



Overview

Country: United States

Industry: Telecommunications

Customer Profile

With corporate offices in New Jersey, Global Crossing is an international provider of telecommunications, Internet Protocol (IP), and voice over IP (VoIP) products and services. The company has nearly 5,000 employees.

Business Situation

The company wanted to standardize its communications environment to improve the effectiveness of communication for employees and to integrate telephony capabilities within its communications infrastructure.

Solution

After implementing Microsoft® Exchange Server 2007 with unified messaging functionality, Global Crossing deployed Microsoft Office Communications Server 2007.

Benefits

- Consolidated communication tools
- Reduced costs by U.S.\$574,000 annually
- Improved administrative capabilities
- Enhanced security
- Annual benefits of \$4.3 million

Global Crossing Cuts Costs, Unifies Communications with Integrated Solution

“Our current internal VoIP deployment, from a leading networking hardware provider, requires purchasing the handset and other security equipment. With Microsoft, we only pay for the handsets. ... This makes it easy for me to choose Office Communications Server.”

Steve Schafer, Director of Collaboration and Network Services, Global Crossing

Global Crossing provides Internet Protocol telecommunications services to customers worldwide. The company's nearly 5,000 employees, who often work in teams that are distributed globally, needed to communicate more effectively. Global Crossing addressed this problem by deploying Microsoft® unified communications technologies to provide users with a consolidated messaging environment for voice, e-mail, instant messaging and presence, and audio, video, and Web conferencing. By deploying the Microsoft solution, Global Crossing has improved employee processes, increased security, and reduced costs. It recently deployed Office Communications Server 2007 R2 to integrate more workloads into the solution including audio conferencing and additional voice features. The solution is expected to produce annual benefits of U.S.\$4.3 million when fully deployed and will pay for itself in seven months.

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Situation

With corporate offices in Florham Park, New Jersey, Global Crossing provides telecommunications services in 690 cities in 60 countries. The company, which has approximately 5,000 employees, offers a range of data, voice, and security products to Fortune 500 companies, as well as 700 carriers, mobile operators, and Internet service providers.

Global Crossing employees, including technical support, sales, and marketing personnel, work from regional offices around the globe. The majority of these workers depend on e-mail, voice mail, instant messaging (IM), and audio, video, and Web conferencing to communicate and stay connected with one another and with suppliers and partners.

Communications were affecting key processes in the company such as order processing, which required action from multiple departments within the company. Though most orders flowed smoothly through the system, exceptions that required input from specific employees were taking longer to be processed than the company would have liked because it was often difficult to locate the specific person or piece of information required.

Global Crossing also saw an opportunity to reduce costs by implementing a unified communications solution. Travel costs for employees to attend meetings or training were increasing and toll charges, especially for international calls, were rising as the company's international operations grew.

Global Crossing wants to provide efficient communications and the ability to communicate effectively across its different business groups. To accomplish this goal, Global Crossing is working to use Session Initiation Protocol (SIP) for all internal

communications. SIP enables users to easily switch between modes of communication so that the user can always select the appropriate mode, whether data, voice, or video, for the current situation.

Solution

Several years ago, the organization decided to find a solution that would bring together all forms of communication while integrating the company's IT infrastructure, based on the Windows® operating system. Additionally, the company wanted to give employees a seamless way to use voice communications together with messaging. “We wanted unified communications to be at the core of how we run our business,” says Steve Schafer, Director of Collaboration and Network Services at Global Crossing. “To that end, we wanted to give our employees a set of tools that would increase productivity by helping them to stay focused and to be able to solve business problems as quickly as possible.”

Global Crossing chose to deploy a Microsoft® solution because Microsoft provides all of the capabilities required by the organization, integrates with its existing environment, and offers a low total cost of ownership. The solution fully integrates all communications including e-mail, instant messaging and presence, audio, video, and Web conferencing, and voice into a consistent environment, which can be accessed through familiar user interfaces like the Microsoft Office Outlook® messaging and collaboration client.

