



# How a Chicago Suburb Streamlined Security, Networking and Communication with Fortinet

## Fortinet Case Study

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## CASE STUDY

# FortiVoice Modernizes the Phone System for the Village of Glendale Heights for 50% Less Cost

Founded in 1959, the Village of Glendale Heights strives to improve residents' quality of life through the cooperative efforts of citizens, businesses, employees, and elected officials. Communication is key to achieving this objective.

The village of about 30,000 on the outskirts of Chicago is home to a highly diverse community. To support these residents, the village government provides a senior center, golf course, water, wastewater treatment, and a police department, as well as typical city services such as permitting and licensing. The departments managing these functions rely on technology, including a heavily used phone system, as they serve their community. That is why, when the village's 20-year-old phone system reached end of life, the IT team was very deliberative in selecting a replacement.

The legacy phone system was failing to meet staff needs in several ways. For one thing, says Mark Radabaugh, information systems associate with Glendale Heights, the legacy system did not include a call queue. "If someone called the police department about a parking ticket, for example, or rules on animal licensing, they might end up getting bounced back and forth between our records department and our dispatch center," he explains. "Our records department has a walk-up window, and when that window is busy, staff might not answer calls quickly. Our old system would bounce unanswered calls to our 911 dispatcher, who would answer, realize it was not an emergency, and bounce it back to records. The result was poor customer service for the caller."

Village staff also needed an auto attendant that they could manage in-house. "Two people in finance acted as the main switchboard for the village," Radabaugh says. "Sometimes the phone would be ringing off the hook, and they would spend half the day answering and routing calls for other departments." The legacy phone system offered auto attendants through which callers could select the department they wanted. Still, village staff were unable to adjust the options in-house, making changes time-consuming and costly.

In addition, the old system provided no way to connect to third-party Session Initiation Protocol (SIP) devices, like emergency call buttons and inmate phones in the jail. "That system could no longer keep up with our technology needs," Radabaugh emphasizes. "Plus, there were times when the old phone system just rebooted itself. Even from a hardware standpoint, it was starting to fail. It needed to retire."

The phone issues came to a head during the COVID-19 pandemic. "People wanted to work from home and have calls forwarded from the office," Radabaugh says. "We could not do that; softclients were not an option with our legacy system. Our staff provides essential services, and since they could not answer their phones remotely, they could not work from home. When most of the community was remote to avoid spreading COVID, Glendale Heights staff were in the office because of our phone system."



*"Using FortiVoice is like using a FortiGate that routes calls instead of packets. We do not have a dedicated phone person, so having a system that we can easily understand has been a game-changer."*

**Jacob Weisz**  
Systems Engineer,  
Prescient Solutions

## Details

**Customer:** Village of Glendale Heights

**Industry:** Government

**Location:** Glendale Heights, Illinois

## Business Impact

- 50% lower upfront costs than alternative phone systems
- More than 50% savings on support and maintenance costs vs end-of-life legacy system
- Much better customer service: shorter hold times, less bouncing between departments, no more dropped calls

## All-in on Fortinet

As the Village of Glendale Heights began looking at phone options, the team was adamant that they did not want a softclient-only system. "We did not want to go with an entirely cloud-based solution," Radabaugh says. "We wanted the phone system to be on-premises, where we would control all the data, where it goes, and how it travels. We just happened to be talking to Fortinet about our environment, and they mentioned the FortiVoice secure unified communications platform. We said, 'Back up the horse and tell us more.'"

The village had been using Fortinet solutions for several years. It began working with Fortinet when its legacy firewalls were no longer meeting its needs. "Our firewalls were end of life, and the legacy vendor would not sell us the right add-ons for geo-blocking," says Jacob Weisz, systems engineer for Prescient Solutions who has worked as a full-time contractor for the village for more than a decade. "We could see in the logs an endless stream of attempts to authenticate to our VPN from IP addresses in Russia. We are a local government, and nobody should be entering our network from outside the U.S. Our legacy vendor said that we needed to buy a new firewall to get geo-blocking, and their firewalls had a hefty price tag."

