

Encryption Advisory Service

Introduction

Take a proactive approach to data protection with the global leaders of data protection. In our encryption advisory service, we can make any attack on data significantly more difficult, time-consuming, and expensive from a defensive perspective. Through our encryption advisory services, we enhance your data protection strategy to reduce your financial risk of breaches and minimize their impact.

With a phased approach to encryption implementation at an enterprise level we will:

- Gather detailed requirements to build a custom strategy design
- Create a roadmap to protect and manage the identified sensitive data
- Perform vendor evaluations and Proof of Concept (PoC)
- Install and configure encryption solutions
- Deploy and integrate solutions as well as migration
- Implement key management practice
- Assist with operational transition





Encryption Assessment

We utilize a tailored framework that is customized based on the client's business and technical requirements for each encryption assessment to ensure that our recommendations are aligned with the industry standards and best practices. The assessment identifies areas needing improvement and recommends ways to mitigate these shortfalls.

Our Service Offerings Include:

- Understand the flow of sensitive (PHI, PII, PCI) data, evaluate existing data encryption capabilities, and identify areas for improvement.
- Review all relevant policies and procedure documents (cryptographic policies, encryption key management policies and procedures, etc.) including data classification policies and standards to create technical and governance data encryption requirements that apply to various data platforms and projects based on the data classification level.
- Build an implementation roadmap to remediate the identified control gaps and design use cases to facilitate selecting and evaluating potential encryption and other data protection solutions.
- We meet with your key stakeholders to understand the high-risk data.
- We review the current encryption implementation against industry standards and best practices to ensure that the high-risk data is encrypted per industry standards such as FIPS 140-2, NIST, and more.
- Gain an understanding of the current state, including challenges, and use cases.
- Define a strategy and implementation roadmap to deploy encryption capabilities across the customer's environment.

Encryption Strategy

We build effective encryption strategy based on data classification, where the data is located, how the data moves in and out of the organization, the risks if the data is stolen or compromised, how the data is utilized (operationalized) within the organization, and the organization's data security goals in the short and long term.

Our Service Offerings Include:

- Perform a current state assessment and gap analysis between the as-is and to-be states for data encryption, data-at-rest, data-in-transit, data-in-use, and the key lifecycle management process.
- To fulfill your immediate business and regulatory requirements, we deep dive into data-at-rest, data-in-transit and data-in-use to build strategies to implement encryption solutions for unique use cases such as enabling encryption for application-layer, databases, disk storage, etc.
- To enable encryption in your organization, we develop necessary governance policies, standards, and program structure.
- We identify applications and platforms for encryption and the type of solution to be used by the organization by developing a decision tree and defining requirements for data encryption.
- To support the implementation of encryption solutions across the enterprise, we develop capabilities for encryption key and certificate lifecycle management.
- We conduct deep dive analysis of the prioritized applications, use cases, etc. of the organization.
- For the organization's highest priority file repository within a business unit or a subset of that business unit, we build strategies to implement robust file encryption.
- We focus on the prioritized data-in-transit requirements and implement transport layer encryption like TLS for application components as requirements are identified.
- To refine and update the approach and strategy to encryption, we collaborate with other programs such as Identity and Access Management, Segmentation, and Data Governance, when additional inputs are received.

- Based on identified threats and risk mitigation, we expand the implementation of application encryption to more applications and add data elements to the scope.
- We develop a roadmap to expand the implementation of file encryption to other business units and onboard other file repositories.
- We enhance existing email encryption capabilities with digital rights management and expand the solution to critical applications that handle file documents.
- We discover SSH and encryption keys across the enterprise and begin efforts for remediation.
- We incorporate encryption requirements, implementation considerations, validation, and testing procedures into the ongoing processes of the organization such as SDLC, controls testing, and third-party assessment.

Encryption Technology Implementation Planning

We will work with you to design a program and implementation plan for encryption governance, key management, and business process modernization. Optionally, we can provide project management and PM resources for technology deployments and solution implementations for the encryption strategy initiatives.

Our Service Offerings Include:

- We develop use cases and identify common architectural patterns across the in-scope applications, databases, big data, cloud, and storage devices, and develop use cases for them.
- Create reference architecture designs for each of the architectural patterns.
- Perform a pilot test for each of the controls and make changes in the reference architecture based on the results.
- We group applications, databases, big data, cloud, and storage devices that are changed in a phased approach by following step-by-step into roll-out phases to avoid one-time, large-scale implementations. This is also useful to show incremental results to executives and management.
- We develop evaluation criteria based on encryption key usage scenarios and requirements.
- Assist you with coordinating vendor information sessions.

- Assist you with selecting key management solutions for further evaluation like vendor solutions, open source, hardware security modules, and more.
- Summarize information from key management solution evaluation and assist you in prioritizing solution options.
- We provide encryption key management solution evaluation criteria and a summary of encryption key management solution documentation.

Encryption Audit

We uncover hidden gaps in your organization by analyzing your encryption architecture for vulnerabilities in cryptographic protocols, evaluating the effectiveness of encryption and authentication methods, and verifying compliance with industry standards.

Our Service Offerings Include:

- Outline the scope, systems, use cases, and data types to be audited, considering all endpoints, databases, and communication channels where sensitive data resides.
- Ensure adherence to industry regulations (like GDPR, HIPAA, PCI DSS etc.) and internal data protection policies to assess if encryption practices meet these standards along with necessary security gaps.
- Identify vulnerabilities in encryption implementation, key management, or data transmission. Prioritize these weaknesses based on severity and potential impact on data security.
- Evaluate encryption algorithms, key lengths, and encryption processes used across different systems to verify correct implementation and compliance with industry standards.
- Compile audit findings into detailed and informative reports that include identified vulnerabilities, improvement recommendations, and a remediation roadmap. Share this report with relevant stakeholders for action.

See it in action

Encryption Consulting LLC is a customer-focused cyber security consulting firm providing an array of services and solutions in all aspects of data protection.

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