Exchange Server 2007 Architecture

Global Crossing is upgrading its e-mail system to Microsoft Exchange Server 2007 to take advantage of the unified messaging features. The company chose a clustered continuous replication (CCR) solution to provide high availability. It is also deploying a standby continuous replication (SCR) solution for geographic redundancy as a disaster recovery



Cash Flow Summary – Global Crossing’s investment in unified communications technology should pay for itself in seven months and provide a 100 percent Internal Return on Investment.

solution. The extensive hardware redundancy should provide 99.99 percent availability. Thirty-two servers are required for the solution and will be deployed at three data centers. The total investment required for the e-mail upgrade is U.S.\$2.4 million including the hardware, software, and migration costs.

| Exchange 2007 Hardware Requirements | |
|-------------------------------------|--------------|
| | # Of Systems |
| Mailbox Servers | 12 |
| Hub Transport Servers | 6 |
| Client Access Servers | 6 |
| Edge Transport Servers | 6 |
| Unified Messaging Servers | 2 |
| Unified Messaging Gateways | - |
| Global Catalog Servers | - |
| Storage in GB | 120,000 |
| Tape Backup Systems | 6 |

Office Communications Server 2007 Architecture

Global Crossing deployed Microsoft Office Communications Server 2007 to standardize its communications on SIP. Office Communications Server 2007 is one of the cornerstones of unified communications solutions from Microsoft. All employees can communicate using instant messaging, Web conferencing, or voice, and receive their peers’ presence information. “We had previously integrated Office Live

Communications Server 2005 into our existing IP [Internet Protocol] telephony environment,” says Schafer. “We knew that the transition to Office Communications Server 2007 would be fairly easy.”

The organization deployed the new solution in a test environment in July 2007, and began deploying it in a production environment several weeks later. The fully deployed environment will include seven server computers for Office Communications Server 2007, a mediation server computer for Office Communications Server 2007, an archive server computer running Office Communications Server 2007, and a SQL Server® cluster to store the archived information. Global Crossing has also deployed Microsoft RoundTable™ video conferencing devices. The total deployment costs are estimated to be \$1.8 million.

| OCS 2007 Hardware Requirements | |
|--------------------------------|--------------|
| | # Of Systems |
| Servers | 12 |
| Storage (GB) | 2,088 |
| Gateways | 1 |
| Load Balancers | - |
| Phone Hardware | 1,680 |
| RoundTable | 24 |

Global Crossing also implemented the voice functionality in Office Communications Server 2007 by using a basic gateway for its North America operations. Global Crossing then integrated this gateway with the mediation server role of Office Communications Server 2007. For its European offices, Global Crossing installed a hybrid gateway, which is able to host the mediation server role of Office Communications Server 2007 directly, saving on space and device management costs.

Office Communications Server 2007 R2

To provide employees with additional capabilities based on the Microsoft Office Communicator 2007 unified communications

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Amanda Masek, Manager of Enterprise Messaging, Global Crossing

client, Global Crossing deployed Office Communications Server 2007 R2. This update provides many additional capabilities, including server-based audio conferencing and expanded voice capabilities. Global Crossing expects all of its users to be migrated to Office Communications Server 2007 R2 by the product launch date in February 2009.

Using the voice functionality of Office Communications Server 2007, Global Crossing employees can use their computers for phone conversations both within and outside of the corporate infrastructure just like they could with a regular desk phone. System users, in addition, can have incoming calls forwarded directly to other devices or to Exchange Server Unified Messaging voice mail, through Office Communications Server 2007.

Instant Messaging and Presence

All users at Global Crossing receive instant messaging and presence capabilities through Office Communications Server. Users enjoy the fact that presence information is integrated with Exchange Server and Office Outlook. This helps identify when users are in meetings or out of the office.

Desktop sharing through Office Communicator 2007 R2 is another option that Global Crossing expects people to use frequently. With desktop sharing in Office Communicator, a participant in a Communicator conference can display his or her entire computer desktop to the other participants. With Office Communicator Web Access 2007 R2, a host can invite someone from outside the company and send them a link to do a desktop share. “It’s a lot easier for the individual to start up desktop sharing than to get a Live Meeting going,” explains Schafer. “For the times when users just want someone to take a quick look at a file, it’s much easier to do.” Being able to easily share

data helps to keep everyone in the organization up to date and reduces the time delays associated with sending documents through e-mails.

