



Polish Border Guard Depends on Cisco IP Telephony Network as it Takes on New European Union Responsibilities

The Polish Border Guard has deployed a Cisco Systems® converged IP voice and data network to streamline its operations, enhance communication and information access, and control its border.

Web Abstract

The Polish Border Guard has deployed a Cisco converged IP data and voice network to streamline its operations and regulate its border.

- To meet its obligations as a new member of the European Union (EU), the Polish Border Guard needed to modernize its telephone system and provide secure network access to critical databases.
- An end-to-end Cisco IP Communications solution provides secure Internet and network access and robust voice communications at border sites.
- The Polish Border Guard benefits from reduced toll charges, easier network administration, and support for new Extensible Markup Language (XML) applications.

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Background

The Polish Border Guard, founded by an act of parliament in 1990, regulates trade and traffic across Poland's 3500-kilometers (km) border protecting the nation from criminal activities. Poland shares its border with seven countries and is made up of 12 regional divisions with approximately 300 border passes, checkpoints, and posts. As Poland prepares to join the European Union (EU) in 2004, the Polish Border Guard is assuming new responsibilities, including monitoring the eastern EU border and ensuring the free and easy flow of travelers and goods.

"Our Cisco network helps us to save money by offloading telecommunication management tasks and freeing our staff for tasks that better suit their expertise. The solution has enabled more than 800 employees to shift their focus from routine network maintenance to border control."

—Cezary Zalewski, general manager, Polish Border Guard Telecommunication and IT Department.



Challenge

Information technology plays a critical role in protecting state borders. It is impossible to effectively control the flow of millions of people without a robust electronic registration system. Due to the distributed nature of border control points, networking technology is a vital part of the Polish Border Guard's infrastructure.

As Poland prepared to join the European Union, the country had to make significant upgrades to its Border Guard's network. The organization would be responsible not only for regulating trade and travel for Poland, but for the EU as well. To implement effective communication with EU countries, the Polish Border Guard initiated an extensive program to modernize and extend its telecommunications and computer network.

"We will depend on our network to access the Shengen Information System (SIS), the EU central database that contains information about criminals and other security risks," says Cezary Zalewski, general manager of the Polish Border Guard Telecommunication and IT Department. "We also use the network to process and track political asylum requests, issue and verify visas, and communicate with airport databases about travelers."

To meet its new obligations, the Polish Border Guard needed a networking solution that could deliver secure, reliable access to critical local and European applications and databases. At the same time, the organization wanted to modernize its telephone system, which could not provide unified service or secure voice communications to all the Guard's locations. The Polish Border Guard also wanted a network infrastructure that could support new applications to help its workforce become more productive and facilitate better communication with the public.

Solution

Working closely with its systems integrator, Nextira One, the Polish Border Guard deployed a Cisco® IP Communications solution managed and operated by Telekomunikacja Polska S.A. (TP S.A.), the Polish telecom provider. Cisco offered the most comprehensive solution for a converged voice and data network.

"Cisco offered a complete solution that would support both the data and voice networks," says Zalewski. "Their products were so closely integrated with one another that we did not need to seriously consider other vendors."

To deliver clear voice communication throughout the organization, the Polish Border Guard is deploying more than 6500 Cisco 7900 Series IP phones. Cisco 7900 Series IP phones feature pixel-based liquid crystal displays (LCDs) and support additional information services including XML capabilities.

Cisco CallManager software and Cisco IP interactive voice response (IVR) systems operate on Cisco media convergence servers (MCSs) at Polish Border Guard locations throughout the country. Cisco CallManager software extends enterprise telephony functions to phones and other network devices and supports advanced applications, such as multimedia conferencing, unified messaging, and collaborative contact centers.

Cisco 3700 Series multiservice access routers handle routing between the Polish Border Guard sites using redundant Frame Relay links. To help ensure high availability for critical voice applications, the Polish Border Guard activated the Survivable Remote Site Telephony (SRST) feature on its routers. SRST enables routers to provide back up call handling support for Cisco IP phones if the WAN connection goes down or if the phones lose connectivity to the Cisco CallManager.

To keep costs to a minimum, the Polish Border Guard utilized most of its existing phone cabling for IP telephony. It is equipping border checkpoints with Cisco Long-Reach Ethernet (LRE) connections featuring Cisco Catalyst® 2950 LRE switches with Cisco 575 LRE CPE devices. Cisco LRE technology enables organizations to extend intelligent Ethernet services to more than 1500 meters over existing telephone wiring.



To provide secure Internet access to its sites, the Polish Border Guard uses dedicated PCs that access a single Internet connection via an encrypted Cisco VPN. Cisco VPN technology enables the organization to carry all its traffic over the same WAN, while separating Internet traffic from sensitive internal traffic.

Because voice traffic is simply another type of network traffic, the Cisco IP Communications solution also enables the Polish Border Guard to encrypt its voice communications, further facilitating secure collaboration between its sites.

Results

As it completes installation of its Cisco IP Communications solution, the Polish Border Guard already realizes significant savings on telephone expenses. IP telephony is now used for half of all voice communication between the organization's headquarters and regional offices, and for all internal communications between remote border sites. These internal calls are included under a fixed fee paid to TP S.A. Now that both voice and data maintenance have been outsourced to TP S.A., the organization has reduced administrative costs and deployed its workforce more effectively.

"Our Cisco network saves us money by offloading telecommunication management tasks and freeing our staff for tasks that better suit their expertise," says Zalewski. "The solution has enabled more than 800 employees to shift their focus from routine network maintenance to border control."

The Cisco IP Communications solution also helps the Polish Border Guard to take advantage of a variety of advanced, customized XML applications that combine the convenience and immediacy of voice with the power of data applications. Working with systems integrator Nextira One, the Polish Border Guard deployed an XML-based centralized directory for all its border sites. The directory enables any employee to look up any colleague's contact information and quickly place a call to them. The Cisco IP Communications solution also includes advanced reporting capabilities, which help the Polish Border Guard to streamline accounting and administrative processes with centralized billing.

"Centralized billing enables us to consolidate all telephone-related costs and allocate them accurately," says Zalewski. "This is the first time we have had this capability."

Next Steps

After completing deployment of its end-to-end Cisco IP Communications deployment, the Polish Border Guard plans to use it to enhance operations and improve productivity even further.

"We're planning to add numerous applications," says Zalewski. "For example, using the LCD displays on our Cisco IP phones, we can support centralized, text-based alert and messaging systems to distribute information quickly and easily to all our sites."

The Polish Border Guard is also considering development of an interactive Web portal to improve communication with the public and process electronic visa requests. Networked e-learning and training initiatives are also under discussion. With its scalable, flexible Cisco infrastructure in place, the Polish Border Guard is well positioned to meet the challenges of membership in the European community.

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