THALES

Thales Data Security and Couchbase NoSQL Databases

Couchbase and Thales offer customers a secure and agile solution to the challenges customers face in the new digital economy.

Solution

The digital economy is impacting every industry; with this shift comes the collection of unprecedented amounts of data from operations. Whether it comes from connected devices, or web and mobile applications, chances are it contains sensitive information. The insights gleaned from this data will drive operations and profits; organizations need to be able to handle it efficiently, quickly, and securely, all at scale. These requirements make implementing security challenging, but fortunately, Couchbase and Thales have collaborated on a solution that meets these challenges.

Couchbase Server

Couchbase Server is a leading, high performance NoSQL database used by hundreds of major enterprises to support mission-critical web, mobile and IoT applications. With a flexible JSON data model and a modern, memory-first architecture, it is designed to scale out linearly on commodity hardware, delivering consistent submillisecond latency and high availability, even at extreme throughput rates. Couchbase Server is exceptionally easy to deploy and manage, and its powerful, SQL-based query language N1QL ("nickel") allows developers to easily build rich applications with sophisticated queries.

Thales Data Security Platform

Thales' CipherTrust Data Security Platform secures data anywhere in its flow from creation to storage. Each solution deploys with Thales CipherTrust Manager, a FIPS validated appliance for centralized encryption key and policy management. The following solutions can be used to secure data in Couchbase NoSQL databases.

### CipherTrust Transparent Encryption

Thales CipherTrust Transparent Encryption is a file-level encryption solution that seamlessly and transparently protects sensitive file data in Couchbase NoSQL databases, such as credit card numbers, personal information, logs, and more.

CipherTrust Application Data Protection

Thales CipherTrust Application Data Protection is an API based application-level encryption solution that lets customers incorporate protection directly into their apps to secure both structured and unstructured data as it is generated.

CipherTrust Tokenization

Thales CipherTrust Tokenization protects high value information in databases by replacing it with a surrogate value or "token" without changing the database table or the file layout. Systems protected with tokenization are removed from the scope of certain regulations such as PCI DSS.

Server Cluster
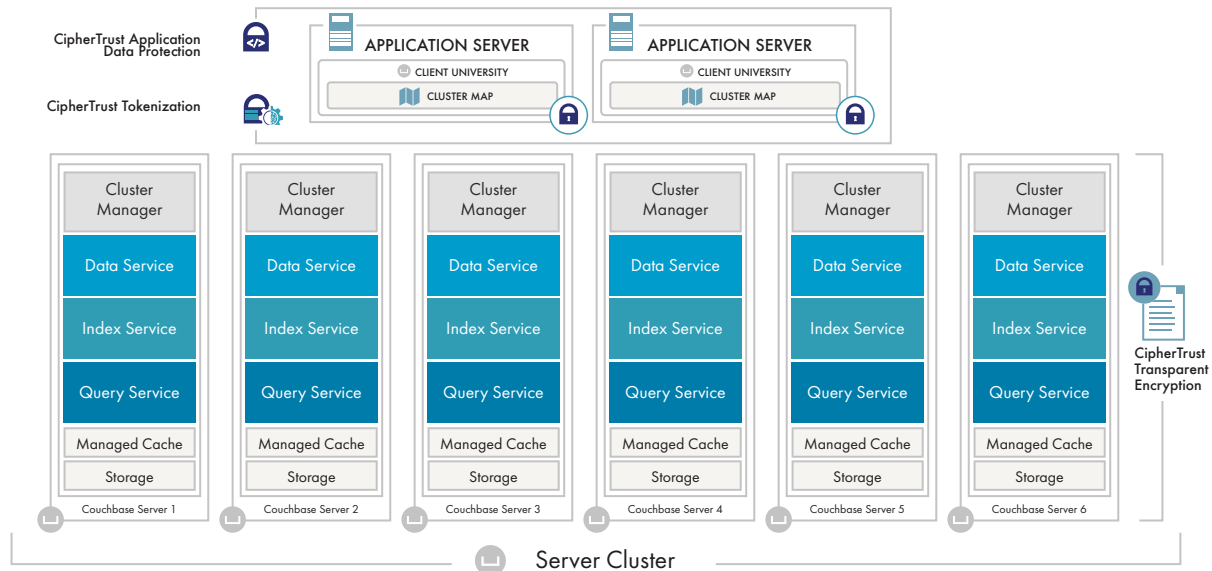
Benefits

Apply Granular Access Control Policies

- Manage keys centrally in FIPS-certified key manager
- Prevent rogue root administrators from impersonating other users and accessing protected data

Secure Data Archival

- Keep data encrypted and inaccessible to administrators performing back-up and restore tasks

Secure Data Destruction

- Ensure all secured, sensitive data is rendered unreadable in the event destruction of data is required

Achieve Compliance

- Track and audit access to protected data and keys
- Demonstrate full data control

Key Features

Separate Duties Among Administrators

Separating duties based on business-need-to-know is an important security best practice. It ensures regulatory compliance and secures data from risks posed by privileged users. Both the CipherTrust Data Security Platform and CipherTrust Manager have granular access controls that decouple administrative duties from data and encryption key access. Administrators responsible for the management of the data center's physical infrastructure will be barred by access controls from viewing the data in Couchbase databases. Concurrently, CipherTrust Manager administrators can only manage the security policies and keys on the key manager.

Achieve Compliance

The CipherTrust Data Security Platform helps achieve compliance with a variety of regulations that require encryption of data including, but not limited to, credit card numbers for Payment Card Industry Data Security Standard (PCI DSS) compliance, Personally Identifiable Information (PII) to comply with state data breach and data privacy laws, and Electronic Patient Health Information (EPHI) in accordance with HIPAA.

Easier, Faster Development

Couchbase lets customers use SQL-based queries on NoSQL databases to build applications faster, and with greater agility than if they were to change complex application code. CipherTrust Application Data Protection comes with sample code that lets developers easily plug encryption into their applications. Together, customers have a joint solution that minimizes development investments but maintains agility around valuable data.

Conclusion

In the new digital economy, organizations must prepare for the rapid pace of innovation and analysis driven by the massive amounts of data they're collecting. The increased opportunity also comes with a real increase in security risk. Couchbase and Thales offer organizations a joint solution to meet current and future needs in an efficient, agile and secure manner. For more, visit: https://cpl.thalesgroup.com/partners/couchbase

About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing number of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.