Frost & Sullivan

2017 North American Encryption and Data Protection Technology Leadership Award

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Best Practices Award

North American Encryption and Data Protection Technology Leadership Award
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Background and Company Performance

Industry Challenges

No matter the industry they serve, many enterprises gather and store vast amounts of critical information within their systems. This information includes customer data, strategic plans, and intellectual property collected from various connected data sources and remains stored within the enterprise’s internal systems.\(^1\) With multiple applications now gathering this valuable data for companies, enterprises must contend with the rising access control threats faced by their systems, such as proprietary information theft and the loss of confidential information due to a cyber-attack.

Frost & Sullivan research asserts that the increased frequency of security breaches and growing compliance requirements across industries makes cybersecurity risk threat a top priority for enterprises. The current operational burdens placed on IT teams are high, leading to system vulnerability patches and only periodic systems upgrades, leaving enterprise systems increasingly vulnerable to attacks.\(^2\) Most cyber-attacks target these specific vulnerabilities to gain access to an enterprise’s data storage and pilfer proprietary information stored by these applications.

Enterprises can protect these fundamental systems through various means, such as increased authentication or encryption options. Encryption presents a more secure access control; however, encrypting each application, database, and data storage interface involves high initial investments due to the required development of separate encryption keys for individual data sources. Additionally, encrypting multiple devices becomes challenging as each device will require separate high-level encryption software and monitoring capabilities.\(^3\)

When considering the extensive development period and integration time frames necessary to develop new encryption protocols for all of an enterprise’s systems, companies must decide the value of placing these protocols in both their new and legacy systems. Many companies do not view encryption as a full security package and choose to protect only one or two applications or databases, leaving other systems with only a firewall protection to thwart cyber-attacks.\(^4\)

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\(^3\) See Frost & Sullivan’s *Innovative Solutions for Application Security—Network Security*.

Technology Leverage and Business Impact

Gemalto remains a global leader in the enterprise data and security market, providing tools and expertise to customers in the financial services, healthcare, retail, government, and other industries to secure their data sources. The company’s SafeNet data protection portfolio ensures that data remains secure wherever it resides, through comprehensive encryption and cohesive key management across the entire enterprise. It accomplishes this goal by breaking down encryption “silos”—where multiple encryption codes protect various systems—and creating a centralized encryption key management point that allows for better access control and encryption systems management through the support of Gemalto’s teams.

The SafeNet Portfolio: The Right Tool for the Right Job

Gemalto follows a proprietary three-step approach to its data protection capabilities: locating and protecting sensitive data; managing the key lifecycle of that data, and; controlling access through identity and policy controls. Through the SafeNet solutions portfolio, organizations can find the precise solution suite to match their security needs without a complete security system overhaul—a key differentiator. SafeNet also supports a variety of digital ecosystems, easily integrating with over 700 solutions across more than 240 different ecosystem partners, making system integrations easier and increasing overall ease-of-use for customers. Gemalto's expanded SafeNet data protection and encryption portfolio far exceeds competing encryption services, as SafeNet offers customers a variety of encryption services to fit their particular needs, all managed by one cohesive key management platform, rather than only one or two encryption options.

The SafeNet portfolio sets out to streamline enterprise security needs, breaking down the data silos, and creating an easier-to-secure enterprise. Gemalto’s SafeNet portfolio includes the range of encryption options:

- **SafeNet ProtectFile**: SafeNet ProtectFile interacts with customers’ operating systems to set individual files or file paths to automatically encrypt, making it an ideal tool for multi-server systems and including policy-based controls. This program protects sensitive data while at rest, enabling customers to set up the encryption programs and then allow them to run in the background—giving SafeNet ProtectFile high scalability and versatility for customers relying on Big Data analytics and insights.

- **SafeNet ProtectApp**: This highly adaptable solution has been in the portfolio for over 30 years and adapts to Big Data customers who need to secure specific databases but do not need full access to the database. The application encryption’s primary benefit lies in that a data transmission remains secured from its creation through every touch point on the network until its resting point. SafeNet ProtectApp’s API-level encryption solutions can also be used on web-based
applications, allowing developers to build an application on top of the API encryption solution.

- **SafeNet ProtectDB**: SafeNet ProtectDB gives customers column-level database encryption in their relational databases, allowing them to encrypt only certain columns within the entire database file. This option is best when customers do not have source code access. SafeNet ProtectDB also creates customized file paths to determine what data to encrypt and prevents the unauthorized reading of data unless the database policy grants a user access.

- **SafeNet Tokenization**: This application-level tokenization solution protects customers’ database data by replacing it with a surrogate value, known as a “token” of the same length and format, encrypting the original data. This solution works well with high compliance or regulatory needs by securing the matching database of “tokens” with their real values in a “vault” database. Gemalto plans to release a vaultless tokenization solution in late 2016, bringing an even higher level of encryption to the data.

