



CASE STUDY

Security and Efficiency in Voice Communications Management

Fortune 500 network security provider Fortinet relies on telephony systems as a crucial part of its technology infrastructure. The company has grown very rapidly since its initial public offering (IPO) in 2009, with share value growing 1,244% in the first decade. Now Fortinet provides a suite of fully integrated, end-to-end security solutions for businesses of every size.

Maintaining such a high growth rate demands a responsive customer support organization, as well as intensive employee collaboration. To perform well in both of these areas, Fortinet requires phone systems that are secure and redundant. Employees across the company utilize desk extensions day in and day out, and traveling sales staff require mobile telephony. In addition, three call centers around the world provide tech support for Fortinet customers. Problems with the corporate phone system would impact customer satisfaction and staff productivity.

Telephony for In-house Call Centers

In its early days, Fortinet outsourced customer support. However, in the mid-2000s, corporate leaders decided to bring support in-house. The company built out call centers in Sunnyvale, California; Kuala Lumpur, Malaysia; and Sophia Antipolis, France. It initially used a third-party private branch exchange (PBX) vendor. Several years later, when Fortinet launched the FortiVoice PBX solution for voice, conferencing, and fax communications, the company transitioned its three call centers to the new solution.

The FortiVoice solution supports Primary Rate Interface (PRI) T1 or E1 digital lines, Voice-over-IP (VoIP) connectivity, and traditional analog telephone lines. Fortinet chose to use multi-protocol label switching (MPLS) connections for the FortiVoice system. "We use MPLS only for voice connectivity between our largest offices, including the call centers," says Rick Huang, senior director of IT at Fortinet. "The main reason is that phone conversations are very sensitive to network performance. If you have a couple milliseconds of latency with your email or your web browser, you won't feel it. But if you started having a problem like jitter or latency with voice traffic, you would notice right away. Because our bandwidth needs for telephony are small, we use MPLS to ensure the highest possible performance."

Over time, the Sunnyvale call center moved to Ottawa, Ontario. Fortinet also transitioned to use FortiFone desktop phones for individual employees and for conference bridges. As components of Fortinet Unified Business Communications, FortiFone and FortiVoice integrate easily, streamlining deployment and ongoing management of the system.



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Details

Customer: Fortinet

Industry: Technology

Location: Sunnyvale, California

Business Impact

- 83% faster conference phone deployment
- Five-minute reduction in time to provision each call center phone
- Elimination of travel requirements for IT staff to install and support remote employees' telephony
- 33% fewer person hours spent by IT staff to manage telephony
- Improved end-user productivity through secure, resilient business communications

Streamlined Infrastructure Management

The auto-configuration capabilities of Fortinet Unified Communications save IT staff a significant amount of time on deployment of individual FortiFone devices. “Installing a FortiFone phone is very easy and efficient,” reports Ping Xiao Sheng, IT Manager for Fortinet’s Ottawa offices and call center. “FortiVoice’s web-based administration console gives me the flexibility to manage devices across all offices. You just plug in a FortiFone phone to the network. Input the phone’s MAC [media access control] address and select the right phone profile within the console. The right configurations are pulled automatically to the phone after a reboot.”

He estimates that deploying a conference phone using this auto-configuration process takes about five minutes. With Fortinet’s previous conference-phone system, installing a phone typically took up to 30 minutes. “But sometimes it simply didn’t work,” he adds. “The configuration would be correct, but we would have to reboot repeatedly before the registration would work.”

Deployment of a new FortiFone phone for call center staff requires more manual configuration, because the call center phones need multiple lines. Still, installing a call center phone takes five minutes less now than it took with the company’s legacy telephony solution. Moreover, preparing a phone for a remote employee today only requires IT to have the IP address of the phone. The rest of the configuration and management can be handled remotely. “This saves my team a lot of time on traveling to deploy and troubleshoot phones,” Sheng says.

In total, the Fortinet Unified Communications system has enabled Sheng’s team to support three times as many users. “We now spend about 60 person-hours per week on managing the telephony for about 300 users,” he says, “whereas previously we spent 30 person-hours per week supporting just 100 users. So, supporting 100 users now takes 20 hours a week rather than 30 hours, for an average time savings per end-user of 33%.”

Making Customer Calls a Positive Experience

Now, thousands of Fortinet employees across North America are using FortiFone IP phones to connect to the FortiVoice PBX system. The solution provides them with calling features including auto attendant, dial-by-name directory, music-on-hold, remote extensions, and more. FortiFone also offers a Softclient that runs on iOS and Android mobile devices, as well as Windows and Mac desktop computers. This enables salespeople to remotely make and answer calls with the same business identity, whether they are in the office or on the road, streamlining the customer experience.

FortiVoice’s call handling capability for call centers also helps route incoming calls efficiently and appropriately. Customers calling during the business day automatically reach a representative from the Ottawa call center. After-hours calls are automatically handled by staff in Kuala Lumpur or Sophia Antipolis to ensure 24x7 customer service.

The FortiVoice system is built to secure business communications. It employs advanced security features including call encryption and user privilege settings to protect against session initiation protocol (SIP) attacks. It also provides proactive monitoring and reporting on threats as well as voice traffic patterns.

Resiliency is another benefit. “FortiVoice PBX is running on two servers in an active-passive configuration,” Huang explains. “When there is an issue with the master, the PBX system fails over easily.” Failover increases uptime, which increases overall performance of the system.

“When people call customer service, they may already be frustrated,” Huang concludes. “We need to make sure the phone system is always working properly so that the call to customer support is a positive experience.”

Solutions

- FortiVoice
- FortiFone

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