

CRYPTOCard's AuthEngine™: Security and Productivity for Los Alamos Labs.

“Our goal is to make it easy and natural for employees to work securely. We're trying to avoid the trap of having security overwhelm productivity.”

Chris Kemper, Deputy Director of Los Alamos' Computing, Communications and Networks



A Nuclear Responsibility

As one of the world's leading research institutions, Los Alamos Laboratories is advancing technology on many fronts including hydrogen fuel cell development, supercomputing, and applied environmental research. Yet, since its creation, the primary responsibility of the lab has been to maintain the effectiveness of the United State's nuclear deterrent. Though the world is rapidly changing, this essential responsibility remains the core mission of the laboratory.

As one of the U.S. Department of Energy's multi-program, multi-disciplinary research sites, Los Alamos is engaged in sensitive and proprietary projects of global importance. Los Alamos' core values combine security awareness, intellectual freedom and scientific excellence with national service to generate scientific and engineering solutions for the nation's most pressing problems.

The laboratory is the second-largest manufacturing site in the nuclear weapons complex and one of only two national labs operating at this high level of mission importance and scientific excellence.

Today, many Los Alamos employees work to help ensure the safety and reliability of the nuclear weapons in our country's stockpile. Much of their work relates to the Laboratory's involvement in national security and must be kept classified. There is also, however, a great deal of work, including security and nuclear research, being done at Los Alamos that is unclassified.

AuthEngine innovation...

CRYPTOCard's customizeable AuthEngine Two-Factor Authentication (2FA) development kit offered an innovative solution to deliver user-friendly strong authentication technology. AuthEngine allows Los Alamos developers to build the 2FA technology into the lab's proprietary/unique systems. With just few days of planning/coding time, Los Alamos was able to take full control of their authentication solution - from token initialization and management, automated deployment and self-enrolment, to reporting and auditing, all from their existing applications.

Case in Point

The Los Alamos Labs Solution

- Utmost security required for classified operations
- AuthEngine implementation delivered strong authentication to a unique/proprietary environment
- Seamless Kerberos integration
- RB-1 token now used for system access throughout the mixed OS environment

Case Study

Security With Productivity

The Lab's challenge was to better protect their critical systems from cyberattack without hindering worker productivity. "Our goal is to make it easy and natural for employees to work securely," Chris Kemper, deputy director of Los Alamos' Computing, Communications and Networks division, told technology specialists from the public and private sectors during a conference sponsored by the National High Performance Computing & Communications Council. "We're trying to avoid the trap of having security overwhelm productivity."

Prompted in part by 1999 allegations that classified data was mishandled, Los Alamos officials spent three years upgrading security at the 43-square mile site, which houses 15 nuclear facilities. For many employees, the new security measures have made life less complicated, according to Kemper. "I think productivity's actually gone up," he said. "People can do their jobs securely without worrying as much as they used to."

With CRYPTOCARD's AuthEngine technology, Los Alamos has implemented a new, centralized identity verification system. Authorized employees can now access sensitive data more easily--and more securely. Rather than having to memorize multiple secret codes, Los Alamos employees now use a one-time password generating RB-1 Token from CRYPTOCARD. With just one Personal Identification Number (PIN) to remember, employees can instantly generate a one-time, non-reusable password to access the protected network. If a token should ever be stolen, it would be useless to the thief without the employee's secret PIN. "That's really made a heck of a difference," Kemper said of the CRYPTOCARD system.

Also, with such a large number of users and the wide array of computing platforms in play at Los Alamos, AuthEngine's ability to deal with all the idiosyncracies within the network has allowed them to customize the solution to their precise needs.



Los Alamos National Laboratories

CRYPTOCARD for Access to All Lab Systems

With AuthEngine in place, there is no server to purchase or licence. The lab simply has to purchase its CRYPTOCARD PIN Pad Tokens to control access to virtually all lab systems.

"The RB-1 tokens have allowed us to eliminate reliance on traditional passwords - which were simply not secure enough for a national weapons lab," said Alex Kent, deputy group leader for network engineering. Los Alamos has now been using CRYPTOCARD since 1999. "It's part of the culture," he said. "Just as people would never come to work without their badges, they won't show up without their password tokens."

About CRYPTOCARD

CRYPTOCARD is a leader and innovator in the Network Authentication Industry. Its multi-awarded, much-lauded Two-Factor Authentication options include both a server based or 'product' solution (CRYPTO-Server) and a Managed Authentication Service (CRYPTO-MAS). The combination allows organizations of any size and means to adopt a strong authentication policy. CRYPTOCARD is unique in the industry in their commitment to ensuring their products/services work with any common network architecture including OS compatibility (Windows, Linux, Mac OS X), webserver flexibility (IIS, Apache) and database options (Active Directory, LDAP, Open Directory etc). Add to that the outstanding 'out of the box' interoperability with many top industry network solutions including Citrix, Checkpoint, Cisco and many more, and you begin to see how CRYPTOCARD has grown since its origin in 1989 to become a thriving enterprise doing business in more than 70 countries.

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