

EMC Corporation

Data encryption for the highest level of security and compliance

Acceleration

“EMC storage software with RSA BSAFE® security software’s encryption accelerates customers to the highest level of security and compliance, without the need for additional hardware. Offering the security functionality required to meet stringent FIPS 140 and Suite B requirements, RSA BSAFE security software is suitable for U.S federal agencies and all other organizations demanding the very best security.”

Roland Cloutier, CISO, EMC Corporation

AT A GLANCE

Business Challenge

- Assure customers that EMC storage solutions meet the highest security and compliance standards, in order to maintain its leading market position
- Find a solution that enables developers to easily build encryption into its products without increasing cost or time-to-market

Solution

- EMC developers embed RSA BSAFE software into storage software to protect sensitive data, ensuring a level of security in line with FIPS 140 and Suite B requirements
- Integrates with RSA® Key Manager – key management solution, which stores, distributes and manages encryption keys throughout their lifecycle

Results

- Allows EMC to achieve a solid and secure software design without significantly increasing development times or costs
- Offers EMC customers a low-cost way of meeting their security and compliance needs, utilizing their existing IT infrastructure

EMC is one of the world’s leading providers of infrastructure information systems, software and services, employing approximately 40,000 people around the world. Its clients range from Fortune Global 500 enterprises to start ups, across all industry sectors, including financial services, manufacturing, transportation, public services, telecommunications, healthcare and life sciences. To learn more, please visit: www.emc.com

BUSINESS CHALLENGE

Several factors are conspiring to increase the threat of data breaches: companies are storing more sensitive data; risk of data loss from insiders is on the rise; the need to share data with authorized external users is growing; new markets for stolen data are emerging; and the regulatory environment continues to increase in complexity.



To maintain its position as the industry-leading provider of storage solutions, EMC must be able to assure its customers its hardware and software meet the highest security standards, as well as regulatory compliance requirements. Data encryption is quickly becoming the de facto technology for achieving these goals.

Any enterprise solution for protecting data – especially data at rest – must involve two core security technologies: strong encryption technology to protect sensitive data and full enterprise key

management for effective administration and distribution of the keys that lock and unlock that protected data.

In order to meet its customers’ security and compliance needs, EMC developers require a technology that enables them to quickly and easily build encryption into storage software, without significantly increasing development timelines or costs.

SOLUTION

Rather than using open source security software, which presents one option for encryption, EMC decided to embed RSA BSAFE security software from RSA, the Security Division of EMC. Regularly and rigorously tested to address the latest vulnerabilities, as well as advancements in cryptographic requirements, EMC found RSA BSAFE products generally offer higher performance solutions as compared with open source security products.



The Security Division of EMC

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RSA BSAFE security software also provides the functionality necessary to allow developers to meet stringent FIPS 140 and Suite B cryptographic requirements for offering products to U.S. government agencies. This is a key consideration for EMC, whose customer base contains a high proportion of federal organizations. Thus far, EMC has embedded RSA BSAFE security software into a number of its software solutions.

EMC Control Center

EMC Control Center (ECC) is an industry-leading software product used for storage resource management. Installed in a customer's data center, it allows companies to discover their storage environment, report on capacity and performance, and monitor the provisioning of storage.

ECC consists of a number of major components: the repository – the central location for all data; the server – the central communications point; and agents – used to collect data from across the enterprise. EMC uses RSA BSAFE security software to protect access to sensitive information when it is at rest as well as establishing trustworthy communications between its components via the Secure Socket Layer (SSL) protocol.

EMC PowerPath

EMC PowerPath is a server-resident software solution that enhances performance and application availability. In a Storage Area Network (SAN) at the point where servers interconnect, data passes through switches where it crosses over from Ethernet to faster Fiber Channel networks. PowerPath takes data on this journey and determines the path of least resistance so performance is optimized.

EMC embedded RSA BSAFE security software into its PowerPath product to ensure optimum data security. This encryption takes place in the kernel of the operating system, so the encryption solution had to be implemented in minimal space. RSA BSAFE security software was an ideal solution.

EMC Documentum

EMC Documentum enterprise content management platform is a repository to store content and assign different access rights. RSA BSAFE security software is used to encrypt data in three of the platform's key elements:

- Trusted Content Services (TCS) is a suite of software providing digital encryption of files at rest in the EMC Documentum enterprise content management platform
- Branch Office Caching Services speed up resolution of performance issues experienced in branch offices when they are caused by network latency by placing content caches close to end-users
- Information Rights Management (IRM) suite allows dynamic control and management of information by enabling content owners to decide who gets to view, edit, print or forward emails and documents — and who does not

Encrypting data at rest in the content management platform, and in the case of IRM data that passes outside of the repository too, gives EMC customers an additional layer of security against rogue administrators and hackers.

RESULTS

RSA BSAFE software provides the encryption functionality to enable EMC to meet FIPS 140 and Suite B-validated security requirements in even the most constrained situations. Designing software using RSA BSAFE technology allows EMC developers to achieve a solid, secure design without significantly increasing development times or costs.

Unlike alternatives such as open source security software, RSA BSAFE security software is enhanced regularly to address the latest vulnerabilities and advancements in cryptographic technology. It is also built on open and proven industry standards, many of which have been developed and championed by RSA. RSA BSAFE products offer interoperability and ease of integration into existing software and device systems.

Another advantage of RSA BSAFE security software is these products integrate seamlessly with RSA Key Manager – RSA's industry-leading key management system. RSA Key Manager securely stores, distributes and manages encryption keys throughout their lifecycle. Designed to hold this data over the long-term it minimizes the loss of primary data resulting from lost keys.

Having RSA BSAFE encryption products embedded into storage software enables EMC customers to comply with legislation such as Payment Card Industry Data Security Standards (PCI DSS). Encrypting data at the application level generally provides the highest level of security but for organizations that do not necessarily need this, encrypting data at rest is a lot simpler and much more cost-effective.



“EMC software solutions with embedded RSA BSAFE security software offer customers a cost-effective way of meeting their encryption needs using their existing infrastructure.”

Jamal Shakra, Lead Product Manager, Documentum Platform Products, EMC Corporation



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