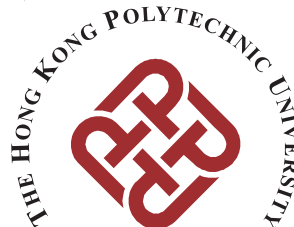


## Mirapoint in Education: Customer Success Stories

California State University  
**Northridge**



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## Introduction

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Information Technology (IT) managers at today's educational institutions face the challenge of deploying an email service that meets the growing demands of their students, faculty, and staff. Traditional messaging solutions used by most organizations are complex, with high management costs and reliability issues. In most instances, messaging software is installed on general-purpose servers with no optimization or scalability in mind. Specialized staff are often required for database administration, system administration, and postmaster functions, which can increase ongoing operational costs beyond the already prohibitive software licensing and hardware costs.

This “point-solution” approach has resulted in a disparate collection of loosely integrated suites of hardware and software from multiple vendors, compounding the task of managing the messaging network and limiting its scalability and flexibility. Expanding or adding new services such as webmail, wireless messaging, and group calendaring requires the integration of even more hardware and software. Often, IT departments must rely on vendors' professional services groups to implement and integrate a custom service, resulting in an expensive and difficult-to-manage messaging system.

**CALLOUT:** What educational institutions need is to build their message networks around the three S's: Services, Simplicity, and Security.

What educational institutions need is to build their secure messaging infrastructure around the three S's: Services, Simplicity, and Security. Mirapoint, the leading secure messaging provider, offers messaging solutions that enable educational institutions to deliver a secure, scalable messaging infrastructure that meets the challenges of increasingly complicated environments, exponential traffic growth, demands for additional services, and email threats including spam and virus attacks

Mirapoint messaging appliances are the building blocks of an “always –on” messaging infrastructure that addresses security throughout the fabric of the network, not just at the network perimeter. A Mirapoint appliance-based infrastructure can easily scale to meet the growing needs of even the largest educational institution, while maintaining the lowest total cost of ownership (TCO) in the messaging industry and providing a platform for the provisioning of new services.

Mirapoint's comprehensive messaging solution ‘makes the grade’ when it comes to email on campus. More than 100 leading educational institutions worldwide have selected Mirapoint for their messaging solution. This case study looks at seven of those educational institutions, the challenges they faced, and why they chose Mirapoint as their single messaging solution. Included in this study are California State University at Northridge, Queensland University of Technology, University of Georgia, Temple University, Virginia Tech, University of Cergy Pontoise (Paris), and Hong Kong Polytechnic University.

## Mirapoint Means Services

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Most educational institutions are familiar with email. Students, faculty, and staff increasingly rely on messaging as a tool to pursue their education or perform their jobs. According to Harris Interactive, a consulting firm, 93 percent of American college students regularly use the Internet, making them the most connected segment of the population. Increasingly, email is becoming the “official” medium for communications between professors, staff, and students.

As the pace of communications quickens, however, basic email is no longer adequate to meet the demands of users. They want robust collaborative features like calendaring, group scheduling, address book, and to-do lists built into their messaging solution. They also want to access email via the Web or mobile devices such as their cell phones. But they don't want the inconvenience of spam that wastes their time, or the hazards of viruses that can infect their computers. Most of all, they want these features to be reliable and easy to use.

Mirapoint provides a comprehensive solution that meets the demanding needs of the educational market. Users can access their email from any desktop via a secure, web-based interface, or via any standards-based email client including Outlook. Because Mirapoint provides built-in native support for industry-standard protocols, it can integrate with any client device, including Microsoft Office, as well as mobile devices using Short Messaging Service (SMS) or Multimedia Service (MMS).

In addition to its email functionality, the Mirapoint solution provides easy-to-use collaboration tools, including group calendaring, scheduling, address book, and to-do lists. Mirapoint also blocks spam, protects against viruses, and filters content for both inbound and outbound messages. Class-of-service controls allow the administrator to deliver specific feature sets to students, staff, or alumni to enable customized services for each user type. Mirapoint's integrated, feature-rich messaging, policy management, and security in a single appliance reduces complexity, simplifies administration, and ensures uptime at the lowest total cost of ownership.

Following are two institutions that are benefiting from the broad set of services delivered through their Mirapoint secure messaging infrastructure.

California State University  
**Northridge**



### **Background**

Cal State Northridge, situated on a 353-acre campus in suburban Los Angeles, California, serves 28,000 students with a faculty and staff of more than 3300. Like many institutions, the university had deployed an email infrastructure a number of years ago. The legacy system consisted of a Silicon Graphics (SGI) server running a version of Sendmail.

