CASE STUDY

NLETS DELIVERS OVER 42 MILLION PUBLIC SAFETY MESSAGES A MONTH—OVER A CISCO FOUNDATION INFRASTRUCTURE

EXECUTIVE SUMMARY

CUSTOMER

Nlets, the international justice and public safety information sharing network

- Serves 18,000 public service agencies at the local, state, and federal level
- Enables agencies to obtain out-of-state criminal histories
- Owned by the states

INDUSTRY

Public Sector

BUSINESS CHALLENGE

- Improve public safety by encrypting sensitive information
- Improve service to member agencies through greater network reliability and flexibility
- Improve productivity of Nlets staff

NETWORK SOLUTION

Nlets upgraded its Frame Relay network to a standards-based IP network based on a Cisco foundation infrastructure and Cisco Security solutions. All of the Nlets endpoints use a Cisco router, for end-to-end encryption.

BUSINESS VALUE

- Nlets now meets federal mandates for improved security by encrypting information end to end
- Cisco foundation infrastructure reliably carries 42 million transactions per month
- Transactions travel over the Nlets network to any agency in one second or less
- The network supports IP standards such as XML, so member agencies can reformat messages
- Nlets employees are more productive because of IP telephony and because member agencies have the expertise to resolve equipment issues

Nlets, the international justice and public safety information-sharing network, is the primary interstate law-enforcement network in the United States. The information in messages that travel over Nlets is instrumental in saving the lives of citizens as well as first responders. Owned by the states, Nlets carries over 42 million messages each month to over 30,000 agencies and 500,000 devices at the local, state, and federal levels in the U.S. and Canada. Because the security, reliability, and flexibility of the network directly affect public safety, Nlets chose a reliable foundation infrastructure from Cisco Systems®.

Nlets logo

When any state, local, or federal law enforcement agency in the United States sends an inquiry to an agency in another state, that inquiry travels over the Nlets network. For example, when a highway patrol officer stops an out-of-state driver for a traffic violation, the Nlets network enables the agency to query out-of-state databases for motor vehicle and driver's data, criminal history records, Canadian "hot file" records, and U.S. citizenship and immigration services databases. It also delivers homeland security messages and Amber alerts. "Without the network, there is no Nlets," says Frank Minice, director of operations for Nlets.

BUSINESS CHALLENGE

In 2000, the FBI Advisory Policy Board passed a motion requiring public safety agencies to encrypt data end-to-end by 2005. To comply with the requirement, Nlets decided to upgrade its Frame Relay network from an older protocol to IP. Nlets viewed the upgrade as an opportunity to increase its service effectiveness in other ways, as well. For example, the organization wanted more safeguards to ensure network reliability. "Nlets can't afford to be down because public safety agencies rely on the information that travels over the network to make decisions," says Bonnie Locke, director of administration. "Certain decisions must be made in seconds, such as 'Should I arrest this person or not?' or 'Is he armed and dangerous?'"

Nlets also wanted the flexibility to quickly connect new agencies and deliver new services such as transmitting messages in a format that the requesting agency could reformat in its own report style. Finally, Nlets wanted to improve its own staff's efficiency and productivity. "With 14 people supporting 18,000 law enforcement agencies, Nlets has to be extremely efficient," says Bill Phillips, security specialist.

NETWORK SOLUTION

Nlets achieved its goals by migrating to a fully-IP network based on a Cisco® foundation infrastructure and Cisco Security solutions. "We chose a Cisco network solution because of its security, resilience, and flexibility to add new members and services," says Steve Correll, executive director. The widespread use of Cisco network solutions in public safety agencies also factored into the decision. "Cisco has a solid reputation within public safety agencies, so our members felt comfortable replacing their existing network equipment with Cisco routers," says Locke. "One way we provide excellent service is by using vendors that our members trust."

Redundant, Resilient Network Design

To plan and implement the Cisco solution, Nlets engaged Darcomm, a Cisco Gold partner, to provide the equipment as well as configuration and design services. Darcomm designed a redundant, resilient network to provide the continuous communications required in critical public safety environments. The network backbone, located at Nlets headquarters in Phoenix, Arizona, comprises redundant Cisco routers, Cisco Catalyst switches, and Cisco PIX™ firewalls. A backup facility in Idaho has an identical configuration. Each member agency, in turn, has its own Cisco router. With Cisco equipment end to end, all transmissions are encrypted to ensure data privacy. A Cisco intrusion prevention system (IPS) helps the agency protect network resources from unauthorized or malicious activity. For additional reliability, Darcomm maintains hot-spare routers at each agency location.