- **SafeNet ProtectV**: This solution takes a full disk encryption approach to virtual machines in order to facilitate the adoption of virtualized and cloud services on-premises and in public cloud vendors such as Amazon Web Services (AWS), AWS GovCloud, Microsoft Azure, and IBM Bluemix (formerly SoftLayer). Pre-boot authentication requirements restrict access to the secured data from unauthorized users, which prevents virtual machines from being copied or moved inappropriately. SafeNet ProtectV offers an option for customers moving their workloads to the cloud while also grappling with the implications such a move has on their ability to keep their regulated data compliant with industry regulations.

- **SafeNet High Speed Encryptors**: SafeNet High Speed Encryptors provide high-assurance Layer 2 network security for sensitive data, such as real-time video and voice data, that moves across multiple sites such as data center to data center, back-up systems, and disaster recovery. SafeNet High Speed Encryptors ensure certified, trusted security for Fortune 500 customers across financial institutions, telecommunication firms and other commercial organizations. SafeNet High Speed Encryptors provide maximum network performance, with near-zero overhead and microsecond latency, scalable and simple set-and-forget management for low total cost of ownership.

The entire SafeNet data protection portfolio integrates with SafeNet KeySecure, a centralized enterprise encryption key management platform for complete key lifecycle management. Encryption deployed on a project-by-project basis without an overarching strategy led to collections of encryption silos. On-going key management for these silos is an administrative burden that inserts a greater risk of error in keeping data secure. The crux of Gemalto’s approach helps to consolidate an organization’s encryption deployment behind a central key management platform to streamline security and breakdown
encryption silos. From a central point, security groups within an organization farm out their encryption as an IT service to the rest of the organization at large.

Extending their vision of centralized encryption management into the cloud, Gemalto makes its SafeNet KeySecure appliance available as a virtual machine designed specifically for cloud and virtualized environments. The effort to breakdown silos also addresses the trend of spreading operational workloads across multiple cloud vendors in order to take advantage of the benefits of different clouds and to lessen dependence on any one partner. The SafeNet data protection portfolio is cloud agnostic which lets it work in any cloud provider. While, with SafeNet KeySecure, customers can manage their encryption across cloud providers from one central location - in the cloud or on-premises.

Creating Customer-Centric Solutions

Gemalto’s SafeNet portfolio offers customers a spectrum of benefits for their enterprise operations (e.g. Big Data) and the assurance that their data is safely encrypted in the best way for their operations. Gemalto’s SafeNet portfolio gives customers better security through tightly secured cryptographic keys and policy controls to prevent unauthorized access from internal and external system breaches. Gemalto’s solutions also provide increased budget savings for customers’ security and data protection costs—SafeNet provides the customized, scalable encryption-as-a-centralized-IT-service solution for enterprises while not forcing customers to overhaul their security systems completely. SafeNet’s ability to standardize an enterprise’s encryption services also allows for freer collaboration between departments due to the breakdown of the security silos without exposing sensitive data vulnerabilities. By outsourcing their encryption needs to a centralized in house IT service with Gemalto's solutions, customers benefit from faster innovation in their operations, as they no longer have to build encryption protocols internally—instead, Gemalto takes care of it all.

Gemalto’s role as an encryption-as-a-centralized-IT-service provider aligns with the current shift in the enterprise sector toward more outsourcing and centralizing of security services. Many enterprise customers look to protect their data from potential network and data security breaches to keep up with a heightened awareness of increased enterprise data hacks and stricter regulatory and compliance protocols to protect an enterprise’s
customer data. Gemalto’s ability to offer the centralized encryption key control and data access appeals to both brick-and-mortar enterprises and public cloud vendors. Gemalto’s scalable encryption and data protection options help it to retain many long-term customers due to its continually expanding encryption services portfolio, as well as its consistent monitoring of the data protection market. The company remains vigilant in monitoring any potential vulnerabilities in its data protection and encryption systems. It provides immediate system patches and updates if any potential vulnerabilities are found during Gemalto’s internal system tests, while also informing customers about any new developments within its portfolio and the industry.

**Trusted Security Advisor for All Enterprises**

Gemalto positions itself as the trusted data protection and security advisor for organizations customers through its broad SafeNet portfolio and enterprise-level encryption and key management capabilities, as well as its authentication offerings. The SafeNet portfolio’s diverse offerings allow Gemalto to meet all the customer’s core uses but also can help the company encourage enterprises to shift to multi-level data protection solutions as a way to protect the data they gather. The company’s commitment to finding the best encryption and data protection solution comes through close customer relationships. Gemalto’s sales team helps enterprises to discover which SafeNet portfolio offerings would fit in their security operations and overall budget. Once the original integration is complete, sales team members stay in close contact with customers to ensure customer satisfaction and comfort with using the encryption protocols. Customers can also give feedback through an internal feedback portal for feature and support requests, direct customer support channels, marketing surveys, and Gemalto’s customer advisory board, where customers can meet with company partners to discuss new goals and strategies for SafeNet and the data protection portfolio.

