

Success Story: Making the Grade at Southern Illinois University

ABOUT SOUTHERN ILLINOIS UNIVERSITY

Founded in 1869, Southern Illinois University is a multi-campus university comprising two institutions, Southern Illinois University at Carbondale (SIUC) with Schools of Medicine in Springfield and Edwardsville, and a School of Dentistry at Alton and East St. Louis. The University, with an annual operating budget of over \$618 million, enrolls over 34,000 students, and offers associate, bachelors and masters degrees in 175 academic programs, as well as doctoral and professional degrees in law and medicine.

The largest campus, SIUC at Carbondale, hosts an average of 17,000 to 20,000 email accounts for faculty, staff, graduate assistants and students, processing 250–350,000 messages per day.

SIUC RESULTS:

- Delivered a more scalable, manageable, and secure email environment
- Reduced administration hours by more than 1/3
- Migrated 20,000 mailboxes, over one weekend, with minimal downtime, and no loss of data

CHALLENGE

At Southern Illinois University at Carbondale, Chaos Theory was a good model to describe a day in the life of the email and security administrators. Before their upgrade and implementation the IT department was constantly patching problems, and defending the network from spam and viruses.

In a culture that promotes academic freedom above all else, eliminating all departmental systems was not an option. The new SIUC email network needed to work with several existing departmental systems. At the same time, these systems were becoming portals for spam, viruses and other threats to the central email network. Moreover, email routing was a challenge, with directory information (email addresses, aliases, departments) scattered across different domains and servers. The IT department faced all of this while trying to protect the university using only public domain software.

With minimal control over the huge influx of spam, the campus-wide email system had grown to the point of unmanageability. “We were running out of CPU processing and having to buy a server with more and faster processors,” says Pamela Reed, the IT department’s systems programmer responsible for SIUC’s email system. “Clearly, something had to give—and without a major budget increase, buying a bigger and faster server and hiring more staff wasn’t a workable option.”

Spam was only part of SIUC’s problems; the IT department noted that each year they were devoting a larger share of time and money to protect against email-borne threats. The university tried to fight this onslaught by deploying a series of public-domain anti-virus and anti-spam applications. This was time intensive because it required a monumental effort to compile new security applications and then make them work with the existing infrastructure. If problems arose, there was no support desk to call, and of course these applications weren’t designed to work together—limiting their flexibility, and further increasing the administration load.

One other missing piece was an effective way to distribute control and empower users. Centralized control was required in order to stay on top of new security threats, but individual users needed the ability to create their own vacation notices, and set their own filters. In addition, traveling faculty and summer-vacationing students needed remote and mobile access to their university mailboxes.

The limitations of the old system were seriously hindering the free flow of information that makes a university what it is—a breeding ground for ideas. It was time for a change.

“I can sleep at night now. Sendmail has made my life so much easier. I haven’t received a single after-hours call since we started using Sendmail.”

Pamela Reed,
Network Administrator, Southern Illinois University – Carbondale





THE SENDMAIL SOLUTION

After evaluating about 15 spam and virus-filtering products—and a competing product for a year—SIUC deployed almost the entire Sendmail family of products. According to Albert Allen, assistant director of Information Technology, “Sendmail offered the most complete solution available, allowing us to integrate all functionality into a single suite that is fully structured and supported to provide all the services we need.”

Just as important, Allen said, “Sendmail gave us the manageability to respond quickly to new threats, since, in the university environment, we tend to see every new threat that comes along.”

THE SOUTHERN ILLINOIS UNIVERSITY-CARBONDALE SENDMAIL SOLUTION

Sendmail Switch™, Multi Switch Console™ – The commercial version of the Sendmail message transfer agent (MTA) offers SIUC maximum routing efficiency and reliability along with easy scalability to handle ever-increasing email traffic loads. Deployed at the Internet gateway, Multi Switch Console provides a standards-based routing solution that enables SIUC to manage multiple MTAs from a single administration console.

Sendmail Advanced Message Server™ – Designed to provide bulletproof email services, Advanced Message Server delivers a carrier-class, standards-based POP3/IMAP4 mailstore that integrates easily with other Sendmail products and provides the performance and scalability to address the university’s future needs.

Sendmail Mobile Message Server™ – Students, faculty, and administrators can read, compose, save, delete, forward and reply to messages from wherever they are—away from their desks or home for summer vacation. The solution supports both Web and wireless access, with IMAP support for a consistent view of messages across multiple devices.

