

RSA®Conference2018

San Francisco | April 16 – 20 | Moscone Center



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SESSION ID: SP03-R14

RISE OF THE MACHINES: DEVOPS AND THE ROLE OF SECRETS MANAGEMENT

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Code Delivery = Revenue Growth



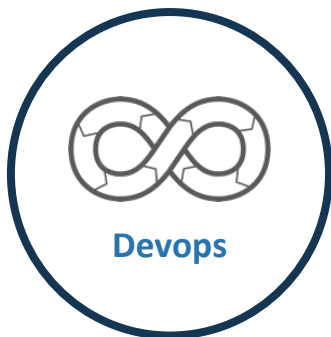
Companies with faster code delivery were

62%

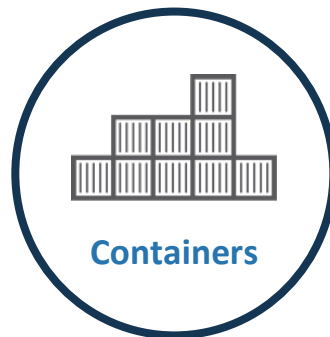
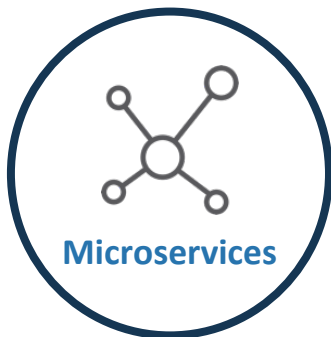
more likely to see YoY revenue growth of 25% or more

Source: EMA, "DevOps/Continuous Delivery Tooling: Launchpad for the Digital Enterprise," 2017.

The New Norm



CLOUD-NATIVE





BUT

51%

of security pros says there is no relationship
between IT security and business innovation

75%

of organizations don't have a privileged account
security strategy in place for DevOps

50%

don't have a privileged account security
strategy in place for Cloud

Sources: F5 "The Evolving Role of CISOs and the Importance to the Business"
CyberArk "2018 Threat Landscape Report"

