

ENTRUST The *Future* of ENTERPRISE KEY MANAGEMENT

KEY CONTROL v10

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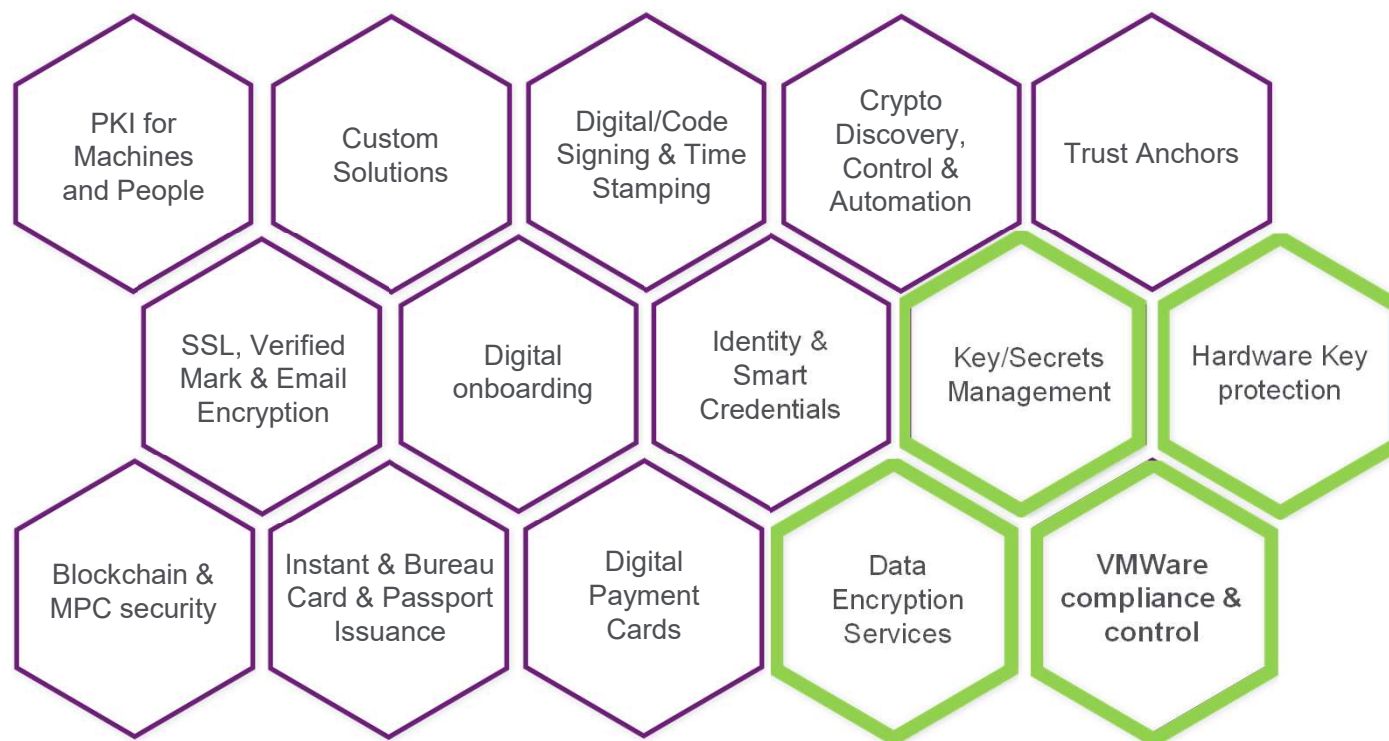
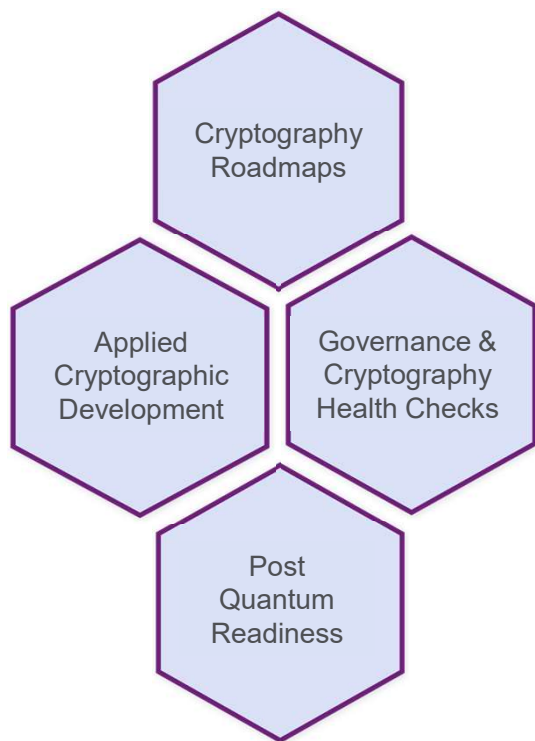
JUNE 2023



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SECURING A WORLD IN MOTION

People, Process, Technology



Agenda

- › Key Management Challenges
- › Entrust Redefines Enterprise Key Management
- › Key Compliance Manager – Functions
- › Sample Architecture
- › Modular Licensing Model
- › Q&A/Next Steps



