THALES

VMware Tanzu and Thales Deliver Powerful, Fast, and Secure Big Data Business Intelligence



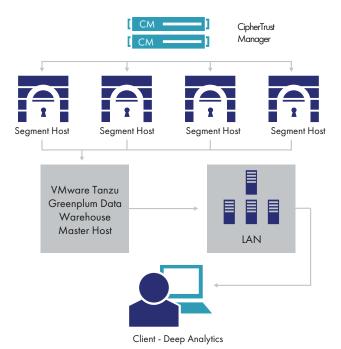
Open Source Data Warehouse Uses Transparent Data Encryption to Protect Data-At-Rest and In Motion

- Provides ultra-high query performance
- Allows petabyte-scale data ingest loading
- Supports wide range business intelligence tools
- Enables advanced machine-learning capabilities
- Offers robust FIPS 140-2 Level 3 certified platform

The Problem: Data Management Capabilities Have Not Kept Up With Available Data Exploration and Business Intelligence Needs

With an evolving competitive landscape and an increased adoption of business intelligence tools by the enterprise, legacy data management solutions need to scale to the volumes of data now available for advanced analytics. Massive parallel processing (MPP) architectures enable data warehouses to deliver ultrahigh volume loading, processing, and linear scalability, but new approaches are needed for effective data exploration and business insight.

vmware[®]



Thales CipherTrust Transparent Encryption agents, served by dual Data Security Managers, integrate with VMware Tanzu Greenplum data warehouse segment hosts to encrypt data-at-rest and centralized key management.

The Challenge: Ensuring Enterprise Security Policy and Regulatory Compliance for Data Managed in **Analytical Databases**

As more data is available for analytical purposes, the threat that sensitive and private information may be at risk increases. Protecting the confidentiality, integrity and availability of warehoused data and ensuring that access is controlled becomes a vital function. Strong encryption secures data, but it must be done in a manner that does not impact performance or interfere with the database query process. Encryption keys must also be protected and managed in a trusted manner for security and compliance with regulations.

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The Solution: VMware Tanzu Greenplum Open Source Data Warehouse And Thales CipherTrust Transparent **Encryption Deliver Optimum Performance And Security**

Greenplum is an open source data warehouse that provides powerful and rapid analytics on very large volumes of data. Uniquely geared towards machine learning and advanced data science, Greenplum is powered by an advanced cost-based query optimizer delivering unmatched analytical query performance on large volumes of data. Greenplum provides flexibility and tight integration with leading analytical libraries and software stacks.

For added security, Greenplum integrates with CipherTrust Transparent Encryption to establish strong controls around sensitive data, and do so with maximum efficiency. CipherTrust Transparent Encryption delivers data-at-rest encryption with centralized key management, privileged user access control, and security intelligence to proactively meet compliance reporting requirements for structured databases and unstructured files. The solution can be deployed without any changes to applications, databases or infrastructure so security organizations can implement encryption with minimal disruption, effort, and cost.

Why Use CipherTrust Transparent Encryption to Protect the Confidentiality, Integrity, And Availability Of Warehoused Data?

CipherTrust Transparent Encryption deliver continuous protection long after the encryption key is applied. Enhanced security features provide:

- Persistent enforcement of security policies that protect against unauthorized access by users and processes
- Continued login of all access attempts to monitoring authorized and unauthorized user activity
- Granular controls and least-privileged access policies to protect data from advanced persistent threat (APTs) and misuse by privileged users
- Specialized policy setting to control administrators with root privileges, processes, file types, time of day, and other parameters
- Security intelligence capabilities to provides detailed data event logs to satisfy compliance and forensic reporting, and to enable additional data security analytics with popular security information and event management (SIEM) systems

As an agent running at the file system or volume level on a server, CipherTrust Transparent Encryption offers flexible implementation. The agent is available for a broad selection of Windows, Linux, and UNIX platforms, and can be used in physical, virtual, cloud, and big data environments, regardless of the underlying storage technology.

About VMware Tanzu

VMware Tanzu's mission is to transform how people build software. Central to this mission is being great at working with data. VMware Tanzu Greenplum is a commercial, fully featured data warehouse, powered by the open source Greenplum Database. Uniquely geared towards predictive analytics. Greenplum is powered by the world's most advanced cost-based query optimizer, delivering high analytical query performance on petabyte scale data volumes.

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.