PROTECT THE PIPELINE

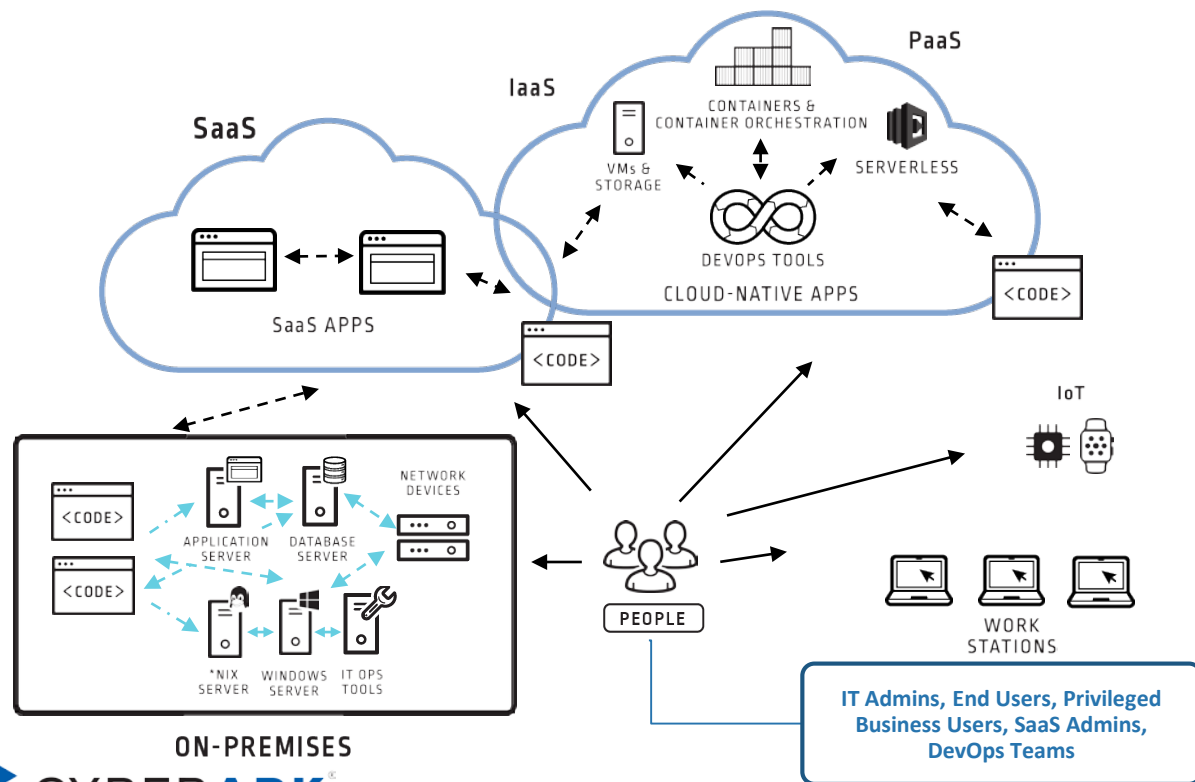
**“Unmanned”
Environment**

Powerful Rights

**Accessed, Changed,
and Modified
by People and Code
Constantly**

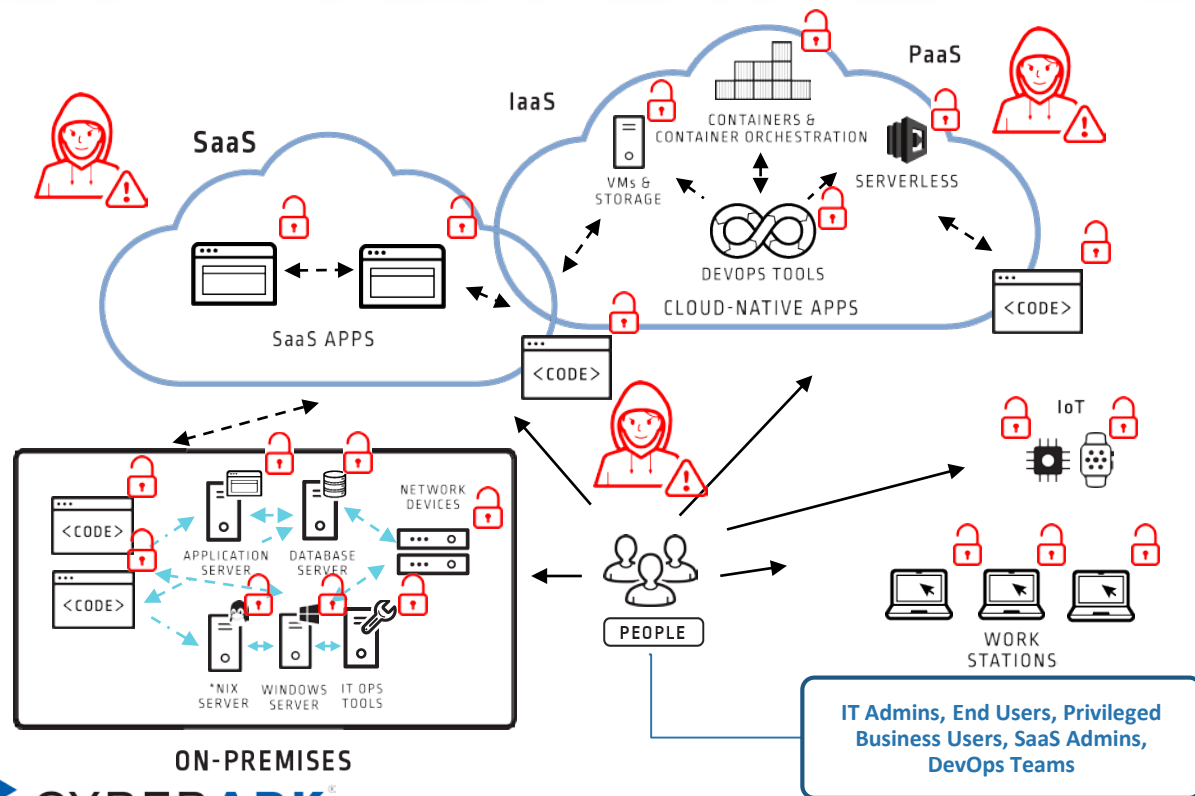
**Massive Amounts
of Corporate IP**

The New Norm: Customer And Industry Realities



- More Infrastructure
- More Applications
- More Privileged Actors
- More Automation