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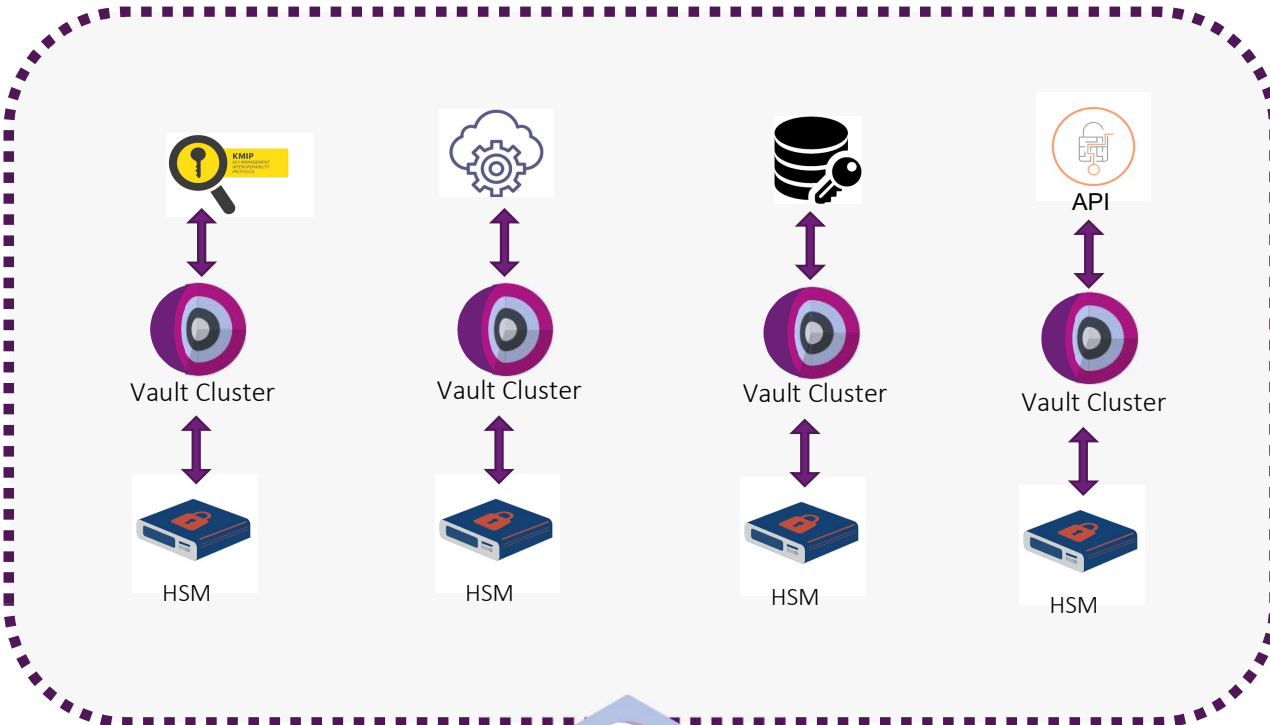
Key Management CHALLENGES

- › Compliance mandates
- › Regulatory requirements
- › Data Sovereignty mandates
- › Best practices
 - Robust auditing and reporting
 - Documentation/ Standards – say what you do, do what you say
- › Security
 - Policies
 - Tight control of cryptographic assets throughout their lifecycle
 - Mitigating threats
 - Reducing attack surfaces
 - DR and contingency planning



Enterprise Encryption Management

Decentralized approach m:n



| Area | Positive |
|-------------------|---|
| Risk & Compliance | <p>Respect local laws</p> <p>Keys in the country where they need to be</p> <p>Split Risk across Vaults in dedicated locations in the global network or cloud.</p> <p>Compliance Management & Keys are separated</p> |
| Administration | <p>Better Network Security (fewer open ports), keys & secrets do not travel across network segments.</p> <p>Works for every Customer</p> <p>Combined Vault Appliances & Dedicated possible</p> <p>Easy and strong SoD and Multitenancy</p> <p>Unlimited Scalability (Vault does not need to store all keys and deliver all Functions in one Cluster)</p> <p>Low latency, deploy where a vault is needed</p> |
| DR | <p>Red-Team Exercise is easy manageable</p> <p>Backup & Restore is easy manageable</p> |