With aging hardware and software and a steady increase in the number of users, the system no longer met the University's needs. The system administrator would need to reboot the system once or twice a day just to keep the application running, and mail delivery often took an hour. The poor service led some departments to deploy their own email systems on campus.

### **Challenge**

The University realized that it needed a new email system, and the requirements were clear. "We wanted an integrated solution that could provide web-based email, calendaring, anti-virus, content filtering, and other features in one reliable, easy-to-use package," says David Sorkin, System Technical Manager for Cal State Northridge. The legacy system had relied on separate components with varying degrees of compatibility including Infinite for webmail, MeetingMaker for calendaring, and Trend Micro for anti-virus.

Sorkin also wanted class-of-service capabilities to meet the different needs of students, faculty, and alumni. Finally, the chosen solution had to be standards compliant to meet a campus-wide initiative.

### **Solution**

After evaluating four systems, the University chose Mirapoint. "We didn't find any solution that fit our needs like Mirapoint did," says Sorkin. "Mirapoint allowed us to deliver all the services we wanted to provide on campus."

Migration from the old system just prior to the 2002 fall semester took just ten days. Since deployment, complaints about slow mail delivery have virtually disappeared. Mail is delivered within two minutes or less. The integrated anti-virus software powered by Sophos has proved so effective that at least one independent email server on campus, the Engineering department, now routes its email through the Mirapoint system.

Through class of service, the University is offering one set of features for students and another for faculty and staff. Mirapoint also provides information that can be used to institute mail quotas for student users.

Reliability has been exceptional. "The only time the system has gone down is when we did something that caused an error," says Sorkin. "In each case, the support staff at Mirapoint has been able to quickly determine what the problem was. We've had very good experiences with them."



## Background

Queensland University of Technology, located in northeastern Australia, is one of the country's largest educational institutions with over 30,000 students, plus 5000 faculty and staff. The university had been struggling with a system that was a combination of proprietary and homegrown freeware-based messaging platforms that included Cyrus, Qpopper, PMDF, Compaq Tru64 UNIX, and VMS.

The existing system was large and cumbersome with substantial administrative overhead.

It was nearly impossible to find qualified staff that could “walk in” and operate the system. There were performance problems with the system and nearly constant instability.

## Challenge

The university had no choice but to consider replacing the legacy messaging system. They drew up a list of features and capabilities that the new system must include. To provide access to all users from wherever they were or from whatever device they used, the new system had to support not only Post Office Protocol (POP), but webmail and Internet Message Access Protocol (IMAP) clients. It also had to integrate with the existing Novell eDirectory that enabled user authentication and account provisioning, and it had to be capable of delivering 99 percent of all emails in less than two minutes.

Furthermore, the new system had to meet the needs of current users, and provide capacity for projected growth over the next three years. It needed to be able to scan all email attachment types for viruses, and also provide a platform for future messaging services such as calendaring and voicemail. Finally, it had to be deployed by the beginning of the 2002 second semester—just months away.

## Solution

The university benchmarked three solutions: freeware, Sun Microsystems' iPlanet, and Mirapoint. The solution from Mirapoint met all of Queensland University's rigorous requirements. It provided a cost-effective system with simplified management capabilities. It also demonstrated proven reliability, scalability, and performance. And it offered a platform for the university to address increasing message traffic and users, as well as new messaging services.

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## Mirapoint Means Simplicity

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Messaging solutions at most educational institutions have evolved over time to include a complex integration of multiple vendors' products. They are prone to high management costs and reliability issues. Adding new services requires purchasing and integrating new hardware and software—and often-costly professional services support from vendors. Ongoing management can be difficult without integrated management tools and unique staffing is often required for mail database administration, system administration, and postmaster functions.

Mirapoint eliminates the complexity, insecurity, and cost of multi-vendor email installations by integrating feature-rich messaging, policy management, and security in a single appliance. Educational institutions can deploy services more rapidly and economically than competitive solutions that require integration between software, hardware, storage, and other components. Mirapoint's standards-based architecture works with major email clients (Outlook, Eudora, Netscape, etc.), legacy email applications, directory servers, and storage options. Global, centralized, dynamic policy management allows the email administrator to control user behavior, message handling, security within the network, and the performance of the network. Mirapoint also offers 5X lower TCO than any other messaging product available, which enables technical resources to be redirected from ongoing management to focus on adding new services, further accelerating deployment and increasing user satisfaction.

