



School Cuts Phone Costs and Increases Student Safety Using Unified Communications

Overview

Country or Region: Australia

Industry: Education—Primary and Secondary School

Customer Profile

Scotch College is one of the oldest Australian schools with 1,800 students and about 250 full-time and part-time teachers. It has a geographically dispersed campus and emphasizes outdoor and technology experience.

Business Situation

Scotch College wanted to streamline its communications environment and reduce costs and multiple data services, limit calls to personal mobile phones, and eliminate paging services.

Solution

The school implemented Microsoft® Office Communications Server 2007 and Microsoft Exchange Server 2007 to take advantage of existing technologies and provide seamless communications.

Benefits

- Increased staff efficiency through convenient communications
- Reduced costs of communications
- Improved student safety through automated attendance alerts

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Carlos Sinay, Network Engineer, Scotch College

Scotch College, a Melbourne, Australia-based K-12 school with 250 teachers and 1,850 students over junior and senior levels, wanted to consolidate its communication and staff-student-monitoring resources. Geographically dispersed buildings, and the manual processes for keeping student attendance and updating lesson resources required documents to be delivered by hand across several buildings. In addition, the school had no integrated communication system, and its mixture of mobile phones, e-mail, and a paging system was inefficient and expensive. Scotch College deployed Microsoft® Office Communications Server 2007 and Microsoft Exchange Server 2007 with Unified Messaging. Now, teachers can look up student information wirelessly and check on student and technician whereabouts through instant messaging, thereby improving staff efficiency and student security, and significantly lowering the use of external data services.



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Luke Turner, Network Administrator, Scotch College

Situation

Scotch College is one of the oldest teaching institutions in Melbourne, Australia. Founded in 1851, the school has more than 1,850 students and 250 teachers. It is a single campus school with remote sites in Phillip Island, Healesville, and Mansfield, which are all geographically remote from the main site in Melbourne.

A pioneer in technology adoption, it launched a Web-based portal called Learning Point in 2002 for teachers to post assignments and for students to share information. Set up by two software developers, this Web-based campus network has about 3,600 users—including teachers, students, and parents—and five IT administrators maintaining it.

While expanding its technology capabilities, the school realized it needed to improve the communication environment for its students, teachers, and parents. Apart from the Learning Point portal, many processes were still manual. Attendance was marked on a class register every morning and after lunch. This was delivered manually to the administrative office by students. The office would then make a phone call or send an e-mail message to inform parents of absent students. With a single student absence, this was easy to handle, but when five or six students were not in class, teachers found that their teaching schedules were severely disrupted.

Teachers were also paged over a dedicated paging system, which required extra IT support and administration. To add to the communications costs, mobile phones were also used to contact ground staff and laboratory technicians. Whenever teachers wanted to request specific lesson resources, such as sports equipment and teaching aid software, they would use their own mobile to locate support staff.

The existing voice mail system was hardly used by staff—especially technicians—because they found it difficult to access the different menus and functions. Access to the voice mail and paging systems was also not secure. Without a comprehensive encoded directory in place for all the different messaging and paging systems, the voice mail and paging systems were open to abuse and external hacking.

Scotch College knew it needed to capitalize on its existing network and its Microsoft® SQL Server™ 2000 database software and Active Directory® service capabilities to make communications more secure and seamless.

Integration between the Scotch College phone network, e-mail system based on the Microsoft Office Outlook® 2003 messaging and collaboration client, and its numerous contact systems was also non-existent.

It used a traditional 600-line Fujitsu PBX system and some support staff using data-specific services from third-party carriers. All these different systems meant added complexity and added maintenance and support costs.

The school needed to find a faster and more efficient way to send messages to parents, without adding extra workload for teachers and staff. It also needed to cut external data service subscriptions and reduce calls to personal mobile phones. Lastly, the school needed a more efficient way of locating, paging, and tracking staff—especially teaching staff.

Solution

In early 2007, Scotch College decided to deploy Microsoft Office Communications Server 2007 and Microsoft Exchange Server 2007 with Unified Messaging to streamline its communication structure. By linking into its current Windows Server® 2003

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Carlos Sinay, Network Engineer, Scotch College

environment, both server applications allow central authentication of all its Windows®-based clients. The move was easily accomplished, notes Carlos Sinay, Network Engineer, Scotch College. “We were familiar with Microsoft solutions, with Microsoft Office 2003 Editions and the 2007 Microsoft Office system. Plus, Microsoft Exchange Server 2003 was already deployed,” he says. “We use Microsoft now and we have a good rapport with the team there.”

