

ENGINE MAKER LOWERS COSTS AND EASES NETWORK MANAGEMENT WITH ADVANCED 3COM IP TELEPHONY AND WIRELESS SOLUTIONS

OVERVIEW

Yanmar developed the world's first commercial small diesel engine in 1933, and since then the Japan-based company has manufactured more than 15 million die-hard engines for agriculture, fishing and industry. The company's American operations in Adairsville, Ga., were expanding into a new office building, with four additional buildings planned. Its aging PBX phone system had no more capacity to add users, while two of the Yanmar America buildings were soon going to need 100 new phones.

Yanmar IT Manager Brian Williams researched phone systems that could meet the company's growing needs while also eliminating the limitations and high maintenance costs of its old system. Williams also was planning for a modern, secure wireless network for the new buildings and was interested in developing a single integrated infrastructure for both data and voice.

With the help of 3Com partner Kenneth G. Way & Company, options were evaluated. Yanmar America chose the 3Com® VCX® IP Telephony system on IBM® System i™ servers and the 3Com Wireless LAN Mobility System. The result has been a flawless transition into the new buildings with an integrated, feature-rich phone system and secure wireless network.



CUSTOMER NAME/LOCATION:

Yanmar America, Adairsville, Ga., USA

SITES/USERS:

A new U.S. office, two manufacturing plants, two additional buildings planned, remote offices; 200 users growing to 500+

INDUSTRY:

Manufacturing

APPLICATIONS:

Resilient IP telephony and managed wireless networking

3COM SOLUTION COMPONENTS:

Network design, deployment and support by 3Com partner Kenneth G. Way & Company

3Com VCX IP Telephony and IP Messaging modules on IBM System i servers

3Com V7111 and V7122 VoIP Gateways

3Com Switch 5500G, 4500G and 4500 LAN switches

3Com 3108, 3105 and 3102 IP phones

3Com Wireless LAN Mobility System with 3Com Wireless Switch Manager, 3Com Wireless LAN Controller WX2200, 3Com Wireless LAN Managed Access Point 2750



3COM

THE CHALLENGE

New Phone System. Yanmar's expansion required a new, scalable phone system for its mission-critical voice communications. It needed carrier-class reliability and quality—and easy migration into the new buildings without any service disruption. "If the phones are out," Williams explains, "we can't receive orders and it cripples our business financially. Frankly, we'd rather have our network down than our phones." Williams also was tired of relying on an expensive outside technician to add new users and implement moves. He wanted a system that his in-house team could easily control.

Go Wireless. Yanmar management believed in the business benefits of supporting mobile workers and providing visitors with secure wireless access. They wanted a high-performance, highly secure yet manageable solution at the right total system price. The Yanmar network had 10 old Dell switches that Williams wanted to replace, and the move to new buildings was recognized as an opportune time to upgrade to a wireless network.

THE SOLUTION

Why 3Com

Williams worked with 3Com partner and IT consultant Ken Monroe of Kenneth G. Way & Company to evaluate the options for VoIP and wireless systems that fit Yanmar's needs, looking at offerings from Avaya, Cisco and 3Com. They found that the 3Com solutions offered outstanding price-performance value.

BETTER VALUE AND MORE FEATURES

"The competitors weren't only more expensive than the 3Com solution," Williams explained, "they didn't have nearly the features 3Com did. We saw that the 3Com solution would support our current needs, and our growth five and even 10 years down the line. It was an easy decision."

CARRIER-CLASS RELIABILITY AND SOUND

3Com IP telephony systems support a distributed multisite architecture for maximum system resilience to ensure Yanmar's business continuity. The backup system is ready to automatically come online in case the primary has a WAN failure or power outage. 3Com's VoIP technology also delivers carrier-class sound quality. "A few years ago we noticed a lot of dropped packets with VoIP," says Williams. "Now we don't hear that."

A COMMITMENT TO OPEN STANDARDS AND STRENGTH IN DATA AND VOICE NETWORKS

3Com has thousands of IP telephony systems installed around the world and is well seasoned in both data and voice networking. Yanmar's 3Com system uses open, extensible standards, including Session Initiation Protocol (SIP)-based VoIP, supporting a growing range of VoIP applications and hardware from many vendors. Yanmar also relies on 3Com switches for its data networking needs.

Key Benefits

LOWER TOTAL PHONE SYSTEM COSTS

Built upon industry-standard server platforms, a license-free Linux operating system and in-house centralized system management, the 3Com IP telephony system cut Yanmar's total cost of phone system ownership.

POWERFUL IN-HOUSE MANAGEABILITY

Williams happily said goodbye to expensive visits from specialist technicians. "Now our on-site IT staff manages the phone system internally. We averaged 30 to 40 moves a year with costs of \$250 to \$500 for each move with the old phone equipment. These costs have been eliminated with our new 3Com system."

EASY MOVES

"We knew we'd be moving 40 people from Plant One to Plant Two, and we didn't want any disruptions," Williams recalled. "As it turned out, we had no problems. Then we moved 100 people out of the old office on a Friday and by Monday all their phones were operating at the new corporate building, without one problem or glitch."