Following are three institutions that are benefiting from Mirapoint's ability to easily deploy, manage, and maintain reliable messaging services.





### **Background**

America's oldest state-chartered university, the University of Georgia was founded in 1785. The main campus, located in Athens, Georgia, had 45,000 students, faculty, and staff relying on a homegrown solution, known as "Arches", for campus-wide email.

Although up-front costs of the homegrown solution were moderate, the University quickly discovered that this approach proved unreliable, required significant ongoing maintenance and expensive hardware investments, and also lacked the flexibility to add new messaging services. "Email is essential to the learning process and ongoing flow of communications between our students, faculty, and staff," says Greg Ashley, Executive Director and Assistant CIO, Enterprise Information Technology Services for the University. "We needed an email system that could scale to eventually handle 100,000 users."

### **Challenge**

What the University needed was a reliable, scalable system that would make it easy to add features in the future. Kirk Bertram, UGA's CIO and Associate Provost, enlisted the help of a committee composed of several directors of IT from across campus to identify issues, alternatives, and make recommendations. The process involved thorough dialog with several independent consultants, rigorous testing, and input from a cross-sectional campus focus group.

### **Solution**

After receiving proposals from a number of suppliers, the evaluation committee narrowed their search to two: Novell Netmail and Mirapoint, represented by the Newman Group, which focuses on the educational market. "In the end, Mirapoint was the unanimous recommendation of the selection committee to manage the tremendous volume of email that we have, while providing a robust and user-friendly interface—all with a very reasonable total cost of ownership," says Ashley. Bertram agreed. "There is simply no room in this environment for a legacy email system. Mirapoint was the only choice."

The University has deployed Mirapoint Message Servers to deliver POP and IMAP services for its desktop email users and webmail for its mobile user population. To facilitate online collaboration, UGA is using Mirapoint's web-based group calendar and address book. They have also implemented Mirapoint Message Directors to secure incoming email traffic and guard against spam, virus, and hacker attacks.

### **Background**

Temple University, based in Philadelphia, Pennsylvania, is the 36th largest university in the United States with 33,000 students and 5000 faculty and staff. According to Tim O'Rourke, Temple's CIO, "Fifteen years ago, email was a grand, innovative idea. Problems with email were expected and easily overlooked. Today, email is a utility and just like the telephone, when you need it, you expect it to be there and working properly. Five minutes of downtime is absolutely unacceptable!"

Email at Temple grew from being 'nice to have' to being a critical application. As more users came on board, existing servers outgrew their capacity and new servers were just added on. "We were in a position where we were maintaining at least eleven different email servers and needing more capacity," says O'Rourke.

At the beginning of the 2002 academic year, Temple had five major systems administered by Computer Services. This included a UNIX-based Sendmail solution called "Astro" and a Novell GroupWise system running on a Windows-based platform. There were also at least as many email servers administered by individual departments for the exclusive use of their own staff and faculty.

One of the problems with multiple email servers is multiple mailboxes. "People don't have to use multiple email addresses, but many do as members of different communities of interest," says Sheri Stahler, Associate Vice President, Computer Services. "While Computer Services encourages the use of mail-forwards to a single mailbox, many people have to check several mailboxes. On average, faculty and staff are likely to have three or four accounts and students at least two."

Multiple mailboxes were a minor inconvenience compared with the level of service. Before hardware upgrades were performed in November 2002, mail delivery was slow and access via the web client was undependable during peak hours, resulting in many complaints. The new hardware helped the main email service, but did nothing for the GroupWise users and departmental servers.

### **Challenge**

In October 2002, the University's messaging problems came to a head. "The decision was to either add yet another server, or eliminate them all and get one robust, reliable, and scalable solution," says O'Rourke. The CIO decided that Computer Services support of messaging solutions would be more efficient and cost effective if only one server was supported instead of five.

## Solution

The University evaluated messaging systems from Critical Path, Sun's iPlanet, Oracle, and Mirapoint. A demo system provided by Mirapoint offered convincing evidence that the Mirapoint system was easy to configure and administer and proved reliable throughout the trial period. "Email has grown to be a utility. Mirapoint is the only firm we looked at that recognized that. They built their email solution as a robust, reliable, and scalable system," says O'Rourke.

The main "Astro" system is scheduled to be migrated over to Mirapoint in May 2003. GroupWise system users will be migrated during the 2003 summer in a staggered implementation. "As a vendor, Mirapoint has been everything we asked for: responsive, concerned, and reliable," says O'Rourke. "All we need now is for them to complete a successful migration. We have every confidence that they will."