The legacy firewalls were also complex. "We did not think network security should be as hard as they were making it," Weisz says. "So, we brought in a pair of FortiGate Next-Generation Firewalls along with FortiAuthenticator and FortiToken for MFA [multi-factor authentication] of our VPN connections. Soon after that, we moved to FortiClient EMS [Enterprise Management Server] to replace our legacy antivirus solution." A couple of years later, Glendale Heights also transitioned to FortiAP access points to provide Wi-Fi across its four locations.

Since then, the village has added more FortiGates to separate out the supervisory control and data acquisition (SCADA) systems that run the OT equipment at the public works facilities. "People at the golf course do not need to get anywhere near an industrial SCADA system," Weisz says.

Glendale Heights is pleased with its Fortinet Security Fabric. "In almost every case where we implemented Fortinet solutions, we have achieved an extremely clear cost savings," Weisz reports. "When we bought FortiClient, it cost half as much as we were paying for our prior solution. And when we deployed FortiAPs, we literally just turned them on and managed them from our FortiGates. They require almost no resources to manage, and the annual renewal cost to keep our legacy access points in service was more expensive than buying the new ones from Fortinet."

All in all, he estimates that Glendale Heights has cut the cost of its networking and security environment in half by using Fortinet solutions. At the same time, the infrastructure is protecting village resources more effectively and is much easier to manage than the legacy environment.

## A Modern Phone System Without the Nickel-and-Diming

This history made FortiVoice an instant frontrunner for the village. The IT team liked that FortiVoice offers both on-premises and cloud-based deployment flexibility. The system's pricing structure was another benefit. "Some of the phone system vendors were going to nickel and dime us on licensing," Weisz says. "For example, if we wanted to have call recording for policy compliance purposes, that would have been an additional license. The fact that all the functionality we need is included in FortiVoice made it a very appealing choice for us."

### Business Impact (cont.)

- Minutes saved every day for every employee, turning night mode on and off
- More efficient, fully internal management of all phones, faxes, and voicemail
- Fewer phone-related help desk tickets for IT staff to deal with
- Faster turnaround on requests for phone installation or configuration changes
- Two months to roll out FortiVoice throughout village government
- 50% lower cost when switching to Fortinet networking and security environment

### Solutions

- FortiVoice Unified Communications
- FortiGate Next-Generation Firewall
- FortiAuthenticator
- FortiAP

*"Every alternative to FortiVoice was more than twice the price. Plus, the cost for support and maintenance is at least 50% lower for FortiVoice. This project came in under budget, and we are very, very happy with the system we got for that price."*

**Jacob Weisz**  
Systems Engineer,  
Prescient Solutions



"We also appreciate the integration of all the FortiVoice features into one interface," Radabaugh adds. "Some vendors had different interfaces for configuring voicemail versus the phones, and faxes were on a whole different platform. By contrast, FortiVoice provides visibility to everything we use in one pane of glass that is easy to configure." Not only that, but the FortiVoice interface is similar to the FortiGate interface, so the team was already familiar with it.

"I tell people that using FortiVoice is like using a FortiGate that routes calls instead of packets," Weisz says. "We do not have a dedicated phone person, so having a system that we can easily understand has been a game-changer."

Rollout of FortiVoice took Glendale Heights about two months as the team deployed it in phases to increasingly critical departments. "We started with the golf course as a test because a golf course in Chicago in December is going to be slow," Weisz says. "When that was working well, we rolled out the new phones to the senior center, then the water treatment plant and sports hub. Finance and ComDev [community development] were next to last, and we finished recently with the police department."

Glendale Heights operates two separate FortiVoice systems. The main village office is also the emergency operations center. Still, the IT team wanted to ensure the phone system at its public works department could operate independently in case of an emergency. The two systems are configured as peers, Weisz says, so they route calls back and forth. FortiVoice has replaced the village's fax machines and incorporated the inmate phones and emergency call buttons. The village is testing the FortiVoice softclient and expects to roll that out to end-users soon.

The IT team is incrementally turning on the system's advanced features. "We are gradually adding features, gently introducing them to people so that they understand the FortiVoice capabilities," Radabaugh says. Right out of the gate, the team built a call queue and helped departments configure auto attendants.

"Because our old system did not have a call queue, when a call rang to a department's main line, and everyone was busy, staff might assume someone else was going to answer the call," he continues. "There was a 'park' button, and the whole team would end up juggling parked calls in a disorganized manner. Often callers experienced long hold times, if not bouncing to other departments."