The Expanded Attack Surface



- More Infrastructure
- More Applications
- More Privileged Actors
- More Automation
- More Privileged Security Risk

Security Islands: Different Locations & Rules



Islands of Security

**PRIVILEGED ACCESS
MANAGEMENT**

AD/LDAP

Puppet Hiera

Ansible Vault

Chef Databags

DockerSecrets

Kubernetes Secrets

AWS IAM /KMS

**Microsoft Azure
IAM/KMS / KMS**

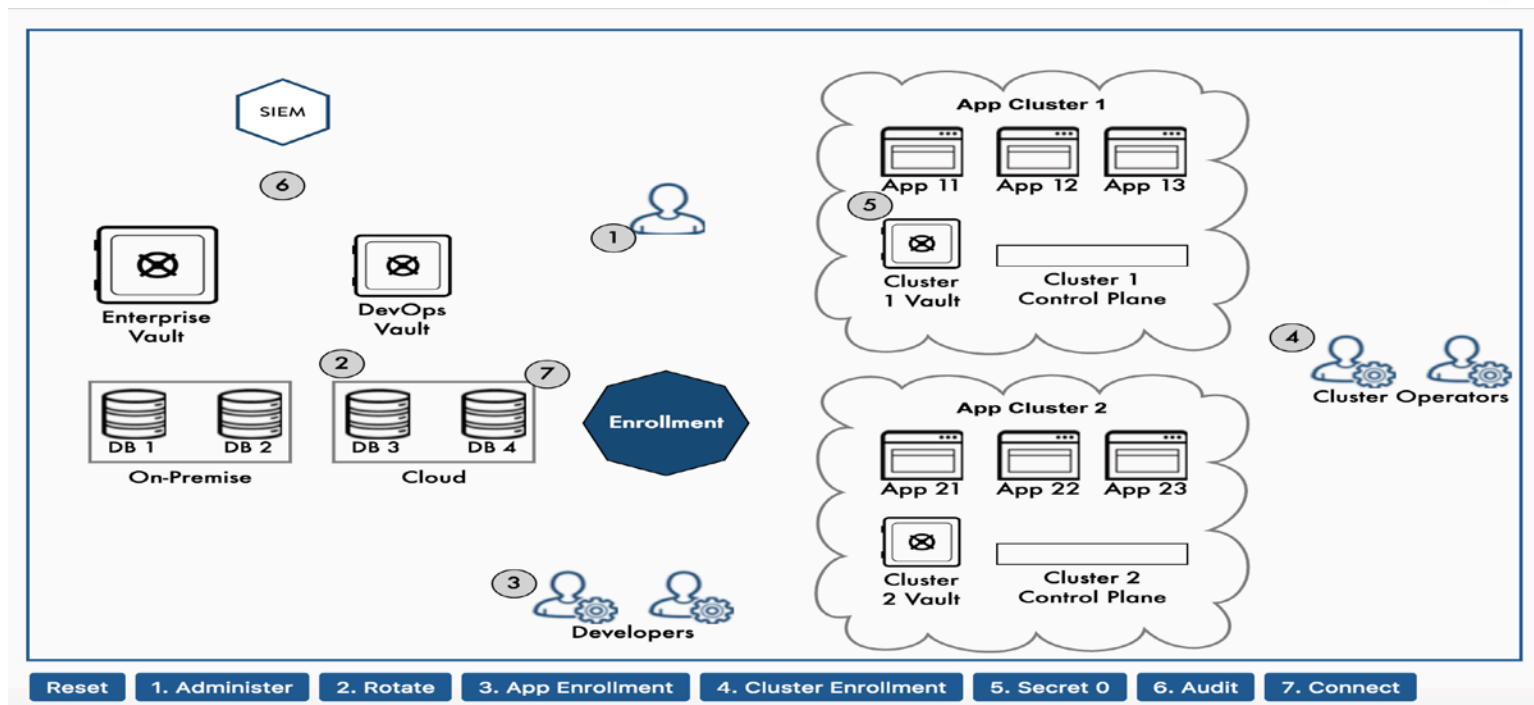
Google Cloud IAM / KMS

OpenShift Secrets

Managing Secrets in One Flow



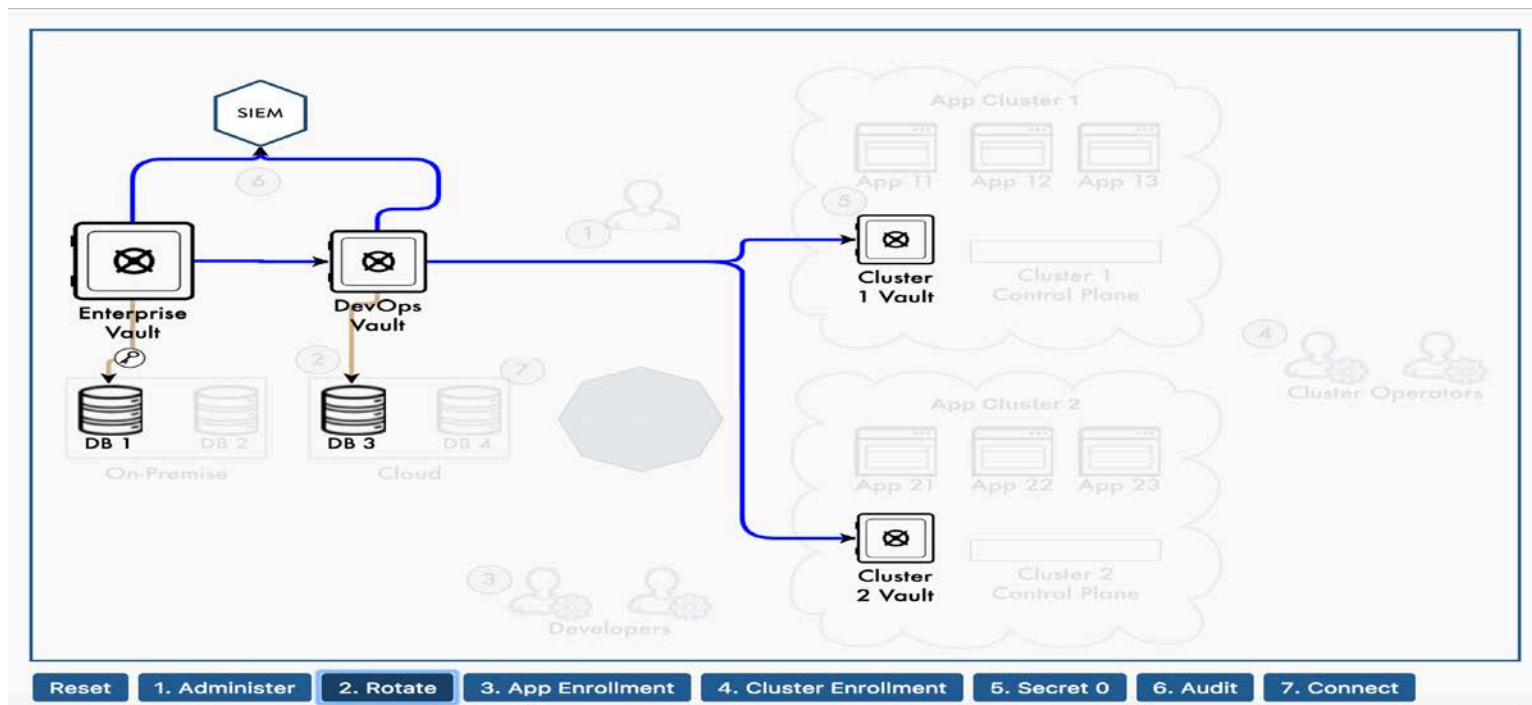
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Vault Cluster Architecture and Secret Rotation