Employees at Global Crossing will also receive Group Chat functionality with the Office Communications Server 2007 R2 deployment. Group Chat enables users to carry on topic-specific, multiparty instant messaging discussions that persist over time. Global Crossing currently uses Microsoft Office SharePoint® Server 2007 for communities of interest and for knowledge repositories, but the company believes that Group Chat may be better suited for these functions. “Having those discussion groups in group chat and having them be persistent will be very beneficial. What will be even more important is having repositories of knowledge,” explains Amanda Masek, Manager of Enterprise Messaging at Global Crossing. “For example, if we get a new router, we can have a group that becomes the repository of knowledge for testing the router and establishing it in our infrastructure.”

Conferencing

One of the new capabilities that Global Crossing will deploy is the audio conferencing capability. Integrated audio conferencing with Office Communications Server 2007 R2 will enhance the user experience. “Simplicity was the main reason for deploying audio conferencing. You could add a conference into an instant messaging session or Web Conference, but you had to do it from the beginning,” explains Schafer. “Now setting up a conference call can be done with one click in Outlook and additional users can be added with just a drag-and-drop.” As of January 2009, Global Crossing has deployed audio conferencing capabilities to all its users.

“Having the multiple languages available on the conferencing attendant is spectacular. We’ve got it set up with Spanish, Portuguese, French, Chinese, and English. We are a global company, so that is exceedingly beneficial.”

Steve Schafer, Director of Collaboration and Network Services , Global Crossing

Voice

Global Crossing is also expanding its use of the voice functionality available with Office Communications Server. The organization has many legacy Private Branch Exchange (PBX) systems in different offices around the world. Decommissioning these PBX systems will be the company’s main focus for expanding voice functionality. Global Crossing plans to deploy Response Groups and the Office Communicator Attendant. With a Response Group, incoming calls are queued and routed to designated agents based on predefined routing rules, while Office Communicator Attendant is an intuitive, integrated attendant console that facilitates accurate and rapid call handling. “The addition of the attendant console is a critical piece in making Office Communications Server a true telephony replacement,” explains Schafer.

Global Crossing is gradually decommissioning its current IP-PBX installations from a leading networking hardware provider, replacing them with Office Communications Server. Office Communications Server will also replace the current voice over Internet Protocol (VoIP) handsets that Global Crossing had supplied to employees who work externally and do not have access to the corporate network. Global Crossing is now providing employees with LG Nortel 8540 handsets, which operate with Office Communicator. Shortly after the launch of Office Communications Server 2007 R2, all remote employees are expected to be switched over to the Office Communications Server-compatible handsets.

For mobile users, Global Crossing will deploy Microsoft Office Communicator Mobile 3.0 to people with BlackBerry or Windows Mobile® phones that meet security standards. Office Communicator Mobile helps people communicate while out of the office. “If people need to reach me late at night, it’s

better for me to just get an instant message from them rather than a phone call,” explains Schafer. “When I go to lunch, people can find me. I run Communicator Mobile all day long without killing the battery.”

Applications

Global Crossing has also developed several applications that take advantage of Office Communicator Mobile to access programs on the corporate network. One application connects to the company’s provisioning application (EON) and gives the end user the capability to query the EON data store for details on circuits, their current status, open tickets, and other information. This application is especially useful for Sales and Sales Engineering teams that continuously travel to customer locations. They can retrieve data on customer circuit orders in seconds from their mobile devices rather than having to boot up their laptops, log on, sign in to the VPN, and access the EON Web service to retrieve the customer’s details.

Another application Global Crossing has developed is a security kiosk that enables employees and visitors to gain access to buildings using a self-service touch screen, while meeting the company’s stringent security policies. The kiosk is integrated with instant messaging, audio, and video in Office Communications Server for visitor sign-in. Using the kiosk, visitors contact the person they are visiting and enter the information for their security badge, which is automatically printed after they are granted access.

Benefits

By investing in state-of-the-art communications capabilities for its employees, Global Crossing has enabled them to perform better, resulting in faster project completion and improved customer service. “We have the ability to move back and forth between different modes of communication when using Office

“It’s more cost-effective to deploy and manage VoIP using Office Communications Server 2007 than via IP-PBX solutions.”