Looking past the deployment, the university expects the time needed for management and maintenance of the new system will be much less than that for the multiple older solutions. "This new system will give us the time to work on innovative messaging and other advanced services," says Charles Mathew, Director, Database Applications and Digital Media Development.

## University of Cergy Pontoise



## Background

Founded in 1991, the University of Cergy Pontoise is a public educational institution emphasizing scientific, cultural, and professional studies. It has five training and research facilities, a technology institute, and a general administration-training institute. Distributed across seven sites around Paris, the university has a student population of 11,000. The university's overworked messaging system consisted of Sendmail and Qpopper running on an aging UNIX server.

As a relatively new institution, the university was still growing rapidly. The messaging server, however, was becoming less able to keep up with the expanding number of users and messages. Spread across seven locations, 350 administrative staff depended upon email to keep in touch. But the service was difficult to manage with individual upgrades, patches, and logs required for Sendmail, Qpopper, and the UNIX operating system—all performed using arcane command line interfaces. The IT group was concerned about the many vulnerabilities residing in Sendmail, Qpopper, and UNIX. They were also frustrated by the lack of scalability of the server.

## **Challenge**

The Information Technology department sought a scalable, easy-to-manage system that would allow staff to check and manage their email via the Internet in France or when traveling abroad. WebMail would be difficult to add to the current server, and IMAP was not even a possibility. Needed was a solution that could simplify management, enabling upgrades that could be performed in a single operation. The IT group also wanted to be able to delegate management by domain to different users.

The new system would also need to provide scalability for current and future needs, and offer webmail and IMAP capabilities to allow users to check messages from any web browser or even a WAP-enabled cell phone.

## **Solution**

The university evaluated three alternatives including Sendmail, Sun's iPlanet, and Mirapoint. "We chose Mirapoint based on three simple criteria: they're reliable, they're efficient, and they're easy to configure and manage," says Edouard Gherardi, Officer of Information Technology Networks and Security Officer for the university. "In addition, Mirapoint's expert technical support staff is always available, guaranteeing us a messaging solution that will always respond to users' needs."

The system allows users to check their email from campus or remotely via a secure Internet connection and provides an automated answering service for each user. The integrated anti-virus software powered by Sophos ensures that viruses don't compromise the network.

The Mirapoint messaging system is easy to install and use, making it simple for IT administrators to incorporate it into any network environment. While conventional solutions require administration of both an operating system and email software, the Mirapoint Message Server has a single administration console, making management of the system easier.

Concerns over reliability are also gone with the new system, which offers redundant data storage and power for maximum availability.

## Mirapoint Means Security

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According to Gartner Group, over 80 percent of all computer viruses enter a company's network through email, with the typical virus infection costing an organization up to \$500,000 per incident. Educational institutions, too, must deal with the cost and disruption caused by viruses as well as spam.

Mirapoint incorporates everything needed to ensure the safety of the message network. Mirapoint is the only messaging appliance to serve, secure, and manage email within the infrastructure at the SMTP layer. It blocks spam, protects against viruses and hacker attacks using integrated day-zero virus scanning technology, and filters content for both inbound and outbound messages. Mirapoint's MailHurdle uses a multi-layered approach to achieve a 98 percent spam catch-rate with virtually zero false positives. MailHurdle blocks spam at the edge of the network before it can consume available bandwidth or waste processing, storage, or administrative resources.

Mirapoint further secures the messaging infrastructure through encrypted transmission of messages from client to the mail server, and through sender authentication to assure messages from unauthorized sources never enter the network. Mirapoint additionally provides a secure, hardened operating system with no known exploits to protect against hackers.

Following are two institutions that are benefiting from Mirapoint's security features including anti-virus and anti-spam protection.



## Background

Encompassing 100 buildings on a 2600-acre campus, Virginia Polytechnic Institute and State University (Virginia Tech), located in Blacksburg, Virginia, is an impressive institution. Founded in 1872, the school has more than 25,000 students and 7000 faculty and staff. Its campus-wide messaging system currently has 82,000 registered users.

Faculty, staff, and students are supported on a Sun Internet Mail Server (SIMS) installed in September 1999, while around 2000 faculty use Microsoft Exchange, deployed in November 1998. “We installed virus protection on the Exchange server virtually from the time we brought it up,” says William Dougherty, Computer Systems Senior Engineer at Virginia Tech. “We saw the kind of impact it was having. The viruses that were being caught increased dramatically from late 1998 to late 1999.”