From an initial trial base of 30 selected users, the pilot group will grow to between 60 and 100 people using unified communication services by December 2007. “At some point next year, we hope to get everyone in the school on the service,” says Sinay. “So far, we don’t have any issues with the overall implementation,” adds Sinay.

Before rolling out Office Communications Server 2007, Scotch College had to upgrade from Exchange Server 2003 to Exchange Server 2007. According to Sinay, this upgrade path was straightforward. “The upgrade from Exchange Server 2003 to Exchange Server 2007 was really good,” he says. “We had no difficulties at all with the Exchange Server 2007 migration—it was easy and seamless.”

The use of the Best Practice Analyzer tool within Exchange Server 2007, “meant we could have a readiness check when installing Exchange Server 2007, which made it easier by cleaning up the system before installation,” says Sinay.

The Office Communications Server 2007 implementation was also accomplished without any major issues, partly because of the support from Microsoft. Sinay notes that if there were any deployment problems, the support was always there in a timely manner. “If we had a problem, Microsoft came down to help us, but in many other cases, the

online forum provided solutions to our problems.”

The entire Office Communications Server 2007 implementation meant Scotch College needed extra hardware in the form of four IBM x3650 servers, one IBM x3550 server, an edge server, a Dialogic PIMG80LS gateway, mediation servers, and an Altusen KVM switch. The trial users were also equipped with LG-Nortel IP Phone 8540 handsets, LG-Nortel 8501 USB phones, and Palm® Treo™ smartphones which connect directly with Exchange Server 2007 to deliver wireless voice, e-mail, Web access, and Microsoft Office Mobile applications. The gateway was configured at a ratio of one to eight, and the Private Branch Exchange (PBX) system linked to the public telephony network. Despite all this reconfiguration, the installation was done on time.

Integrating the contact database into a single entity was a big factor in commissioning the new environment. Once the SQL Server database was up and running with all the college data in one place, all the voice, e-mail, and information systems had to be linked up to the SQL Server database. “Now, with Office Communications Server 2007 connecting to our Active Directory, the whole system is much easier to maintain,” says Sinay. Now, Active Directory within the Windows Server 2003 operating system maps the information from Office Communications Server 2007 to SQL Server to allow rapid communications across all mediums within the school.

“To upgrade to Exchange Server 2007, we installed Service Pack 1 and remapped the addresses. We didn’t have to spend a lot of time on Active Directory implementation; we just expanded the schema for Exchange Server 2007, which turned out to be quite an easy operation,” says Luke Turner, Network Administrator, Scotch College.

Following the upgrade to Exchange Server 2007, the Scotch College IT team had to rebuild its server structure after installing the first software update—Service Pack 1. “This was quite tricky for us, so we called on Dimension Data to help us with that,” says Turner.

Dimension Data is a Microsoft Gold Certified Partner that provides infrastructure services and application integration services to companies worldwide.

Now, with the deployment of Office Communications Server 2007 and Exchange Server 2007 with Unified Messaging, teachers and technicians can access the central database remotely using any of the mobile hardware, and they can also access voice mail and Outlook Voice Access using mobile devices. In addition, they can use the presence technology to see if other users are available or not and how best to contact them.

In October 2007, Scotch College made Microsoft Office Communicator 2007 and Microsoft Office Communicator Mobile available for staff. Sinay says the college is also keen to implement Microsoft Office SharePoint® Portal Server 2007 by October 2008. It will be used by students to submit work to teachers, for posting sports activities information, for group and parent meetings, and to complement the functionality of the Learning Point portal.

Benefits

Scotch College has streamlined and improved its overall communications infrastructure by bringing together many disparate processes. The deployment has led to increased staff efficiency, reduced operating costs, and improved student safety across the campus. Says Sinay, “With Office Communications Server 2007 and Exchange Server 2007, we can rapidly access communication tools at

the right time and place. It will also help us to continue our pioneering work on Web-based learning.”

Increased Staff Efficiency Through Convenient Communications

Teachers can now mark attendance records with a handheld device, such as a notebook or Palm Treo smartphone. With Office Communications Server 2007, messages can travel from the mobile device straight to the SQL Server database, no matter where the teacher is—even out on the playing field.

“When teachers were out in the field, they used to bring their registers to mark the attendance rolls. But now, they can bring a Palm Treo that connects to a database with the Office Communications Server 2007. So there is much more convenience for the teacher,” says Sinay. In addition, there is no need to physically take the register to the administrative office, with the bonus that records are updated in real time.