The call queues in FortiVoice provide a much better experience, letting callers know where they are in the queue. "Our records and recreation departments were notorious for long hold times when there was a line at the walk-up window," Radabaugh says. "Even internal calls would get dropped. With FortiVoice, we can sit in a queue, listening to hold music rather than the phone ringing, and know someone will get to us eventually. It is also much easier for staff in those departments because their phones are no longer ringing off the hook."

## Smooth to Deploy, Easy to Use

Training staff on the new system was quick and easy. "We would basically just deploy a phone, show them 'transfer' and 'conference,' and that was about it," Radabaugh says. "Some employees have spent more time with advanced features like the call center, but they have not required much training." Weisz adds: "We have also spent about an hour with each department discussing and answering questions about the call queue. But at the end of the day, it is a phone system, and it works as expected."

Users' reaction to FortiVoice was immediately positive. "One nice capability is that users get email notifications of missed calls," Radabaugh says. "That is new for us, and staff fell in love with that feature. Another capability users appreciate is night mode. With our old system, everyone had to manually put their phones into night mode at the end of the day and select the right message for nighttime, weekend, or holiday. With FortiVoice, we schedule all that in the administration console. People love that the system automatically switches to the after-hours greeting. That is saving every employee a couple of minutes a day."

Weisz explains that streamlined voicemail management is another end-user benefit of FortiVoice. "In the past, to change our outgoing voicemail message, we would have to call in, enter our voicemail PIN, and go through a bunch of prompts," he says. "Now, employees can go into the user portal and see all their voicemail messages, as well as record or select a new outgoing

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**Mark Radabaugh**  
Information Systems Associate,  
Village of Glendale Heights



message.”

That means FortiVoice is saving time for the IT team as well. “There are a lot of phone-related help desk tickets that we just do not get anymore,” Weisz says. “For example, people used to put in tickets for things like having their voicemails forward to their email. FortiVoice does that automatically.”

## Cutting Phone System Costs in Half

On the system administration side, the ease of use of FortiVoice enabled the village to cancel its contract with the external integrator that managed its legacy phone system. “The old phone system was complex, and the user interfaces were targeted toward a phone expert,” Weisz says. “There were a lot of panels that were grids of ones and zeros, and the admin would have to change the ones and zeros, then go to another panel to define what those ones and zeros did.

“Nobody on staff had the right expertise, so an external integrator managed the phone system for us,” he continues. “Every time we needed to add a phone or make any type of system configuration change, we had to call that firm. And they charged hourly for support, so the need for a configuration change would have to reach a level that made it worthwhile to bring in this third party. With FortiVoice, Mark and I just make the changes.”

Better yet, the system’s ease of management has reduced turnaround time on phone-related help desk calls. “With our old system, if somebody needed a new phone, we would call the external integrator,” Weisz says. “We would order the phone and wait for them to come out, so we would be looking at a two-week turnaround. With FortiVoice, we can just order the phone and do it ourselves in a fraction of the time. We are saving downtime for the end-user by making changes more quickly.”

The IT team is leveraging information from FortiVoice to support phone configurations. “With our old system, we had no idea about things like how many concurrent calls we handle at a time,” Weisz says. “FortiVoice provides excellent visibility to all kinds of data. For example, we have had people say, ‘Someone said they called X number of times before they got through.’ And we can go into the call log and see what happened. We can report back that the person called Y number of times, pushed these specific buttons, and reached this extension.”

“The visibility is awesome, because we are frequently victims of other people’s stories,” adds Bob Walters, information systems administrator for the village. “FortiVoice gives us a lot of information that we can use to navigate any issues that come up.”

All told, FortiVoice has enabled the village to modernize its phone system, while saving substantial costs. “When we were doing our due diligence and considering alternatives, we would tell vendors what features we needed, and every alternative to FortiVoice was more than twice the price,” Weisz says. “Plus, the cost for support and maintenance is at least 50% lower for FortiVoice. The system will pay for itself in a few years. This was a project that came in under budget, and we are very, very happy with the system we got for that price.”

Staff are happier, residents who call the village government are happier, and the total cost of ownership is dramatically lower. “I am very pleased with how the install went, and the phones are working great,” Walters concludes. “I am really proud of my team and very happy with FortiVoice.”





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