## Challenge

Protecting non-Exchange users from viruses was becoming a major challenge. The helpdesk was receiving 10 to 20 calls each day for virus-related problems. “We estimated that it was costing between \$120 and \$150 per call to resolve those problems,” says Dougherty. “Students, who were paying a technology fee, expected more service, and staff were losing productivity. They weren’t able to do their jobs. It started to become an issue.”

## Solution

Dougherty considered installing anti-virus software on the SIMS server, but decided against that approach. “Getting something to work with the hooks to go into the SIMS box would have been difficult because it was a proprietary product,” recalls Dougherty.

They also tested virus software running on a Sendmail front-end device using a small Intel-based Linux box. “There was an awful lot of overhead, and there was more management involved. The cost model was also prohibitive because we would have to pay a fee to the virus software company for every user on the system.

He then turned to Mirapoint. “We could put the Mirapoint product out in front of the mail server, so we didn’t need to worry about the load on the SIMS server or software compatibility.”

The university installed four Mirapoint Message Directors with load balancing in August 2001. Early on, the system was registering 50,000 virus hits a day. “By implementing the Mirapoint solution, that number has decreased by 97 percent,” says Dougherty.

With viruses under control, Dougherty turned his attention to the other email problem—spam. “We were getting pounded by spam. It was a problem we had to do something about.”

Leveraging the customization capabilities of the Mirapoint solution, the university created an effective spam filter. Whenever someone comes into the network with more than 100 simultaneous SMTP connections, the system logs it, the email is purged from the queue, and then the Internet Protocol (IP) address is added to a black list. “Because it’s blocked before it gets to the mail server, it lightens the load on the system,” says Dougherty. “We have over 200 sites that we currently block.”

## Hong Kong Polytechnic University



### Background

The Hong Kong Polytechnic University is the largest university grants commission-funded tertiary institution in Hong Kong, with 22,000 students and 3000 faculty and staff. To serve the messaging needs of its students, faculty, and staff, it had purchased separate hardware and storage components and general-purpose operating systems. Creating a fully functional messaging server in this manner required extensive integration of disparate hardware and software components.

### Challenge

“All students, staff, and faculty members demand quick and reliable access to computing and email resources for administration, research, teaching, and learning,” says Kent Leung, Chief Computing Officer for the Information Technology Services Office at the university. With email traffic—and incidents of viruses—on the rise, the university decided to take action. “We needed to upgrade our existing system to provide better virus protection,” say Leung.

Because managing and maintaining a messaging system is a complex and costly function, Leung looked for an easily manageable and cost-effective approach to enhance their messaging infrastructure. Strong anti-virus protection was critical to any solution considered.

### Solution

Hong Kong Polytechnic selected Mirapoint. The Mirapoint Message Director is a tightly integrated messaging hardware and software system that is simple to deploy. With support for Internet standards, the Mirapoint solution works within any Internet messaging environment to provide high-performance, scalable message routing services. “It allows staff and students to send and receive messages with anti-virus protection, and it works on a cross-platform basis for ease of deployment,” says Leung.

## Conclusion

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Email is the number one mission-critical application in educational institutions today. Yet, colleges and universities are suffering from fragmented infrastructures, poor performance, an exploding flood of spam, and constant virus attacks transmitted via student laptops.

Mirapoint delivers proven, appliance-based solutions with carrier-grade reliability to build a more secure messaging infrastructure with centralized control and simplified management at a dramatically lower cost. Purpose-built appliances provide 99.999 percent uptime with fully integrated security to protect networks from viruses, spam, and other unauthorized traffic. Single console management simplifies administration and minimizes costs and maintenance. And the appliance-based module approach provides the flexibility to meet the individual needs of students, faculty, staff, and alumni.

Mirapoint is the market leader in appliance-based solutions for secure messaging networks in educational institutions, with more than 100 million mailboxes served and secured worldwide. For more information on how Mirapoint messaging appliances can serve, secure, and manage your email, visit our Web site at [www.mirapoint.com](http://www.mirapoint.com), or call us at 408-720-3700.

### **Mirapoint, Inc.**

909 Hermosa Court,  
Sunnyvale, CA 94085 USA  
Tel: 800-937-8118  
Tel: 408-720-3700  
Fax: 408-720-3725  
Email: [info@mirapoint.com](mailto:info@mirapoint.com)  
[www.mirapoint.com](http://www.mirapoint.com)

For local and international office locations please visit [www.mirapoint.com](http://www.mirapoint.com).

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