

SecureZIP Technology Helps Creighton University Researchers Protect Sensitive Patient Information

Creighton University Medical Center at a Glance:

Creighton University is a private, Catholic Jesuit University ranked annually by U.S. News and World Report as one of 'America's Best Colleges' among Midwest universities. Located in Omaha, Nebraska, the school's mission is to provide comprehensive professional instruction to prepare graduates for a career that emphasizes integrity and service.

Creighton University is consistently recognized as one of the top private universities in the country for medicine, pharmacy, physical therapy, occupational therapy, dentistry and nursing. In addition to teaching students, research is an important aspect of the school's programs.

Faculty members and graduate students conduct research in many areas, including ethics, clinical drug studies, innovative educational techniques, neuromuscular research, and toxicity of drugs and environmental pollutants, among others.

The Challenge: As part of their ongoing research, professors, doctors, graduate students, and others exchange a wide range of confidential patient data. To maintain the integrity and privacy of such data, the U.S. Government introduced the Health Insurance Portability and Accountability Act (HIPAA) in 1996 and established April 2003 as the deadline for compliance. In 1999, the university set up a working group to look at the implications of HIPAA as it related to its medical centers. In 2002, the university began to consider the ramifications of HIPAA on the university's research efforts.

"We knew that the time was drawing near when we would have to have a standard HIPAA procedure in place to adequately protect subject identifiers from improper use and disclosure," said Dr. Phillip Vuchetich, assistant professor of Pharmacy Sciences for the School of Pharmacy and Health Professions. "In preparation for this requirement, we launched a research study to evaluate the feasibility of deploying PKWARE's SecureZIP-enabled solutions for Windows as an integral part of a HIPAA solution for independent, LAN-based centers for medical research and student medical services."

Solution Overview: Creighton University was already using PKZIP to compress large files, so they were familiar with the product and its capabilities. However, they wanted to determine if the new SecureZIP technology which provided strong encryption could meet the tough security and privacy standards set forth by HIPAA. Alternative solutions Creighton could have implemented included S/MIME and PGP, however both would have required greater investment, are more complex, and raise interoperability issues. Because SecureZIP integrates with both PKI and non-PKI environments, the cost was much less for deploying internally as a security solution as well as for interoperating with external recipients.

"Creighton University Medical Center operates islands of excellence," said Dr. Vuchetich, "and our goal was to assess SecureZIP's capabilities with regard to protecting health-related data as well as the integrity of our research."

To determine if SecureZIP could meet HIPAA requirements, Dr. Vuchetich—together with Dr. Vasant Raval, chair of the department of Accounting in the College of Business Administration—launched a formal study in June 2002. The researchers implemented SecureZIP in a Microsoft Windows environment made up of more than 110 researchers, and then began testing in two browser environments, Microsoft Internet Explorer and Netscape Navigator.

"The implementation of SecureZIP was swift and relatively easy," said Dr. Raval. "We found the product performed data encryption well, and also integrated smoothly and easily with externally supplied digital certificates. Plus, once we equipped a few users, SecureZIP scaled quickly and easily to our remaining researchers."

Today, the team of researchers associated with the Creighton University Medical Center, including professors, physicians, graduate students, clinicians, and statisticians, rely on SecureZIP in Windows 2000 and Windows XP environments to exchange confidential patient data and other research-related information. By relying on SecureZIP's seamless email integration with Microsoft Outlook, researchers can auto-zip email attachments—and selectively encrypt file attachments to ensure privacy. As a result, Creighton researchers now have an easy-to-use solution for sending email attachments compactly and securely.

Benefits: “The people who use SecureZIP are very busy and they needed a non-intrusive, user friendly way to comply with HIPAA,” said Dr. Raval. “Researchers each have their own specialty, such as osteoporosis or cancer, and they’re not computer ‘techies.’ SecureZIP encryption technology lends itself well in this scenario.”

Furthermore, when Dr. Vuchetich asks external reviewers to read through his research before he sends it for peer review, they can do so easily with ZIP Reader by PKWARE, a freely available program that allows anyone to open and decode highly secure ZIP files. As a result, strong encryption capabilities are ensured—without Dr. Vuchetich’s outside reviewers being required to purchase a copy of SecureZIP in order to unzip and decrypt the contents of a secure ZIP archive.

“SecureZIP delivers a cost-effective, user-friendly and simple solution to secure communication and storage for networked user groups,” said Dr. Vuchetich. “By blending SecureZIP with RSA Security’s BSAFE software, the solution offers best-of-breed encryption for recipients that have digital certificates, and also achieves the same benefits for users that don’t (through the support for password-based encryption). Along with ZIP Reader, these capabilities provide a powerful combination for bridging the gap between PKI have’s and have-not’s, as well as breaking down other barriers to deployment. We were thrilled to find that SecureZIP provides a security solution that is easily deployed within our current infrastructure, and will be an essential part of future security enhancements for protecting patient identifiable information.”

Customer Solution Spotlight: Creighton University Medical Center

Profile:

Located in Omaha, Nebraska, Creighton University is consistently recognized as one of the top private universities in the country for medicine, pharmacy, physical therapy, occupational therapy, dentistry and nursing. As part of their ongoing research, more than 300 professors, doctors, graduate students, and others exchange a wide range of confidential patient data.

Needs:

- Low-cost approach to HIPAA compliance for securing confidential data transmitted over public networks that could be easily adopted among researchers
- Platform-interoperable solution for users on Windows, UNIX, OS/400 and mainframe
- Seamless integration with Microsoft Outlook for auto-zipping email attachments

Solution:

- SecureZIP technology for Windows

Results:

“SecureZIP delivers a cost-effective, user-friendly and simple solution to secure communication and storage for networked user groups. By blending SecureZIP with RSA Security’s BSAFE software, the solution offers best-of-breed encryption for recipients that have digital certificates, and also achieves the same benefits for users that don’t...Along with ZIP Reader, these capabilities provide a powerful combination for bridging the gap between PKI have’s and have-not’s...We were thrilled to find that SecureZIP provides a security solution that is easily deployed within our current infrastructure, and will be an essential part of future security enhancements for protecting patient identifiable information.”

~ *Dr. Vasant Raval*
*Chair of the department of Accounting
in the College of Business Administration
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