Today's KMS Tools

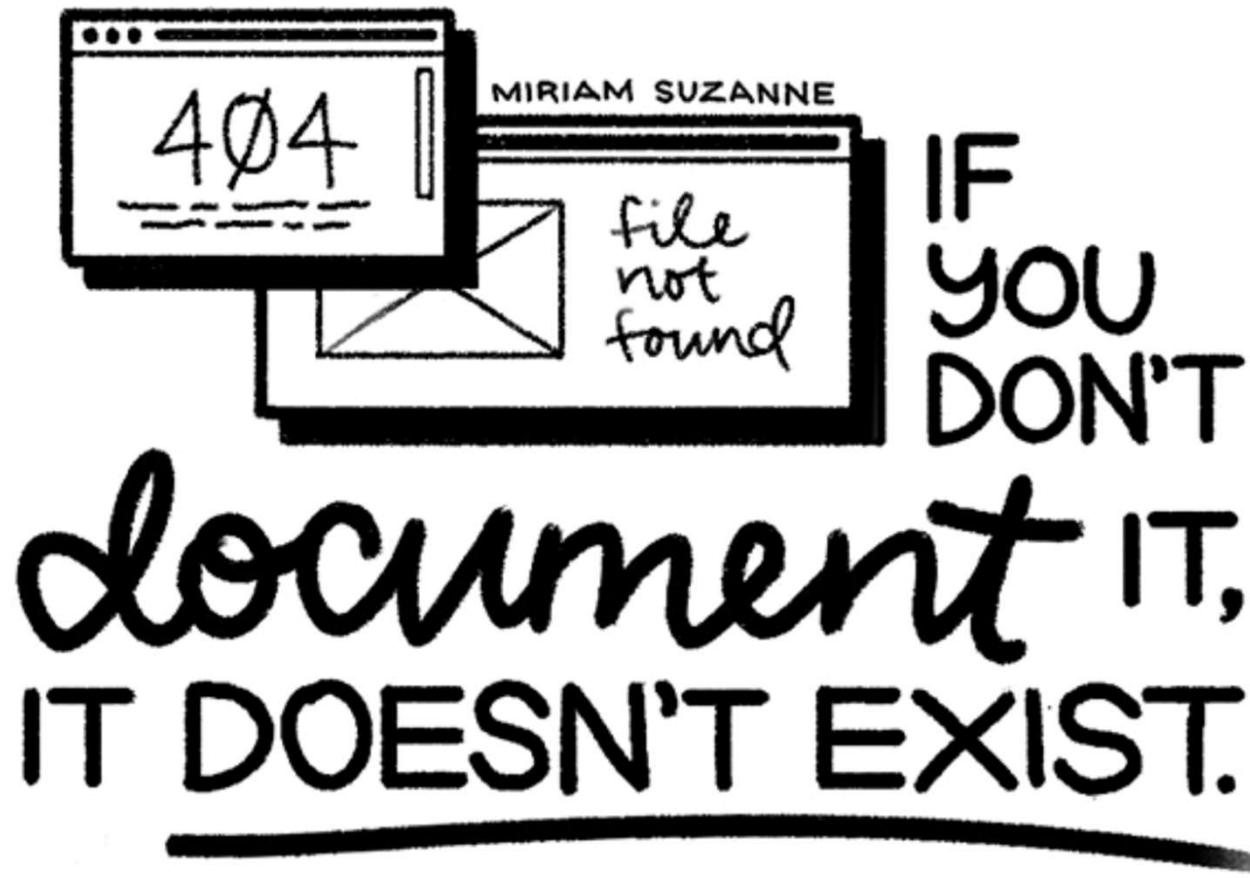


CEO European Tax-Agency:

“There are no KMS Systems, there are only Graveyards”

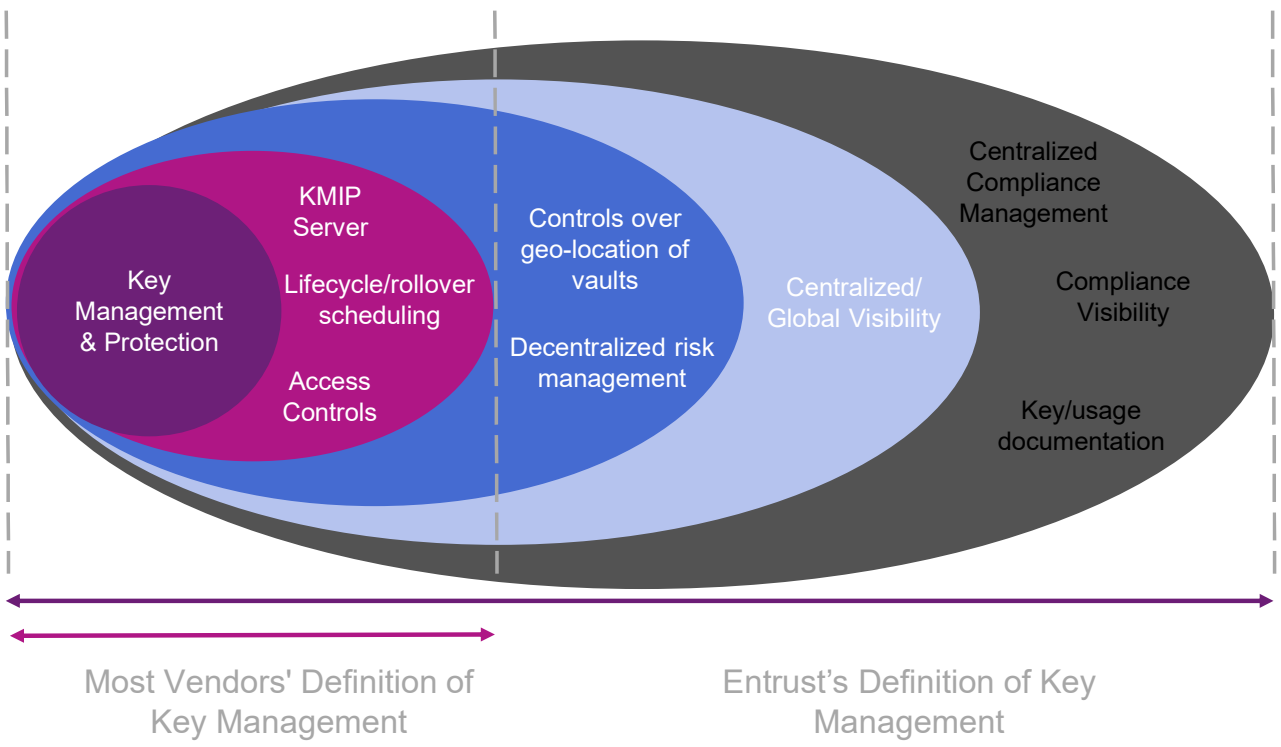
“On a graveyard you can read a name, a start- and an end date and maybe the religion, but you know very little about the person!”

