

Panasas PanFS and Thales TCT CipherTrust Manager



The Challenge

Whether used to understand complex climate and weather forces or analyze defense and military intelligence data, high performance computing (HPC) systems store and manage huge volumes of data. HPC data is often sensitive and needs to be protected from unauthorized access.

The best way to protect HPC data is to encrypt it. However, encrypting huge volumes of data generates huge numbers of encryption keys, key stores and access policies. This creates a significant administrative burden to manage the encryption and associated key lifecycles.

The Solution

Panasas® PanFS® on ActiveStor®

Panasas PanFS, a scale-out parallel file system, provides unprecedented bandwidth and scalability, accelerating throughput for data-intensive applications. Its excellent mixed-workload processing offers fast, nimble system performance, and its low-touch administration means one IT administrator can easily manage petabytes of storage.

In order to protect sensitive data at rest, Panasas PanFS, when deployed on Panasas ActiveStor platforms, delivers superior encryption with zero degradation in performance, making it suitable for critical applications.

Thales Trusted Cyber Technologies (TCT) CipherTrust Manager

The management and security of the encryption keys that enable data at rest encryption is paramount. Panasas PanFS integrates with Thales TCT CipherTrust Manager to mitigate the threat of unauthorized access to encrypted data.

CipherTrust Manager provides role-based access control to keys and policies, multi-tenancy support, and robust auditing and reporting of all key management and encryption operations.

Key Benefits of CipherTrust Manager in Panasas ActiveStor Environments

Centralize Management of Encryption Keys.

CipherTrust Manager centralizes and simplifies key management (e.g. key generation, escrow, recovery) for Panasas PanFS while improving compliance and auditability.

Configure Data in High-Availability Schemes.

Multiple CipherTrust Manager appliances can be clustered to maintain encrypted data availability.

Separation of Duties.

CipherTrust Manager supports segmented key ownership and management by individuals or group owners to protect sensitive material against unauthorized access from rogue staff.

Simplified Compliance.

Save staff time while satisfying compliance mandates with efficient, centralized auditing of key management practices such as FIPS 140-2, PCI-DSS, HIPAA, GDPR.

Lower Administration Costs.

Lower the cost of key management and encryption with centralized administration and automated operations.

Risk Mitigation with Maximum Key Security.

Root of trust using a FIPS 140-2 Level 3 compliant hardware security module (HSM) with a full U.S. supply chain.

About Panasas

Panasas delivers high-performance computing (HPC) data storage solutions that support industry and research innovation around the world. Whether it's building the next Dreamliner, winning a Formula One race, creating mind-bending visual effects, curing disease, or modeling climate change, the world's leading companies trust Panasas to support their most innovative HPC projects. For more information, visit www.panasas.com.

About Thales Trusted Cyber Technologies

Thales Trusted Cyber Technologies, a business area of Thales Defense & Security, Inc., protects the most vital data from the core to the cloud to the field. We serve as a trusted, U.S. based source for cyber security solutions for the U.S. Federal Government. Our solutions enable agencies to deploy a holistic data protection ecosystem where data and cryptographic keys are secured and managed, and access and distribution are controlled. For more information, visit www.thalestct.com.