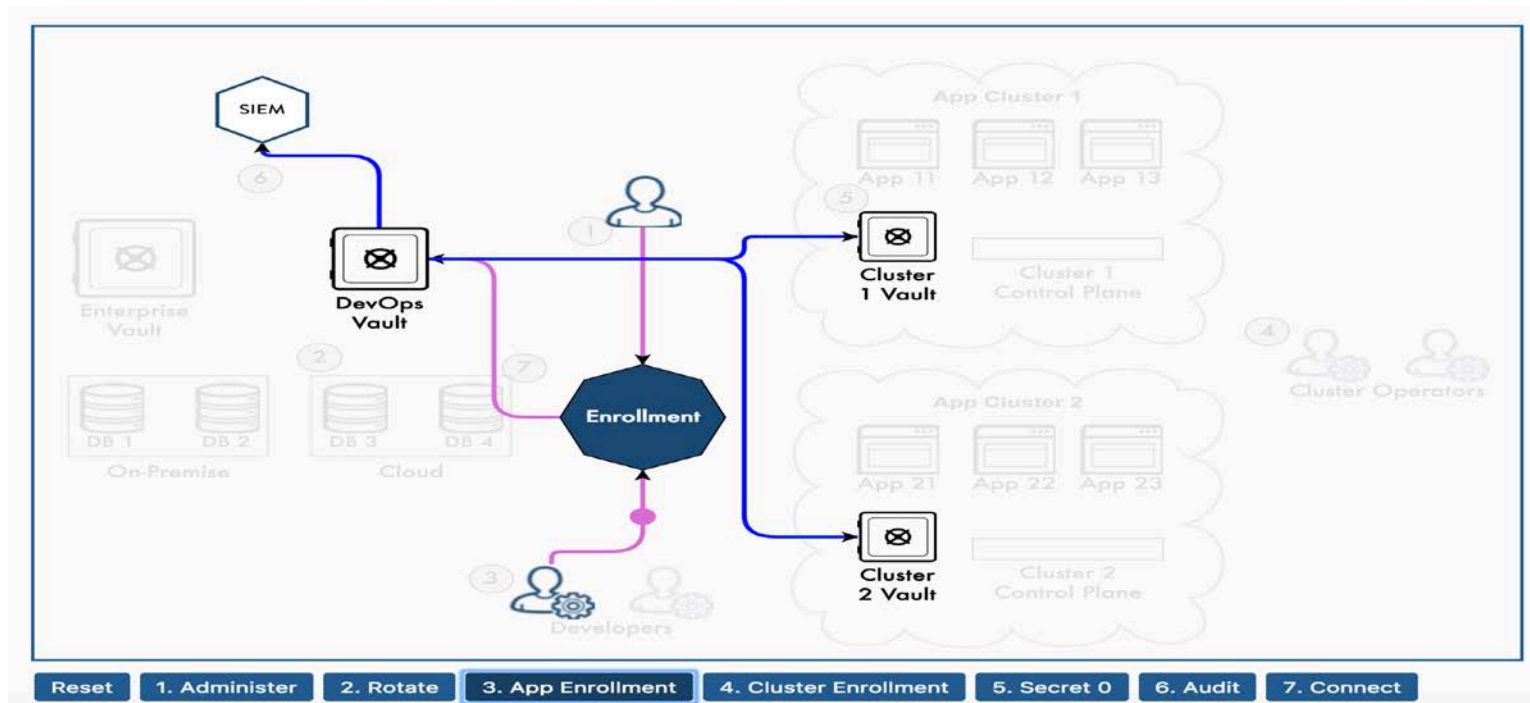
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Application Enrollment Flow for Secrets Retrieval



