validation process was carried out, according to a test plan that had been designed before deployment took place. However, in contrast to a typical commercial environment, where such tests are best performed in the middle of the night, over a weekend, a police department is often busiest during this timeframe. So the system was tested right in the middle of the day, right in the middle of the week, on a Tuesday afternoon. Thorough testing was performed—including simulation of hardware failures, database failures, and connectivity problems with the network and storage—to see how the cluster would react. It passed the test.

## Results

The previous configuration had been letting them down, but the department's IT staff, and even the chief of police, are confident that the new clustered configuration will truly support their mission-critical technologies the way it's supposed to. The newly configured environment is a critical and powerful weapon in their arsenal.

For more information about Forsythe's offerings, visit [www.forsythe.com](http://www.forsythe.com)



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