



## MICROSOFT .NET CUSTOMER CASE STUDY PRESS RELEASE

### Openwave Case Study

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#### **Telecom Software Provider Automates Asset and Update Management, Saves Time and Money**

Openwave, which provides software and services for more than 70 mobile carriers and 47 mobile device manufacturers worldwide, struggled to track and update its hardware and software assets. Despite yearly inventories and hours of labor, the company's asset records weren't accurate enough to satisfy financial audit requirements. Openwave also spent hundreds of hours each year manually updating its software. After evaluating options to automate these tasks, Openwave chose the Autonomic Network and System Administration (ANSA) update and asset management solution built on the Microsoft® .NET Framework. ANSA reduced the financial liability caused by inaccurate asset reports, eliminated the need for a dedicated employee to update systems, saved labor by reducing the company's vulnerability to viruses and hackers, and cost hundreds of thousands of dollars less than comparable solutions.

Headquartered in Redwood City, California, Openwave provides software and services for mobile carriers, mobile handset manufacturers, and wireline broadband service providers. More than 70 mobile carriers worldwide use Openwave infrastructure and messaging software, including four of the top five carriers in the United States. On the client side, the company's Mobile Browser software has been licensed by 47 mobile device manufacturers and shipped with more than 700 million handsets to date. Beyond the wireless industry, Openwave has a strong presence among wireline broadband service providers, and counts 9 of the top 15 broadband Internet service providers in North America as customers.

To develop, sell, and service its products, employees at Openwave rely on a network of more than 4,000 computers. Roughly half of that total runs a version of the Microsoft® Windows® operating system. Those computers include laptop, desktop, and server systems used for product development, network infrastructure, and basic business functions such as e-mail and word processing. The other half of the company's

computer inventory runs a version of the Sun Solaris operating system, and is used primarily for product development and testing.

With several thousand systems spread across 25 offices in 13 countries, Openwave found it almost impossible to state precisely what hardware and software it owned. The company started each year by updating its database of hardware and software with a three-week audit conducted by a group of contractors hired for the purpose. Through the rest of the year, Openwave IT staff would work to keep the database up-to-date, manually modifying entries as necessary.

However, both the audit and subsequent maintenance efforts were clouded with uncertainty. During the yearly audit, the contractors inevitably would overlook some resources. As the year progressed, existing errors would be magnified and new errors introduced as the company's inventory of hardware and software shifted to accommodate staff and project requirements. "We didn't have a good solution," says Paul Massie, Director of Global IT Infrastructure for Openwave. "The audit was out-of-date a week after it was completed, and keeping up the database manually was laborious, slow, and error prone."

The ambiguity about assets carried potentially serious financial consequences. Computer hardware and software are assets that must be accounted for on quarterly corporate financial statements filed with the United States Securities and Exchange Commission (SEC). The Sarbanes-Oxley Act of 2002 increased the scrutiny that those statements receive, which has translated to more stringent auditing procedures that are more likely to expose potential discrepancies. While a computer or two more or less would not present a problem, some of the engineering software that Openwave uses costs as much as U.S.\$500,000 for a single license. The company strictly enforces software licensing policies but realized that it might not know about a violation until it was caught by an auditor.

Furthermore, as Sarbanes-Oxley also increased the penalties for violations, Openwave could potentially face hundreds of thousands of dollars in fines in addition to the unexpected cost of purchasing enough licenses to bring the company into compliance. "Just a couple of people breaking the rules—even accidentally—could wipe out an entire quarter's profit," says Massie.

The absence of a reliable list of hardware and software assets also added hours of labor as the Openwave IT department tried to keep operating system software up-to-date. The logistics were challenging. When the IT department learned of an update, IT personnel would manually check the database to find the computers to which the update applied, and then travel to the site of the affected computers to install the update. If the computers were servers, the IT department would have to schedule downtime. Openwave dedicated a full-time IT staff member to the task. "It's critical to keep the computers updated," says Massie. "Falling behind even a week or two opens us up to viruses and hacker attacks."

**Solution:**

Openwave began looking for an asset and update management solution that could track the company's hardware and software assets and keep both Windows-based and Solaris-based systems updated. The company evaluated several options and reduced the field to two finalists—Altiris and Computer Associates—but still felt that it had not found an ideal answer. Both solutions were more expensive and less flexible than Openwave was comfortable with. "We were faced with paying \$500,000 or more depending on the vendor," says Massie. "And we weren't convinced that we could easily add more functionality as we needed it."

Openwave also was concerned about the relatively high system resources required by the client agents of the management solutions that it evaluated. One of the software agents in particular started out at 3 MB, but then ballooned up to 20 MB as functions were added. "Many employees wouldn't even know that it was there," says Massie, "But we were concerned that our developers would—and that they'd disable it if they felt like it was getting in their way."

Openwave contacted Autonomic Software, which had developed an update management solution called Autonomic Network and System Administration (ANSA). Built on the Microsoft .NET Framework, ANSA was significantly less expensive than competitive software, promised easy extensibility, and boasted a software agent no larger than 500 KB. The only drawback was that ANSA did not support asset management. Openwave challenged Autonomic to add this functionality, and Autonomic rapidly produced a robust prototype. Openwave chose ANSA for asset and update management, working closely with Autonomic to further develop the solution's asset management functionality.