Documentation?








Introduction

➤ Entrust KeyControl redefines key & secrets management



© Entrust Corporation

-  Traditional Lifecycle Management
-  Secure Root of Trust with nShield HSM
-  Decentralized Vault-Based Architecture
-  Comprehensive Central Policy
-  Compliance Management Dashboard



Centralized DECENTRALIZED Security

» CeDeSec

« Centralized governance and control, and decentralized storage and usage - these are key pain points for organizations right now.

They can't and won't centralize everything into one tool. »

Erik Wahlstrom, Gartner

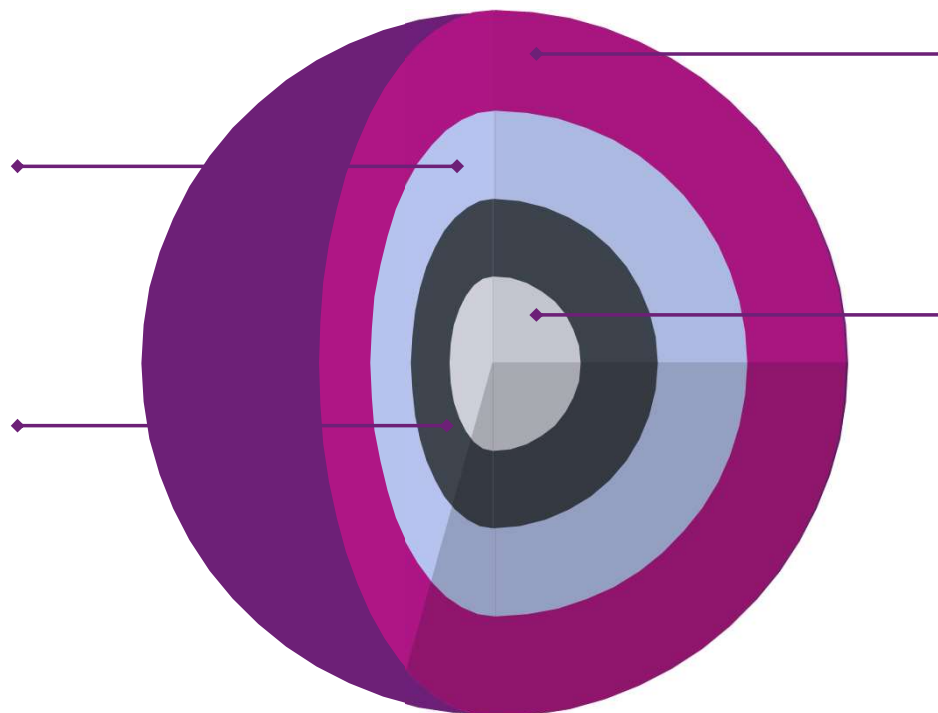
The Vault

Vault (n vaults in vm supported)

Provides Service: KMIP, TDE, BYOK, HYOK, Tokenization, SSH-Proxy, Secrets management, DB Secrets management