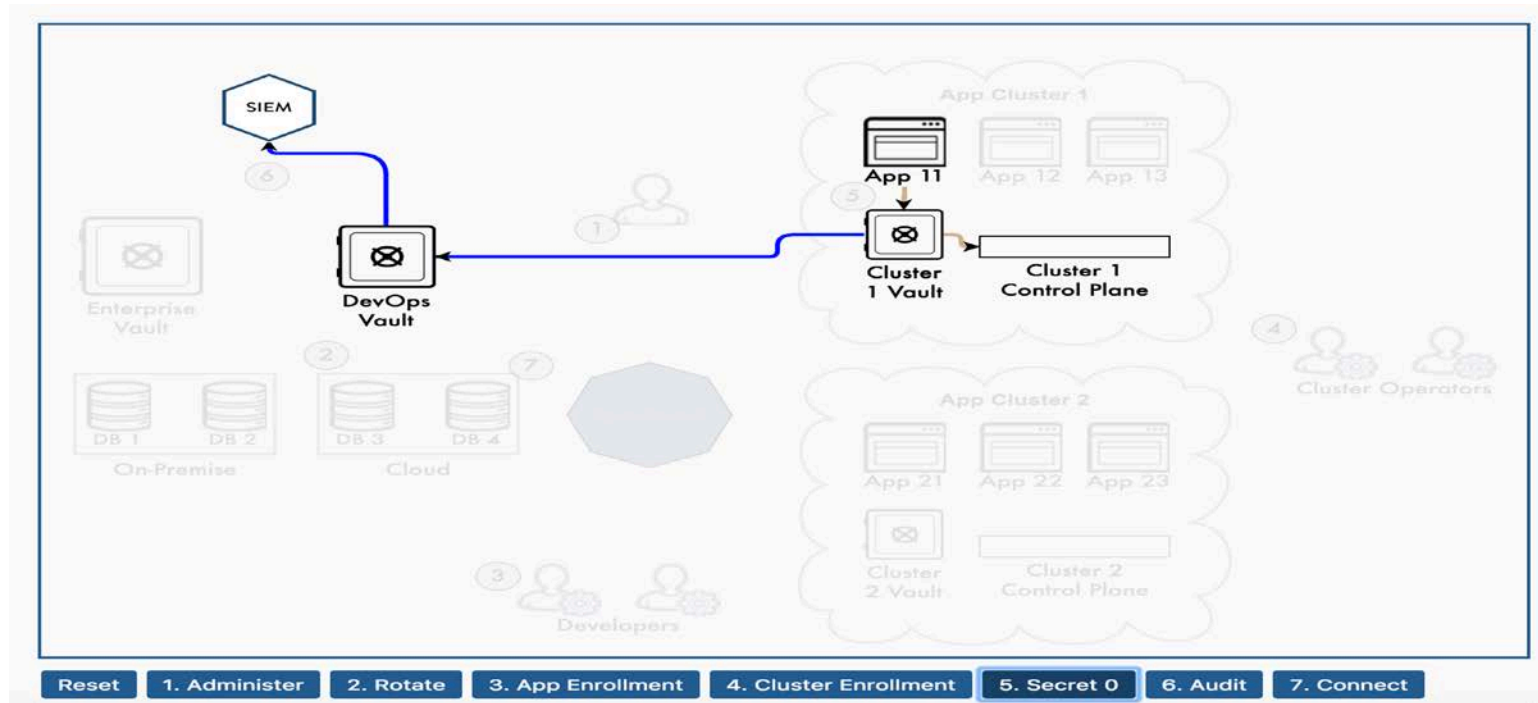
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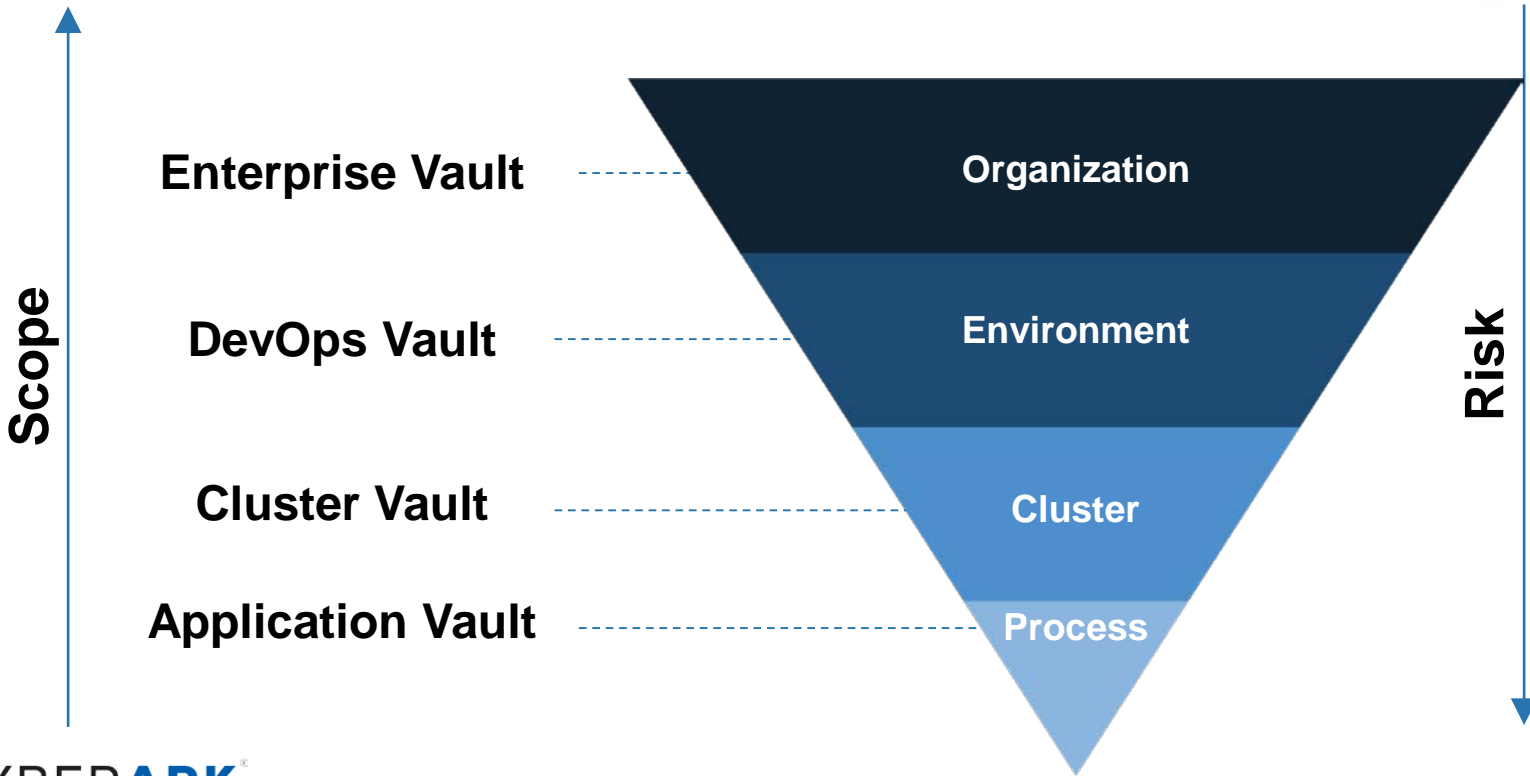
"Secret 0"