"The Nlets mission is to help save lives, both of citizens and first responders. We accomplish that mission every day by delivering information and services over our network, and the reliable Cisco network solution is an integral part of that effort."

— Bonnie Locke, Director of Administration, Nlets

Smooth Migration

After migrating the network backbone to a Cisco foundation infrastructure, Nlets helped its 18,000 member agencies migrate, and celebrated the final agency cut-over to the standards-based IP network in March, 2005. Each agency tested its new Cisco equipment while continuing to use the old equipment and protocol for live traffic. "The ability to support the existing network and the new IP connections in parallel was a major advantage of the Cisco solution," says Minice. "Our users were able to attain a comfort level with the new technology for a mission-critical service before cutting away from the old equipment."

IP Telephony

Nlets headquarters is home not only to the Nlets network backbone, but also an internal network that Nlets staff uses for productivity applications, including a Cisco IP Telephony solution. "Productivity improved immediately after we adopted IP telephony because we were able to receive and forward voice mail and transfer calls," says Minice. Nlets expects further productivity gains when it adds Cisco Unity™ Unified Messaging, which will allow the organization's mobile employees to listen to their voicemail messages from their e-mail inboxes instead of having to check for messages on both their phones and PCs. Nlets is also considering offering IP telephony to its member agencies to further improve security. Member agencies would be able to encrypt voice communications just as they now encrypt data communications.

BUSINESS VALUE

Improved Public Safety

The end-to-end Cisco network improves public safety in two principal ways. First, information can be encrypted end-to-end across the Nlets network. Even if an intruder is able to intercept public safety messages, the messages cannot be read or altered.

The reliability comes at nominal cost to network performance; messages travel end-to-end across the Nlets network, to any public safety agency in the United States, in less than one second.

Second, the Cisco network solution significantly increases network reliability. This reduces the risk that a police officer, for example, cannot access the information he or she needs to determine that someone stopped for a traffic violation has outstanding warrants in another state. “To date, we’ve never had a Cisco device fail,” Minice notes.

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Innovative Services

Standards-based technology in Cisco network solutions enables Nlets to offer its members valuable new services based on Extensible Markup Language (XML) and Web services. “Our standards-based network lets members format messages from other states in the way they’re accustomed to seeing them,” says Minice. For example, a Minnesota agency might request a criminal history from California. With the old network, the history appeared in California’s format, which might cost Minnesota officers valuable time as they skimmed the report looking for the information they needed. With the standards-based network from Cisco, Nlets is now able to transmit messages in XML. The requesting agency’s server can take the items of information in the report and format them in whatever way that command and field personnel are accustomed to, which cuts valuable seconds from the time needed to make an informed decision.

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— Steve Correll, Executive Director, Nlets

Staff Multiplier

Prior to the Cisco network deployment, devices on the Nlets network requiring service had to be shipped back to Nlets headquarters, a costly inconvenience. Today, Nlets staff can support the network more easily because most member agencies use Cisco equipment for their own networks and have internal technical expertise. “It’s fairly easy to find someone in a member agency who can resolve an issue with a Cisco device, which is a big advantage for us,” says Correll. “Because Cisco gear and training are so widespread and our end customers can assist with troubleshooting and resolution, Nlets has virtually increased staff and service effectiveness. Using Cisco equipment, we can accomplish what larger agencies with larger budgets and staffs cannot.”

Greater Flexibility

Finally, the Cisco foundation infrastructure gives Nlets the flexibility to quickly form new partnerships, an important benefit in the rapidly shifting public safety environment. “The public safety environment is very dynamic,” says Correll. “If we need to add bandwidth or new services, we want to be able to do it quickly, and the Cisco equipment helps us remain nimble.”

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This customer story is based on information provided by the National Law Enforcement Telecommunications System (Nlets), and describes how that particular organization benefits from the deployment of Cisco products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

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