Mailstream Manager™ – Sendmail Mailstream Manager is a complete email security and policy management solution that provides SIUC centralized control over its email security infrastructure. Anti-spam, anti-virus, text and attachment scanning, and policy enforcement are all controlled by a powerful rules-based application which provides SIUC unprecedented control, flexibility, and visibility into their critical email communications.

Sendmail Intelligent Inbox™ – Intelligent Inbox provides a Web-based user interface that allows SIUC users to: create personal filtering rules based on sender, message body, time of day. Users can also manage personal whitelists and blacklists; set personalized vacation and out-of-office responses; forward mail to other email addresses and sort mail into specific IMAP folders based on sender, priority, subject and more.

Sendmail Directory Services™ – Sendmail Directory Services provides a single clearinghouse for all email addresses, aliases and other directory information from the assortment of directories scattered across the university. The Directory Services is a key component within the Sendmail/SIUC email architecture, providing enhanced connection control, optimized routing, and complex policy creation.

EARNING ITS TENURE: A LONG-TERM SOLUTION FOR EMAIL MANAGEABILITY

Even with all the added security, manageability and usability features, Sendmail’s tight integration enabled SIUC to upgrade its previous email configuration while reducing the amount of administrative hours required. In terms of hardware, maintenance and management cost savings, the benefits were clear. But that’s only the beginning, according to Pamela Reed. “I don’t have to spend nearly as many hours maintaining mail. There’s no constant monitoring, like there was on the old system. Now I have time for my projects. It’s a much more efficient use of my time.”

The creation of a central campus email directory was a significant improvement over the assortment of directories with no hierarchy or structure that were scattered across the University. The new directory working in tandem with the other campus directories, ensures that people can quickly find one another and that messages get routed and delivered to the correct mailstore the first time.



With Sendmail in place, Reed has more time for strategic IT projects. In addition, she can concentrate better now that no one is waking her up at night. "Officially, we're on 24-hour call," she says. "I used to get calls late at night when the system was down, and I'd have to come into the office at 10, 12, and, 2AM. I haven't received a single after-hours call since we started using Sendmail."

And because everything is designed to work together, it works much more efficiently than the old public-domain-based system. "When we grow our system, we don't have to buy bigger boxes," Reed says. "We can expand horizontally by simply adding another MTA." But that day is far off, since the current configuration has more than enough capacity to handle SIUC's user base and email volumes for the foreseeable future.

AT THE HEAD OF THE CLASS: THE END-USER EXPERIENCE

Greater efficiency, easier management, integrated functionality and reliable support are all terrific benefits—but the bottom line of any email system is the end-user experience. The first potential impact on end users was the migration itself.

Sendmail's Professional Services migration came off literally without a hitch. From start to finish, the entire project took only three weeks. "We had one of Sendmail's consultants come in to help us with the transition, and he was great," says Albert Allen. "We wanted to make it as smooth and transparent as we could, so that our customers weren't threatened by a whole bunch of changes. The consultant developed things that were even beyond our expectations to lessen our downtime during the migration."

In fact, the entire migration of over 20,000 mailboxes was done over a single weekend. User inboxes and mail folders were backed up and copied directly over to the new system, so no mail was lost and there was no need for users to reorganize their inboxes. User IDs and passwords were transferred as well. In terms of email availability during the switchover, "probably 80 percent of our customers on campus didn't even notice the transition," Allen says.

SPREADING THE KNOWLEDGE

Now that the new system has proven itself for over a year, some of the independently run departmental email systems are moving to Sendmail. One department that has run its own system for many years is already working to integrate its own domains with the central email system. The plan is for the department to use the Sendmail gateway for incoming mail, apply Sendmail anti-virus and anti-spam, scanning and then route the mail to the intended recipient within the department.

MAKING THE GRADE: OVER A YEAR OF SUCCESS

As the IT person who must keep email working for SIUC faculty and students, Reed sums up her experience in a very personal way: "I can sleep at night, and Sendmail has made my life so much easier." Apparently, it's making life easier for her customers too. "We live in a small town, after the migration I would get stopped on campus and in town by people who wanted to compliment me on how much they appreciated the new mail system," she recalls.

A year later, what Reed mostly hears about the system is nothing—no complaints, no concerns, and no calls. In other words, email is working for people exactly the way it should. Users hardly think about the system at all—even as it makes their lives immeasurably easier and better.

In any class of technology, that's a straight-A performance.

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Assistant Director of Information Technology, Southern Illinois University – Carbondale

Command and control for email.



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