Bill Haskins, Director of Collaboration Products, Global Crossing

Total Cost of Ownership – The total cost of ownership for Global Crossing’s communications capabilities will be decreased from \$450 per user to \$375 per user. These cost improvements will be achieved even with a dramatic increase in the services offered to employees.

Communications Server as our unified communications platform,” explains Schafer.

In addition, the costs for telephony and employee travel have been reduced by more than \$1 million annually and the cost of maintaining the organization’s communications capabilities have been reduced by \$360,000 per year. Overall, Global Crossing estimated a total acquisition cost of \$4.2 million and, in return, the company expects to achieve total annual benefits of \$4.3 million when the solution is fully deployed. The project has an internal rate of return (IRR) of 100 percent and will pay for itself in seven months.

Reduced Cost of Operations

Upgrading communications capabilities has provided cost savings from many areas across Global Crossing. One of the largest benefits comes from reduced travel costs for meetings and training. Global Crossing took advantage of Web conferencing to reduce travel costs even before the deployment of Office Communications Server 2007. Now, with the ability to host Web conferences on-premise with Office Communications Server 2007, usage has expanded and will provide additional savings in the future.

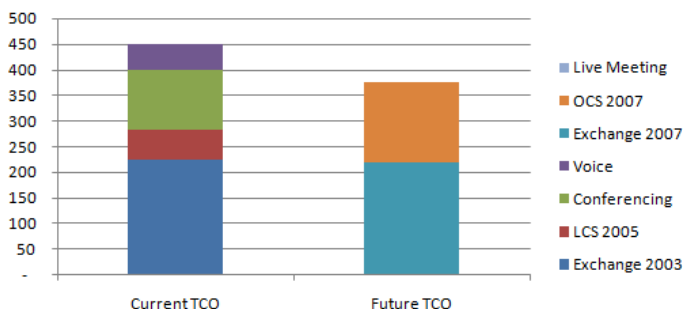
Cost savings have been realized in other areas as well. “We’ve seen immediate savings in long distance and audio conferencing costs with Office Communications Server 2007,” says Bill Haskins, Director of Collaboration Products, Global Crossing.

Reduced IT Costs

“We will also be able to lower the costs that are associated with maintaining and supporting our voice-mail systems. It’s more cost-effective to deploy and manage VoIP using Office Communications Server 2007 than via IP-PBX solutions.” Haskins also says that the organization will need only Exchange Server 2007 and Office Communications Server 2007 for communication in some of its smaller branch offices. “We won’t even deploy standard telephony or VoIP at smaller branch offices that have Exchange Server 2007 and Office Communications Server 2007,” he says. “That’s a very cost-effective option for us, made possible by this solution’s consolidation and integration of messaging technologies.”

Global Crossing also discovered that its new solution gives IT personnel better control of users during deployment. “Office Communications Server 2007 and Exchange Server 2007 provide us with automated provisioning capabilities, through the integrated, centralized infrastructure we’ve put into place,” says Haskins. “When a new employee is hired, we can pull together information from our human resources systems and provide that person with layered functionality in the form of e-mail, instant messaging, voice, and telephony.” The solution’s integrated features also make system administration simpler in general. “Office Communications Server 2007 gives us unification on the systems side, unification with a client that offers a familiar tool set for users, and unification on the network layer. So I’m now able to consolidate IT support

TCO Comparison by Workload - Per User



teams into a central group that's already familiar with the Microsoft environment," Schafer says.

Moving users from its current solution enables Global Crossing to save approximately U.S. \$600 per user. "Our current VoIP deployment, from a leading networking hardware provider, requires purchasing the handset and other security equipment. With Microsoft, we only pay for the handsets, because we have authentication of the user. This makes it easy for me to choose Office Communications Server."