Vault-Tenant

Every Tenant gets his own DB inside a Vault



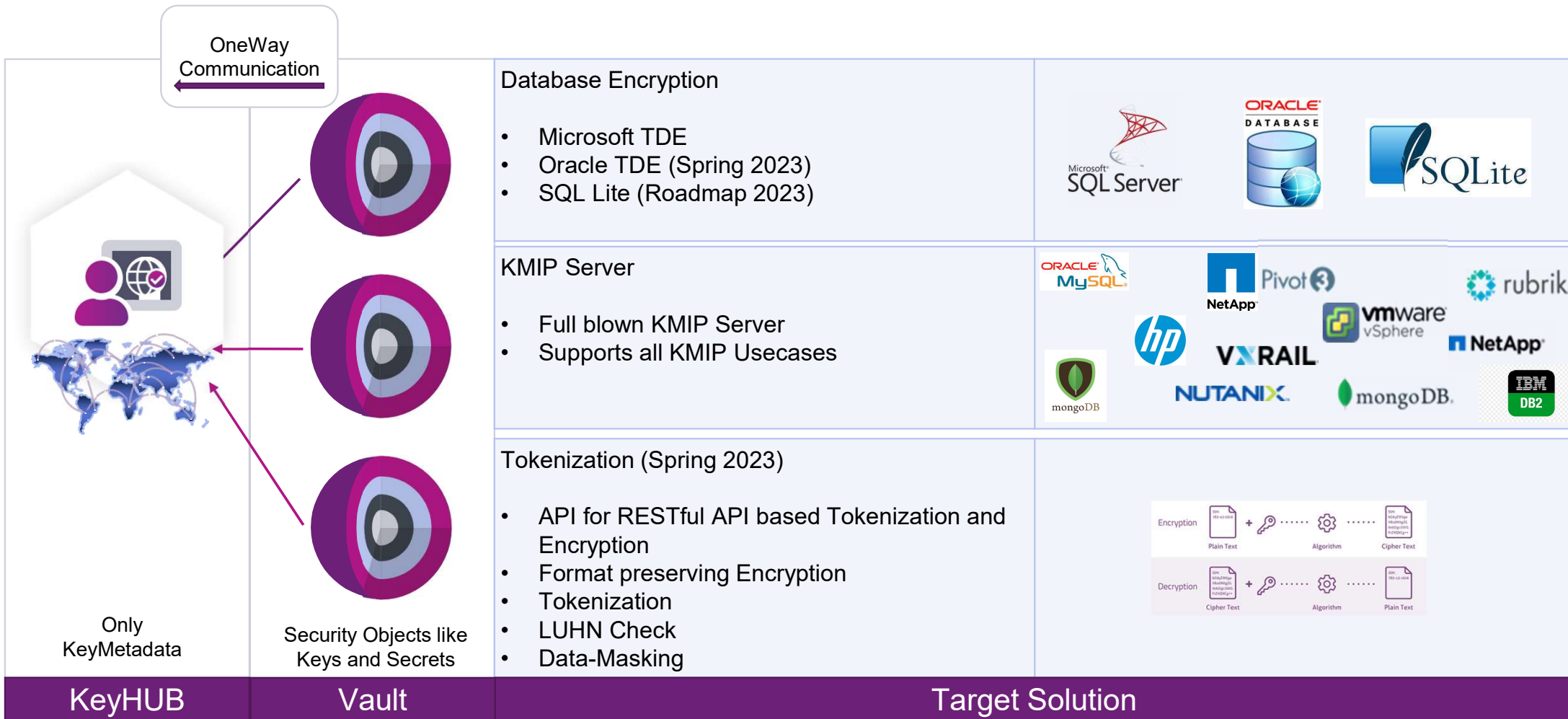
Virtual Appliance

FIPS 140-2 Level 1 certified secure appliance.

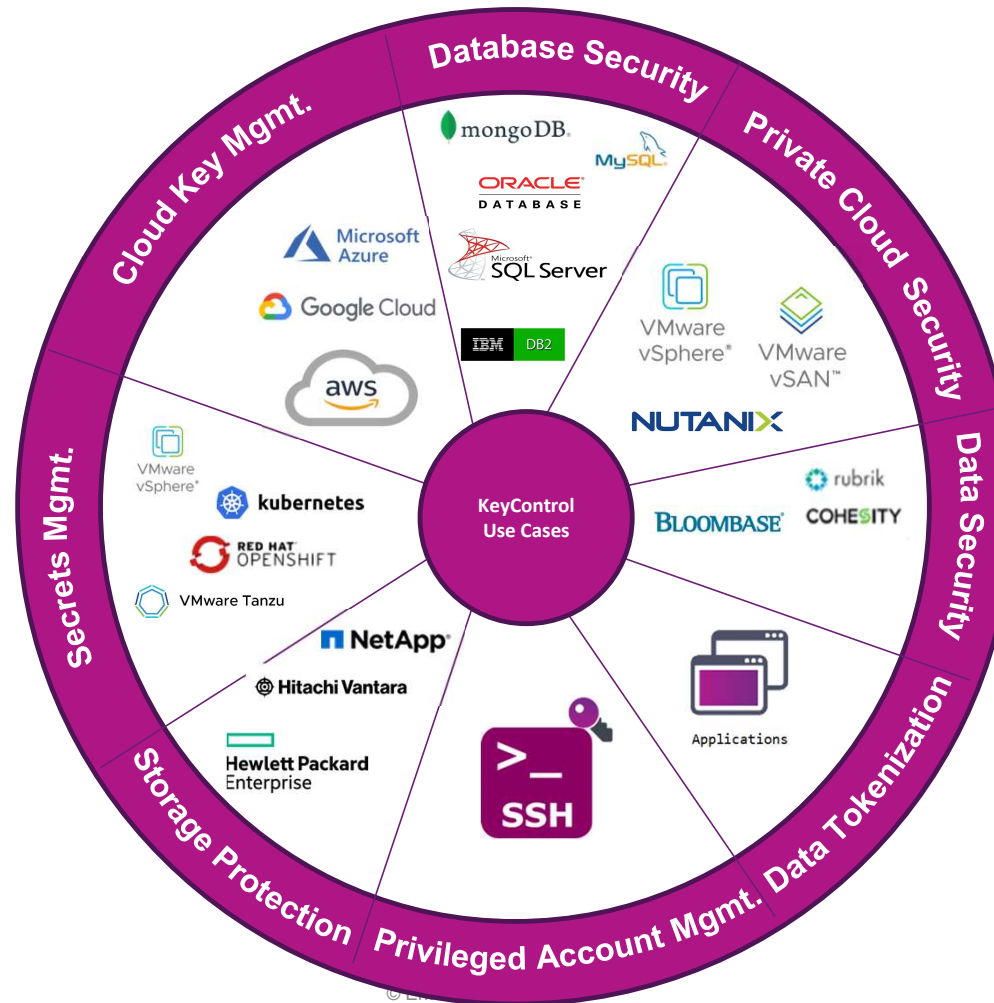
KEYS & SECRETS

Secure Place for Keys and Secrets. For higher security needs the Appliance can utilize an external HSM like nShield and nSaaS.

