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Vormetric Data Security for SAP

SAP provides the operational heartbeat for many enterprises and SAP data repositories can contain large amounts of sensitive information affected by internal governance rules or external compliance mandates. SAP modules typically contain a variety of internal sensitive data including employee health information, salary data, and personally identifiable information such as social security numbers as well as regulated business data. Increased pressure from the rapidly growing regulatory environment and the evolving threat landscape are causing security-conscious enterprises to mandate strong data security controls, including encryption, over SAP data stores. For example, employee health information contained in SAP ERP Human Capital Management can be affected by regulatory regimes like the US Health Insurance Portability and Accountability Act (HIPAA) and HITECH Act as well as European regulatory regimes such as the UK Data Protection Act and EU Data Protection Directive which call for the protection of individual data. However, security must not be implemented at the cost of SAP availability.

Securing SAP data is a high-visibility task that must be done carefully to avoid impeding business operations. Minimizing project risk requires finding a proven solution that secures SAP data while not interrupting SAP availability nor hindering system performance. The optimal approach to securing SAP data must satisfy privacy and audit requirements, but do so transparently to the SAP application and with minimal impact on IT operations.

Sensitive customer data can be impacted by multiple regulatory regimes, and the resulting compliance requirements may affect data held in SAP as auditors require relevant data be secured against potential data breach. Securing SAP data with encryption meets compliance needs and complements existing SAP security measures. Encryption can secure the actual SAP data as well as all information in the SAP environment such as reports, extract or log data generated from SAP. Protecting data with encryption complements tools such as Database Activity Monitoring (DAM) that secures against misuse of data, but DAM does not address regulatory requirements for data privacy and security addressed by encryption.

Vormetric Data Security for SAP

Vormetric provides a proven approach to securing SAP data that meets rigorous data governance and compliance requirements. Vormetric Data Security can be quickly deployed to secure data while requiring no change to SAP, the underlying database or hardware infrastructure. This approach enables enterprises to meet data governance requirements with a rigorous separation of duties.

Whether you are securing an existing SAP deployment or upgrading, to a new version, Vormetric has gained the experience and learned best practices[1] from previous customer deployments to deliver a proven approach to quickly secure SAP data while ensuring SAP continues to operate at optimal performance.

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[1] "Setting up IBM Database Encryption Expert in an SAP environment", Anatoly Malchevsky, SAP Canada, 03 March 2009. http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/00d8f606-f30a-2c10-f19b-a92f7d0af4d0

Compliance Drivers for Securing SAP Data

• Enterprise business governance mandates

• Health Insurance Portability and Accountability Act (HIPAA) and Health Information Technology for Economic and Clinical Health (HITECH) Act applying to employee health-related human resources (HR) information

• National mandates including UK Data Protection Act and EU Data Protection Directive

• "Safe Harbor" provisions for data privacy between US & European Union

• US state data breach laws (California, Massachusetts, Nevada, etc.)

Challenges in Protecting SAP Data

• Dispersed Data - Hundreds of database columns may contain sensitive information, making database column-level encryption or tokenization unwieldy

• Performance - Maintaining maximum SAP database responsiveness when implementing encryption

• Data Variety – Need to protect both structured data (database files) and unstructured data (log files, Extract-Transform-Load data files, archive data, etc.)

• Supportability – Modifying SAP application or altering database tables risks jeopardizing support agreements

• Expense & Total Cost of Ownership – Custom development and management of encryption & key management can be costly given breadth of SAP applications

SAP Environments supported by Vormetric Data Security

- Databases including Oracle, DB2, Informix, MaxDB, SQL Server
- Operating systems including Unix, Linux, Windows
- Files located in physical, virtual and cloud environments

Vormetric Protects SAP Data

Top 3 Global Convenience Food Company

- Business Need: Compliance with corporate governance mandate
- Technology Need: Non-intrusive encryption providing high performance
- Solution: Vormetric Data Security with Oracle database on HP-UX server

Leading Global Medical Technology Company

- Business Need: Adhering to multiple compliance initiatives, including PCI and HITECH, protecting intellectual property & personally identifiable information.
- Technology Need: Ensuring security of structured and unstructured SAP data with rigorous separation of duties for system administrators and database administrators (DBAs)
- Solution: Vormetric Data Security with Oracle database on Solaris server

Top 3 Global Beverage Company

- Business Need: Fulfilling executive mandate to protect sensitive data
- Technology Need: Securing SAP data without changing existing environment
- Solution: Vormetric Data Security with IBM DB2 database on AIX server

Key Features and Benefits

- **Transparency enables rapid implementation** – Vormetric Data Security encrypts databases and files "in place" and avoids the need to re-architect databases, files, or storage networks. Inserted above the file system and/or logical volume layers, Vormetric Data Security is transparent to users, applications, databases and storage subsystems. It requires no modification to SAP or the database, consequently deployments have been managed in weeks rather than months.

- **Comprehensive protection for structured and unstructured data** – Vormetric Data Security can secure structured and unstructured data to satisfy rigorous audit requirements and provide comprehensive protection for sensitive data. SAP generates and manipulates both structured and unstructured data, and sensitive data is spread across all SAP modules in the database. This can pose challenges for some native database encryption solutions that do not address cross-platform requirements and do not address data residing outside of the database.

- **High performance** – Benchmarking has demonstrated the Vormetric solution no discernable performance impact for SAP end users.[2] Vormetric performs encryption and decryption operations at the optimal location of file system or volume manager. This approach leverages the I/O profile of SAP databases by only encrypting and decrypting the storage blocks needed for a particular operation.

- **Centralized key and policy management for heterogeneous environments** – Vormetric Data Security minimizes administrative overhead with key and policy management providing a secure, easy to administer method of administering encryption keys. It enables organizations deploying SAP to establish consistent and common best practices for managing the protection of both structured and unstructured data accessed by SAP in Linux, UNIX and Windows systems.

- **Fine-grained Auditing** – Vormetric Data Security provides granular and configurable auditing and reporting of access requests to protected data, as well as changes to policies and keys. The system's audit management reduces audit scope, integrates with existing Security Information & Event Management (SIEM) solutions, and aids compliance with industry and regulatory practices regarding the handling and protection of private and confidential information.

- **Scalability** – Organizations can scale Vormetric in large and complex SAP environments including thousands of systems and files.

For more information, please call (888) 267-3732 or visit www.vormetric.com/sap.

[2] "See previous citation.

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