The ANSA solution at Openwave consists of two server computers running the Microsoft Windows 2000 Server operating system and SQL Server™ 2000 Enterprise Edition, part of Microsoft Windows Server System™ integrated server software. The two computers, called *inoculation servers*, maintain databases of the hardware and software configuration of every Windows-based and Solaris-based computer on the Openwave network. The servers—one dedicated to Windows and one to Solaris—constantly check the Global Update Repository, which is a database of software updates hosted by Autonomic.

Once notified of an update, the inoculation servers download it directly from the software vendor and alert Openwave so that the IT department can evaluate the update and schedule installation. IT staffers can also schedule updates that they identify independently. All the computers at Openwave have an ANSA client agent installed, which receives updates from the inoculation server.

Developing the asset management features of ANSA took 6 months, but once the features were in place, deploying the software was uncomplicated. "You can't imagine how quickly it went," says Massie. "The servers sent out the client software, our users accepted it on their systems, and ANSA figured it out from there."

## **Benefits:**

By automating its asset and update management, Openwave has dramatically improved the precision of its hardware and software inventory. The reduced liability is projected to save the company hundreds of thousands of dollars per year. Openwave has also dramatically cut the labor necessary to keep its systems updated, reduced its security vulnerabilities, and eliminated the need for its yearly manual audit.

### **Increased Accuracy Can Save Hundreds of Thousands per Year**

The new solution gives Openwave precise information about its hardware and software inventory, and saves the company from having to set aside hundreds of thousands of dollars each year to offset the potential liability of finding unlicensed software running on one of its computers. "At the boardroom level, the asset management is a real relief," says Massie. "Our top executives have to sign our financial statements, and the penalties for violations are severe. With our asset management solution, we don't need contingency cash on hand for sudden surprises."

### **Automation Cuts Labor to Nearly Zero**

By automating its processes, Openwave has been able to redirect the full-time IT employee previously dedicated to asset and update management. "We still need to monitor vulnerabilities and test updates," says Massie, "But I don't need to have someone log on and apply the same update to a couple hundred servers. It's like getting an extra employee."

Openwave has also dramatically broadened the number of systems that its staff is able to monitor. Prior to installing ANSA, Openwave focused on keeping its most critical systems updated. "We have limited resources, so we made sure that our high-value systems, like our financial applications, were as safe as we could make them," says Massie. "ANSA has helped us reduce our risk."

### **Comprehensive Updating Reduces Virus Vulnerability**

Using ANSA to actively update its systems has provided Openwave with an unexpected benefit. Even though Openwave already had a centralized virus scanning solution, the company has found that the frequency and severity of virus attacks has dropped off. Previously, whenever a new virus would come out, Openwave would suffer between 50 and 100 systems infected, the network would slow down, and the help-desk call volume would increase. Now, Openwave reports that a typical virus attack infects an average of 20 systems. "ANSA has taken a huge amount of stress off the help desk," says Massie. "After a virus attack, we recover in hours instead of days."

### **Asset Management Saves \$20,000 per Year, Reduces Error**

Openwave has eliminated its manual hardware and software audit, saving roughly \$20,000 per year and greatly reducing the opportunity for errors in the company's asset database. "Now we know exactly what we have and how it's configured," says Massie. "People make mistakes, but machines make a lot fewer."

## **Development Tools Cut Application Cost**

Openwave saved hundreds of thousands of dollars by choosing ANSA over comparable solutions. Those savings were possible because Autonomic Software used Microsoft tools, including the Microsoft Visual Studio® .NET 2003 development system to help reduce its development costs. "Building on the .NET Framework was very cost-effective, especially with Visual Studio," says Steve Hassfeld, Vice President of Technology for Autonomic Software. "We couldn't have created our solution in 16 months with fewer than 10 developers without the Microsoft tools."

By using the .NET Framework, Autonomic Software also was able to create an architecture that the company can easily adapt and extend. "Because ANSA was built on the .NET Framework, we were able to prototype asset management functionality in days," says Hassfeld. "Visual Studio and the development libraries provide so much that's already done; we could focus on the problem at hand."

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### **Partner Details:**

Autonomic Software  
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[www.autonomic-software.com](http://www.autonomic-software.com)

### **Customer Details:**

Openwave  
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### **Template Type:**

.NET

### **Country or Region**

United States

### **Industry**

Telecommunications

### **Customer Profile**

Based in Redwood City, California, Openwave provides software products and services for the communications industry. The company employs more than 1,300 people in 13 countries.

### **Business Situation**

Openwave wanted to increase the accuracy of its hardware and software asset inventory, while reducing the time and money that it spent updating those assets.

## **Solution**

To automate its asset and update management, Openwave chose the Autonomic Network and System Administration solution, built by Autonomic Software on the Microsoft® .NET Framework.

## **Benefits**

Increased asset certainty helps decrease financial liability  
Automation cuts labor to nearly zero  
Comprehensive updating lessens vulnerability  
Computerized inventory saves U.S.\$20,000 per year  
Powerful tools cut application costs

## **List Trade Marks other than Microsoft**

Visual Studio, Windows, and Windows Server System

## **Partners**

Autonomic Software

## **Product Solution Items**

Microsoft Visual Studio .NET 2003  
Microsoft Windows Server System  
    Microsoft Windows 2000 Server  
    Microsoft SQL Server 2000 Enterprise Edition  
Technologies  
    Microsoft .NET Framework

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## **Introduction Quote Credit**

Paul Massie, Director of Global IT Infrastructure, Openwave

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## **Quote 2 Credit**

Paul Massie, Director of Global IT Infrastructure, Openwave

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## **Quote 3 Credit**

Steve Hassfeld, Vice President of Technology, Autonomic Software