Vaults



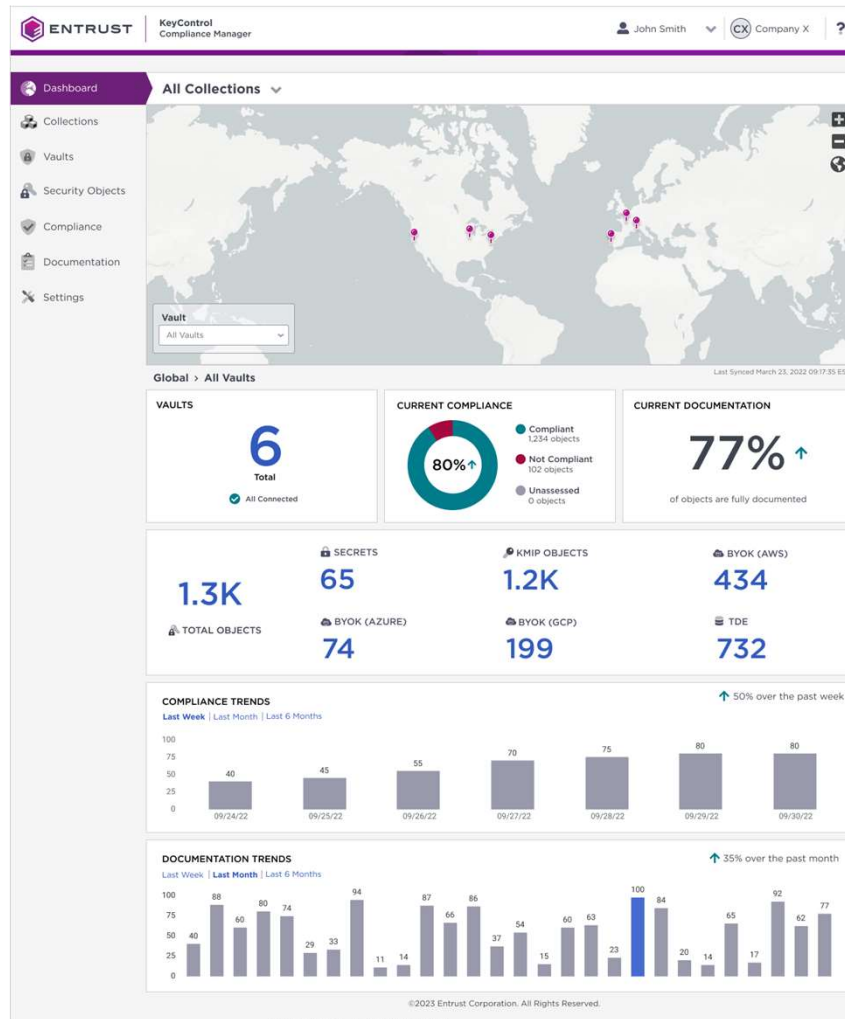
Vaults of KeyControl & integrations



Key Control Compliance Manager



- World Map visualising all Vaults and Cloud Keystores
- Global visibility “what is where?”
- Detail View per Vault on keys & Secrets
- Compliance & Trending
- Comprehensive documentation and audit capabilities



Key Compliance Manager - Functions



- World Map visualizing all Vaults and Cloud Keystores
- Global visibility what is where
- Detail View per Vault on keys & Secrets
- Compliance & Trending

| | |
|--|---|
| <p>Vault technical</p> <ul style="list-style-type: none"> • Vault Health, Location, Cluster size • License management • Receive Metadata for keys & secrets from the Vault |  |
| <p>Metadata</p> <ul style="list-style-type: none"> • Receive vault keys & secret metadata • Request documentation on-demand via custom forms to vault owner, key owner or app owner. • Key History |  <p>Metadata + Documentation + History = KLM</p> |
| <p>Policy management</p> <ul style="list-style-type: none"> • Industry Standard Policies (CIS; BS, NIST etc. for algorithm, , algorithm variant, key length and key age) • Own written Policies |  |
| <p>Risk management & Compliance</p> <ul style="list-style-type: none"> • Calculate risk for given objects and vaults (applied policy, sensitivity, value of protected data, protection level of the key, age of the key etc.) • Compliance level and trending for Vault, Region, Keys |  |
| <p>Process enablement</p> <ul style="list-style-type: none"> • Request documentation / update • Inform on policy violations, and how to remediate • Alert on key expiry (Key should be replaced, rotated, or deleted). I.e. Test & Eval Key only accepted for 4 weeks. |  |