Gemalto’s sterling brand reputation gives it tremendous sway for customers choosing an encryption and data protection solution. Its high brand standing for its identity and access management made the shift into data protection and encryption a seamless transition for Gemalto. The company acquired the SafeNet portfolio in 2015 and retained all of its previous customers, as well as giving new opportunities for Gemalto’s customers unfamiliar with encryption solutions. The company competes with many start-up firms for data protection protocols, so Gemalto’s high brand standing gives many customers confidence in SafeNet’s performance capabilities. Gemalto is also uniquely positioned in the data protection market thanks to its broad spectrum of use cases and customers including device makers, financial organizations, governments and operators. This expertise brings versatility and flexibility to Gemalto's data protection solutions in any deployment environment, whether embedded or cloud-based and inherently meets industry regulations especially in highly regulated sectors such as finance and government. The company remains steadfast in its commitment to highlighting SafeNet’s full portfolio and integrates the encryption and protection protocols to much of Gemalto’s customer network, unfamiliar with how encryption could better secure their data security.
Conclusion

The sharp increase in data collected by enterprises makes these entities and the information they possess particularly vulnerable to cyber-attacks and data breaches. Encryption measures allow these enterprises to not only safeguard this collected information from cyber-attacks but also secure the data internally so only those who need to access it can. Gemalto’s SafeNet encryption and data protection portfolio offers enterprise customers with an array of encryption and data protection protocols that integrates seamlessly with any existing security technology infrastructure and offers a cost-effective and trusted data protection solution.

With its broad data protection and encryption portfolio and commitment to customer needs, Gemalto is recognized with Frost & Sullivan’s 2017 Technology Leadership Award.
Significance of Technology Leadership
Technology-rich companies with strong commercialization strategies benefit from the increased demand for high-quality, technologically innovative products. Those products help shape the brand, leading to a strongly differentiated market position.

Understanding Technology Leadership
Technology Leadership recognizes companies that lead the development and successful introduction of high-tech solutions to customers’ most pressing needs, altering the industry or business landscape in the process. These companies shape the future of technology and its uses. Ultimately, success is measured by the degree to which technology is leveraged, and the impact that technology has on growing the business.
Key Benchmarking Criteria

For the Technology Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Technology Leverage and Business Impact—according to the criteria identified below.

Technology Leverage
- Criterion 1: Commitment to Innovation
- Criterion 2: Commitment to Creativity
- Criterion 3: Technology Incubation
- Criterion 4: Commercialization Success
- Criterion 5: Application Diversity

Business Impact
- Criterion 1: Financial Performance
- Criterion 2: Customer Acquisition
- Criterion 3: Operational Efficiency
- Criterion 4: Growth Potential
- Criterion 5: Human Capital

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan’s 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often, companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.
Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan Awards follow a 10-step process to evaluate Award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

<table>
<thead>
<tr>
<th>STEP</th>
<th>OBJECTIVE</th>
<th>KEY ACTIVITIES</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monitor, target, and screen</td>
<td>Identify award recipient candidates from around the globe</td>
<td>Pipeline of candidates who potentially meet all best-practice criteria</td>
</tr>
<tr>
<td>2</td>
<td>Perform 360-degree research</td>
<td>Perform comprehensive, 360-degree research on all candidates in the pipeline</td>
<td>Matrix positioning all candidates’ performance about one another</td>
</tr>
<tr>
<td>3</td>
<td>Invite thought leadership in best practices</td>
<td>Perform in-depth examination of all candidates</td>
<td>Detailed profiles of all ranked candidates</td>
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<tr>
<td>4</td>
<td>Initiate research director review</td>
<td>Conduct an unbiased evaluation of all candidate profiles</td>
<td>Final prioritization of all eligible candidates and companion best-practice positioning paper</td>
</tr>
<tr>
<td>5</td>
<td>Assemble panel of industry experts</td>
<td>Present findings to an expert panel of industry thought leaders</td>
<td>Refined list of prioritized award candidates</td>
</tr>
<tr>
<td>6</td>
<td>Conduct global industry review</td>
<td>Build consensus on award candidates’ eligibility</td>
<td>Final list of eligible award candidates, representing success stories worldwide</td>
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<tr>
<td>7</td>
<td>Perform quality check</td>
<td>Develop official award consideration materials</td>
<td>High-quality, accurate, and creative presentation of nominees’ successes</td>
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<tr>
<td>8</td>
<td>Reconnect with panel of industry experts</td>
<td>Finalize the selection of the best-practice award recipient</td>
<td>Decision on which company performs best against all best-practice criteria</td>
</tr>
<tr>
<td>9</td>
<td>Communicate recognition</td>
<td>Inform award recipient of award recognition</td>
<td>Announcement of award and plan for how recipient can use the award to enhance the brand</td>
</tr>
<tr>
<td>10</td>
<td>Take strategic action</td>
<td>Upon licensing, company may share award news with stakeholders and customers</td>
<td>Widespread awareness of recipient’s award status among investors, media personnel, and employees</td>
</tr>
</tbody>
</table>
About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best in class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best-practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages over 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 31 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.