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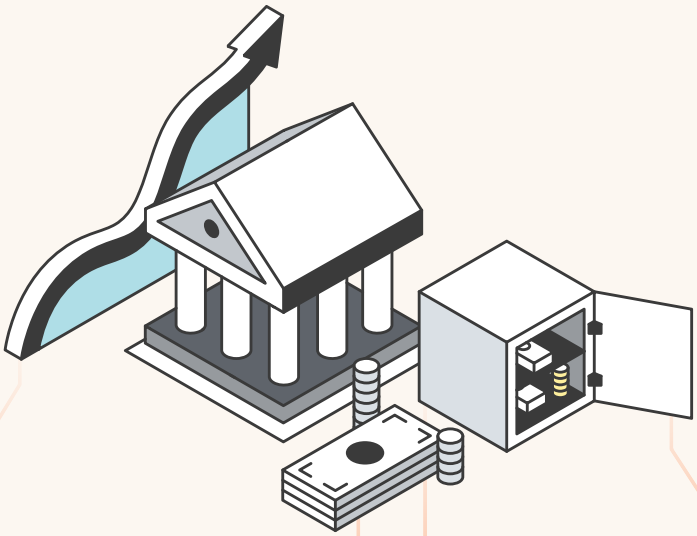
Google BigQuery



Vaultree and Google BigQuery:

Enabling Advanced Analysis of Financial Data for Fraud Detection and Prevention

In the rapidly evolving digital financial landscape, where data breaches and financial fraud pose significant risks, the integration of Vaultree's Data-In-Use Encryption with Google BigQuery stands as a beacon of innovation and security. This paper will demonstrate how this partnership empowers financial institutions to enhance their fraud detection and prevention mechanisms while upholding the utmost data security and privacy compliance standards.

Join us to explore how, by leveraging Vaultree's groundbreaking encryption technology with BigQuery's powerful data analytics capabilities, financial entities can securely analyse vast volumes of transactional data in near real-time to identify fraudulent patterns and anomalies.

The Current State of Financial Security in the Cloud

The financial industry's shift towards cloud computing marks a significant pivot towards digital-first strategies. Recent studies indicate that 91% of banks and insurance providers have already begun their cloud adoption journey, a steep rise from 37% in 2020. This surge represents the industry's belief in cloud technology and why rates of cybercrime targeted at financial cloud environments have increased in tandem. Further issues around cloud adoption within this sector include:

Cloud Hesitancy:

While many leaders in the finance sector see cloud adoption as the future of their industry, 68% of surveyed executives still identify data security as a significant concern, halting proceedings.

Regulatory Compliance:

The financial sector is heavily regulated, with stringent requirements around data sovereignty, compliance with laws like GDPR, HIPAA, and industry-specific regulations such as PCI DSS for payment data. Ensuring cloud services meet these compliance standards can be complex and challenging. For example, a recent update to GDPR introduced the Digital Operational Resilience Act (DORA), which mandated that financial institutions must rigorously implement, document, and uphold the requisite systems, protocols, and tools to provide sufficient reliability, capacity, and resilience.

Performance And Latency Issues:

Even minimal delays can be problematic for financial transactions. Concerns about network latency and the performance of cloud-hosted applications compared to on-premises solutions can deter cloud adoption.

Unauthorised Access:

The unauthorised access to cloud resources poses a significant threat, with attackers exploiting vulnerabilities like excessively permissive access, poorly protected passwords, encryption keys, and admin credentials. Such poor access control leads to endangered intellectual property safety and undermines potential secure collaboration efforts.

Vaultree and BigQuery: A Synergistic Partnership

What is BigQuery?

Google BigQuery is a fully managed, serverless data warehouse that enables scalable, cost-effective, and fast analysis of big data. It is designed to process vast amounts of data in seconds to minutes, providing insights through SQL queries.

BigQuery's serverless architecture allows users to focus on analysing data to find meaningful insights using familiar SQL and does not require any infrastructure management. Its capabilities are integral for businesses looking to leverage powerful analytics to drive decision-making, optimise operations, and predict trends.

Vaultree's Data-In-Use Encryption in the Cloud

Vaultree's integration with Google BigQuery marks a pivotal advancement in secure cloud computing for the financial industry. This partnership synergises Vaultree's Data-In-Use Encryption technology with BigQuery's robust, scalable, and cost-effective data analysis capabilities. The collaboration is designed to address the unique challenges faced by these organisations, ensuring the highest levels of data security and privacy without compromising on analytical power or operational efficiency.

Securing Financial Data for Fraud Detection

BigQuery's serverless, fully managed data warehouse facilitates scalable and swift analysis of vast amounts of transactional data, offering insights through SQL queries. Vaultree's integration with BigQuery allows financial institutions to analyse encrypted transactional data within BigQuery securely. This capability enables banks and financial services to leverage cloud computational power for detecting and analysing fraudulent activities without compromising sensitive customer information.

Enhancing Compliance

The integration of Vaultree's technology with Google BigQuery enables financial institutions to meet stringent compliance standards, including GDPR, DORA, and PCI DSS, by ensuring sensitive financial data remains encrypted at all times, even during analysis. This not only fortifies data security, significantly reducing the risk of breaches, but also simplifies the compliance process. Specifically, it addresses DORA's rigorous requirements for operational resilience and secure data handling by streamlining encryption key management and access controls, ensuring that only authorised personnel can access sensitive information.

Financial Data Sovereignty and Veracity in the Cloud

Vaultree's Data-In-Use Encryption technology offers selective encryption down to the column and table level. This precision ensures that sensitive financial information, from customer data to transaction records, remains protected and compliant with global data sovereignty laws.

Moreover, the integration advances data veracity with exhaustive audit logs that record every interaction with the data—be it access or processing. This transparency is pivotal for regulatory

compliance, allowing financial institutions to maintain a clear record of data handling activities, which is critical for audits and ensuring operational integrity. Vaultree's detailed access controls further solidify data sovereignty, permitting only authorised individuals to access or manipulate the data, thereby safeguarding sensitive financial information from unauthorised access and potential misuse.

Facilitating Secure Collaboration and Innovation

Through Vaultree's recently launched product, Vaultree Encrypted Data Sharing (VEDS), secure collaboration is revolutionised for the financial sector, allowing organisations to share and analyse encrypted cloud-based datasets. This synergy enables financial entities to securely collaborate on fraud detection and transaction analysis without compromising data security. By facilitating the secure analysis of encrypted data, VEDS empowers financial institutions to leverage shared insights and advance anti-fraud measures while ensuring compliance with privacy regulations. The combination of VEDS and BigQuery sets a new standard in financial data management, merging powerful analytics with unmatched data protection.

Conclusion

Vaultree's integration with Google BigQuery marks a significant milestone for the financial sector, addressing both the imperative need for uncompromised data security and the increasing demand for sophisticated analytics in fraud detection and prevention. This collaboration not only solidifies the protection of sensitive financial data but also enables financial institutions to confidently adopt cloud technologies for insightful analytics. Through the combination of Vaultree's technology and BigQuery's powerful data processing capabilities, financial data remains encrypted and secure, fulfilling compliance requirements even during intricate data analyses.

Learn how Vaultree's partnership with Google can revolutionise your financial institution's approach to data management and fraud prevention. Contact us today to uncover the full potential of our collaboration to enhance your operational efficiency and security.

Contact Information

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