Redefining Enterprise Key Management

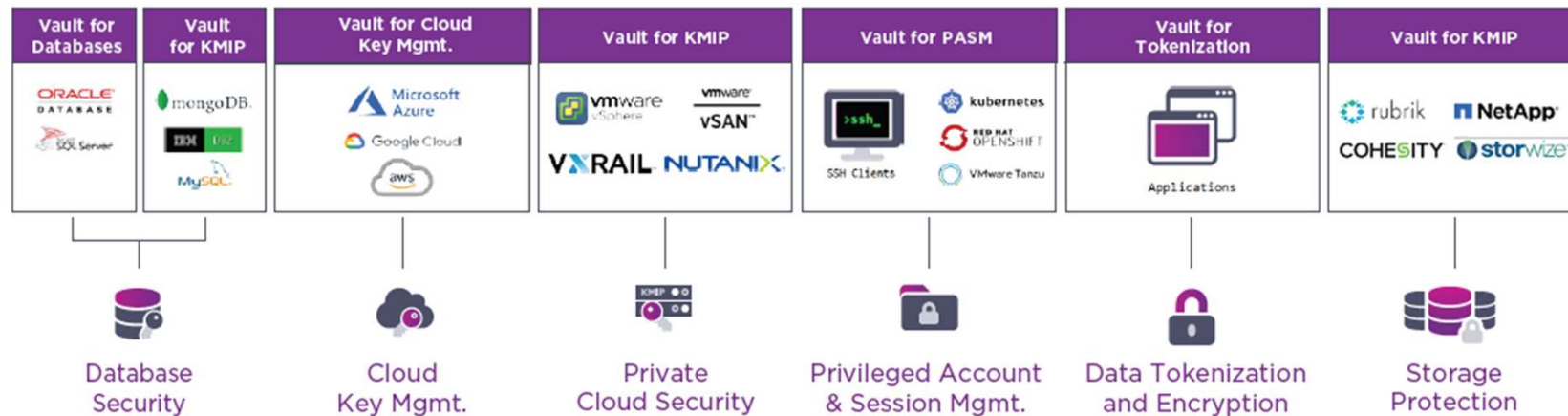
KeyControl Platform

Enterprise Key Management & Compliance Platform

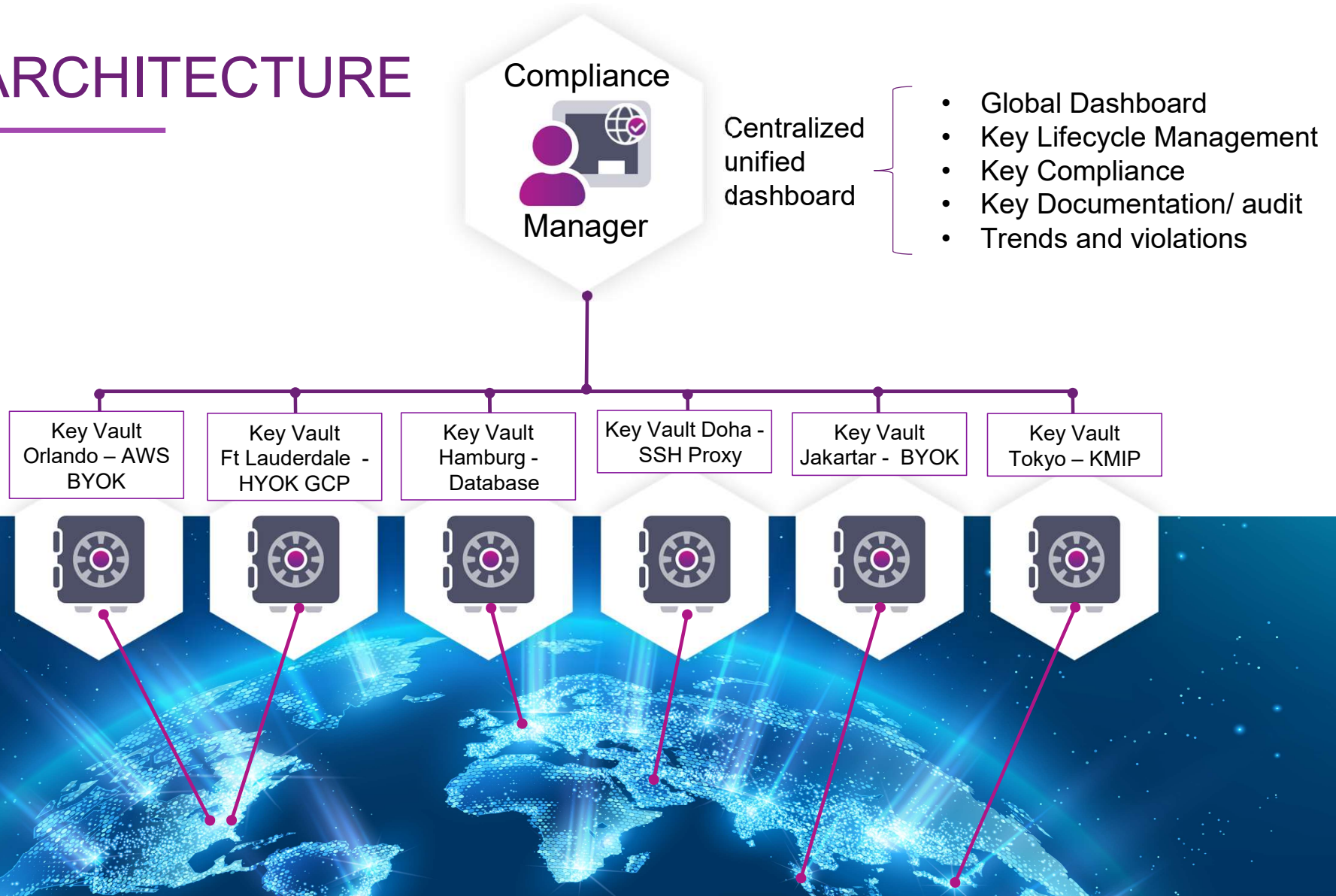
KeyControl Compliance Manager

Global Compliance Dashboard - Policy Enforcement - Granular Key Inventory - Audit/Risk