More Efficient Employee Processes

The new solution has brought together disparate communication tools—such as instant messaging, voice mail, and audio and video conferencing—into one seamless system. By using this solution, employees can send an instant message to reply to a voice mail," says Schafer. "The consolidation of Exchange Server 2007 and Office Communications Server 2007 helps us all to do our jobs better and to make better use of our time." Global Crossing estimates that the average employee is able to save about twenty minutes a day due to more efficient communications. The benefits come from many areas such as being able to search e-mails faster and more effectively with Exchange Server 2007, or taking advantage of presence information to quickly find colleagues and avoid spending time trading messages with them. "Office Communications Server 2007 is integrated so well with Office Outlook 2007," says Haskins. "One of our goals was to reduce the amount of time that employees spend moving between applications. This solution gives us that opportunity."

"Combining the telephony in Office Communications Server 2007 with conferencing and instant messaging is

making communication here more effective," Schafer adds. Improved communications capabilities are helping Global Crossing employees complete projects such as developing new products faster and with less effort.

Improved Conferencing Capabilities

Integrating audio conferencing capabilities into Office Communications Server makes communications simpler for end users, helping them to be more successful. "We've experienced issues with users trying to bring a hosted audio bridge into OCS-based calls," explains Mike Fuqua, Senior VP of Global Information Systems at Global Crossing. "What Office Communications Server brings is simplicity."

Another benefit of the audio conferencing bridge for Global Crossing is the multiple language support. "Having the multiple languages available on the conferencing attendant is spectacular. We've got it set up with Spanish, Portuguese, French, Chinese, and English. We are a global company, so that is exceedingly beneficial," explains Schafer. Within one conferencing system, employees from many countries, as well as their customers and partners, can access instructions in their local language.

One constant concern with audio conferencing is not being able to tell who is on the phone during the conference. Office Communications Server 2007 R2 solves this problem with the ability to create personal identification numbers (PINs) for attendees. "When somebody joins my meeting with their personal PIN, I know who is on the meeting. I don't have to do roll calls continuously as people join," explains Schafer. "The identification and authentication, whether they joined the call by Office Communications Server VoIP or PSTN dial in, is key."

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Improved IT Support Services

The voice functions, such as Response Groups, will be used within Global Crossing by the on-call services organizations. When 24-hour support is required, these teams have a person designated to be on-call so that the help-desk staff can reach a resource to solve an issue. “With Office Communications Server, we can give the help desk a link to select and it will go out and find somebody for them,” explains Schafer. Rather than a single on-call person, Global Crossing will be able to establish global teams with specific skills. “When there is a critical issue, the on-call person may not be the actual person you need. Say its 4:00 A.M. and I have an issue with Exchange Server,” adds Schafer. “I’m not sure I want to call the on-call person in North America, when my Exchange guy over in Denmark is online and available. Having the help desk contact a person who is available for a critical task will be an important use.”

Desktop sharing is another tool that will help improve help-desk service for users.

“Desktop sharing will be a very effective tool for the help desk to use to troubleshoot problems. Live Meeting was slow to do that and cumbersome. Desktop sharing through Communicator makes it much faster and easier to look at a user’s system and see what’s going on,” explains David Trotta, Manager of Technical Support at Global Crossing. “Since our help desk provides IM chat support, oftentimes, we are already engaged in an IM conversation with a customer regarding an issue. We can easily and quickly escalate to a desktop sharing session to see firsthand what the user is experiencing. This flexibility can translate into quicker resolution times for the help desk. Desktop sharing will play an even bigger role for Tier 2 support groups who don’t have access to other remote control troubleshooting tools.”

In summary, Global Crossing has improved employee processes, increased security, and reduced costs by deploying the Microsoft unified communications solution.

For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: www.microsoft.com/office

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Microsoft Office System

The Microsoft Office system is the business world's chosen environment for information work, providing the programs, servers, and services that help you succeed by transforming information into impact.

For more information about the Microsoft Office system, go to: www.microsoft.com/office

Software and Services

- Microsoft Office
 - Microsoft Office Communicator 2007 R2
 - Microsoft Office Communicator Mobile
 - Microsoft Office Communications Server 2007 R2

Hardware

- Microsoft UC-qualified devices provide the optimal UC experience and economics: wideband audio, plug-and-play installation, and seamless Microsoft Office Communicator 2007 integration.
 - Polycom CX200 USB phone
 - Jabra GN2000 NC USB headset
 - Plantronics SupraPlus Wideband USB headset
 - LG Nortel 8540