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Use the Right Size Vault for the Environment



The Maturity Level of Secrets Solutions



DevOps Vault Product Evolution Generations

- **"0th"** – No strong encryption, robust authentication, authorization or audit
- **1st** – Encryption, authentication, authorization, CLI management and REST API, single-site HA
- **2nd** – Add declarative policy, user interface, multi-site HA, integrations with 3rd party tools
- **3rd** – Add extensible authentication (delegation of "Secret-0" root of trust), and enrollment workflows to support separation of duties
- **4th** – Remove developers and code from the secrets workflows. Secure the "last mile" delivery of connectivity to applications

Securing Devops Initiatives is a Team Sport



CYBERARK

C³ Alliance

+70 Certified Partners

+100 Certified Joint Solutions

Analytics	Authentication	Detection	DevOps	Discovery	Governance	HSM
ICS	Identity & Access Management	ITSM	Orchestration & Response	Robotic Process Automation	SIEM	Vulnerability Management

+200 Plug-ins

CPM Plug-ins	PSM Plug-ins
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Simple Steps to Secure DevOps



- 1 Assess secrets and management approaches across cloud and DevOps environments.
- 2 Mitigate poorly secrets as basic DevOps hygiene.
- 3 Embed security with developers and DevOps teams to facilitate better secrets management practices.
- 4 Embrace security engineering and security automation.

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THANK YOU



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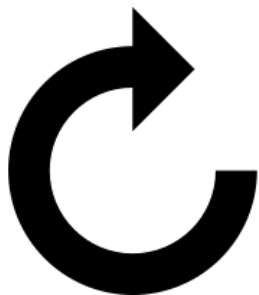
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Rotate, Repave and Repair



Rotate datacenter credentials
every few minutes or hours



Repave every server and application every
few hours from a known good state



Repair vulnerabilities consistently
within hours of patch availability

BUT there are always exceptions.
No one has every environment set fully on automate.
If it is fit for purpose, use it.