KEYCONTROL VAULTS & USE CASES



SAMPLE ARCHITECTURE



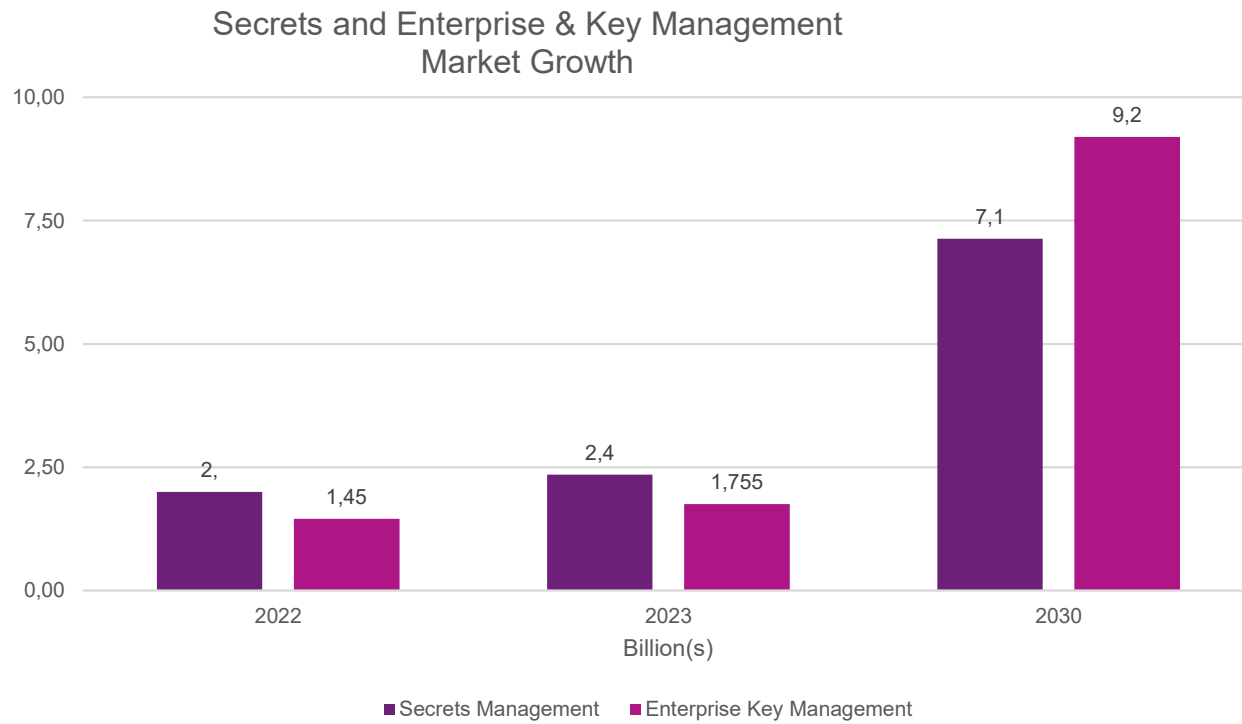
Market Leaders in Key and Secrets Management



Kuppingercole ANALYSTS

Source: Kuppingercole May 2023

Market Growth Opportunity



Source: Mordor Intelligence May 2023

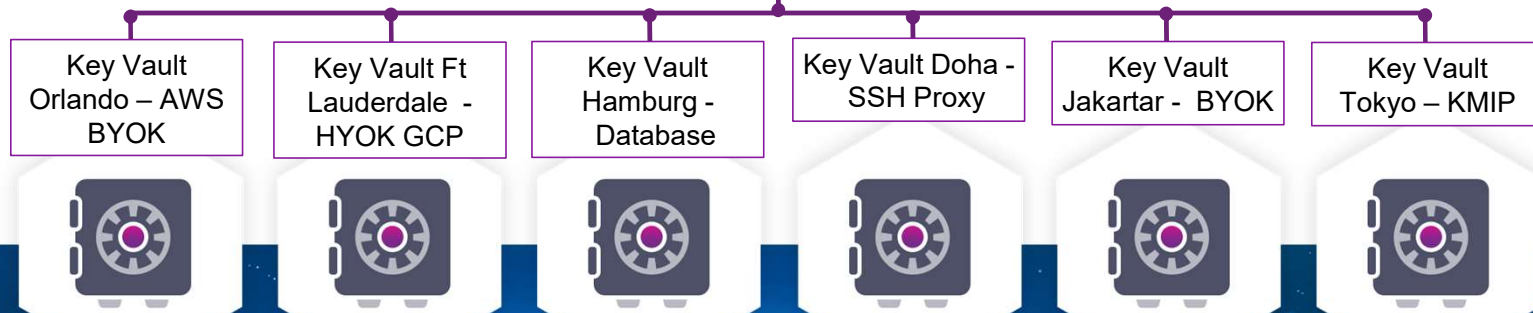
KEYCONTROL 10

(KCM + VAULTS)



Centralized
unified
dashboard

- Global Dashboard
- Key Lifecycle Management
- Key Compliance
- Key Documentation/ audit
- Trends and violations



KEYCONTROL 10

KeyControl 10 Platform with KCM and the Vaults:

- Decentralized security with centralized visibility
- 1st real converged crypto platform
- 1st real key lifecycle management platform (KLM)
- Secure enterprise grade platform
- Keys & Secrets located where they are needed
- Vault Owner own the Keys
- Lawful
- Respect heterogeneous IT environments
- Support private, public and hybrid cloud
- Wide area use-cases are supported
- “Red-Team Exercise”, Networking, Backup & Restore are easily manageable
- Real-Time compliance and trending for C-Level
- And a lot more...

Questions?



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Thank You!



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Supporting Slides



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Enterprise Key Management Platform

















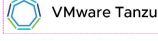





KeyControl 10 Platform
Enterprise Key Management & Compliance Platform



KeyControl Compliance Manager
Global Compliance Dashboard - Policy Enforcement - Granular Key Inventory - Audit / Risk



KeyControl Vaults

| Database Security | Public Cloud Security | Private Cloud Security | Privileged Access & Secrets Mgmt. | Data Tokenization and Encryption | Storage Protection |
|---|---|--|--|---|--|
| Vault for Databases      | BYOK Vault    | HYOK Vault      | Vault for PASM     | Vault for Tokenization  | Vault for KMIP     |