Users connected to Office Communications Server 2007 have a presence indicator to show their availability and the best way to contact them. “You can see the phone number of the people you want to contact without searching for your address book,” says Sinay. “Students and teachers on the system can thus be easily reached during an emergency. With Office Communications Server 2007, we know how to get hold of someone by looking at their presence status, which means we no longer have problems finding people if we need to contact them urgently.”

The escalation feature also allows staff to move from an IM session to a conferencing session (audio, video, and Web) “If there are any queries that a teacher has, they can go from a simple instant message to a voice call, then even to a video call and conference if need be, all from the single interface. That’s really great,” says Sinay. “Clients of the Office

Communications Server 2007 love the capability to switch from IM sessions to a voice call, and allied to presence, they can see exactly how to access the best communication medium for that person at that time,” he adds.

When contacting tech support, teachers can also use these different communications channels. Depending on the urgency of the resolution, they can use either voice, IM, or e-mail for the level of response they want. Calls can be used for critical situations, IM messages for urgent requests, and e-mail for all other non-emergency situation.

Now, teachers also find it easier to contact parents. Sinay says: “By integrating Exchange Server 2007 with Office Communications Server 2007, teachers from the school can send an e-mail message or maybe even an IM to a parent without having to know their number or address—the system can pull it out for us automatically, even using voice commands if need be.”

Teachers can also make phone calls with their laptops by connecting to Office Communications Server 2007. Without going to the common-room phones, teachers can now call parents from anywhere in the school campus—saving them time and effort.

Reduced Cost of Communications

The Office Communications Server 2007 rollout has reduced Scotch College mobile phone bills considerably, both internally and for communication with remote campus staff. It has also been able to reduce its long-distance calling fees to parents. “With more students and staff using Office Communications Server 2007, we can cut down on PBX costs, data services, and mobile phone use by staff,” says Sinay.

Student that board at the college will be able to call their parents using the VoIP service

built into Office Communications Server 2007 and save on costs. By using software-powered VoIP, students can bypass long distance call charges and still get good quality voice calls. Also, with a unified communications environment, the school can lower its IT maintenance costs.

“Using Microsoft Office Communications Server 2007, we will be able to cut out support costs considerably because we now have just a single system to support,” says Sinay. In the past, Scotch College needed to support separate systems for voice, e-mail, and IM, but with OCS it only supports one system, offering a lot more value in terms of productivity and flexibility.

At the same time, with the implementation of Exchange Server 2007 Unified Messaging, Scotch College has been able to cut costs in many departments. It has been able to reduce the use of PBX phone extension hardware, with a commensurate cost reduction.

Improved Student Safety Through Automated Attendance Alerts

With the roll out of a unified communication infrastructure, Scotch College can now inform parents immediately of missing students through automated e-mail message or voice mail. “Teachers have to mark attendance in the morning and after lunch, and we are required to notify parents within half an hour if students are absent. We can now communicate immediately if the students are not at the roll call, whereas before it could take a long time because students took the attendance list to the administrative official for the school to alert parents,” says Sinay.

Scotch College is looking to completely automate the process, so that when a teacher logs on, the class roster loads automatically. “Then the teacher marks the attendance and the information is updated in

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For more information about Scotch College products and services, call 03 9810 4236 or visit the Web site at: www.scotch.vic.edu.au

real time onto the SQL Server database,” says Turner.

“If a student is missing, the system will automatically generate an e-mail message or voice call to alert the parents within the specified time. This is likely to be a Duty of Care requirement at some time in the future, so it will help us enormously should more than just a couple of students be missing,” adds Sinay.

Office Communications Server 2007 also allows both e-mail and voice conversations to be recorded on the server as a backup for Outlook. This satisfies record-keeping obligations, and it also helps staff keep track of any instances of bullying among students and prevent them from spreading or becoming uncontrollable.

Microsoft Office System

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Software and Services

- Microsoft Office
 - Microsoft Office 2007
 - Microsoft Office 2003
 - Microsoft Office Communications Server 2007
- Microsoft Server Product Portfolio
 - Microsoft Exchange Server 2007
 - Microsoft SQL Server 2000
 - Windows Server 2003
- Technologies
 - Active Directory

Hardware

- IBM x3650 server
- Edge server
- Cisco KVM switch
- LG-Nortel IP Phone 8540 handsets
- IBM x3550 server
- Fujitsu 600 PBX
- Dialogic PIMG80LS Gateway
- LG-Nortel 8501 USB phones
- Palm Treo 750W