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Brian Williams, IT Manager, Yanmar America

PROVEN CARRIER-CLASS DEPENDABILITY AND SCALABILITY

3Com IP telephony systems carry billions of minutes of VoIP traffic with 99.999 percent proven availability. The new 3Com system can easily handle Yanmar's projected growth from the current 200 users to 500 users over the next few years. In fact, the 3Com platform can scale to support up to 50,000 users.

MANAGED WIRELESS SECURITY

Visitors receive access to the Internet but not to the Yanmar LAN, while employees can wirelessly access their full LAN resources anywhere in the buildings.

ECONOMICAL SHARED INFRASTRUCTURE

One Ethernet infrastructure provides both computer and phone connectivity, with no additional power connections required for telephones thanks to Power over Ethernet (PoE) technology.

COST-SAVING PHONE FEATURES

- › Least cost call routing and centralized dialing plans reduce Yanmar's intracompany long-distance costs.
- › Built-in five-way teleconferencing eliminate carrier fees.
- › Four-digit transfers now allow quick and easy transfers from the construction group in Georgia to the parts department in Chicago.

FLEXIBILITY, EASY NEW PHONE AND DEVICE SET-UP WITH POE

PoE reduces Yanmar's cost of deploying IP phones, wireless access points and IP security cameras. "The PoE has been a lifesaver," says Williams. "It's really nice to connect phones with Cat 5 cable and nothing else."

LONG-DISTANCE SAVINGS AND POWERFUL NEW FEATURES FOR MOBILE USERS

Yanmar's traveling employees now use a mobile snap-in device that enables them to make long-distance calls from their laptops

over any high-speed Internet connection, saving the company substantial long-distance charges. The system also enables employees on the road to receive the calls that come into their office phones.

STANDARDS-BASED

The 3Com IP telephony solution is based on SIP signaling, the industry standard for IP telephony. Compatible with all standard SIP-based software and hardware, the 3Com system provides Yanmar a great deal of future flexibility and no vendor lock-in.

Solution Components

The **3Com VCX IP telephony module for the IBM**

System i platform features a highly resilient architecture and powerful features that are well suited for Yanmar's multi-site and multinational networks. The solution delivers commonly accessed IP-PBX features, advanced trunking services, voice boundary routing and support for media gateways and wide-band IP phones.

The **3Com IP messaging module** provides Yanmar centralized voicemail, fax mail and e-mail service. Users can see their voice and fax mail as e-mail, and can even have their e-mail read to them. Yanmar employees now have extensive distribution list capabilities, including the ability to schedule the delivery of messages. Executives can broadcast time-sensitive messages to a global distribution list.

3Com VoIP gateways enable internetworking between the IP network and legacy equipment and applications, including PBXs and the public switched telephone network. Yanmar uses both analog and digital SIP-compliant VoIP gateways from 3Com that—in conjunction with the 3Com IP telephony module—mediate control signaling, handle calls and facilitate access to IP trunking network services. Yanmar staff remaining on digital PBXs can interact efficiently with co-workers on IP telephony systems, keeping productivity high and facilitating a smooth, phased migration to an all-IP infrastructure.

"Our traveling employees now use a mobile snap-in device that allows them to make long-distance calls from their laptops over any high-speed Internet connection, saving the company a lot in long-distance charges."

Brian Williams

3Com IP phones are designed and built on the principle that the quality of the user's IP telephony experience is tied to the quality of the IP phone. The phones provide advanced features, high fidelity and ease of use and management.

The **3Com Wireless LAN Mobility System** powering Yanmar's wireless network includes a 3Com Wireless LAN Controller WX2200 with 3Com Wireless Switch Manager software. Together they provide sophisticated planning, configuration and management tools, including the ability to centrally manage and control Yanmar's 28 PoE-powered 3Com Wireless LAN Managed Access Point 2750s. This provides comprehensive management of Yanmar's highly secure, multiple-building wireless deployment, with the PoE capabilities of the access points allowing Yanmar a great deal of network-wiring flexibility.

3Com Switch 5500G, 4500G and 4500 systems deliver great value, providing Yanmar's infrastructure with advanced network access control and security, network monitoring software and PoE. The intelligent, voice-ready family of 3Com managed, stackable and clusterable 10/100 and 10/100/1000 Ethernet switches deliver flexible LAN connectivity and voice-optimized features.

LOOKING AHEAD

Soon Williams will extend Yanmar's 3Com IP telephony system to the company's Chicago office with a private T1 connection, continuing to extend the benefits of the VoIP system throughout the expanding Yanmar America organization. Yanmar executives and Williams are confident that the company's phone and network infrastructure and systems will support its growth plans.



Founded in 1912, Yanmar's core business is the manufacture of commercially viable small diesel engines that it first brought to market in 1933. Yanmar America promotes energy-efficient and productivity-increasing machines for agricultural, fishing and industrial use.

Want to know more? For additional case studies, **visit www.3com.com**

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