

Managing secrets in dynamic environments

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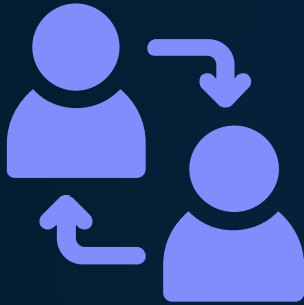
Take home



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HashiCorp Vault





What are dynamic environments?

Dynamic environment

- Heavy reliance on third-party solutions such as Open-source software and Cloud providers
- Changes in existing solutions or transitions to new ones
- Changes in teams and permissions



What are secrets?

Secret

- A piece of sensitive information
- Used by applications to access other services
- Provides authorization or authentication
- Needs to be kept confidential

Challenges with secrets



Challenges with secrets

Challenges with secrets

Storing & managing

Challenges with secrets

Storing & managing

- Can be stored in Github, Gitlab or infrastructure management tools
- Can be stored locally in plain-text files or in environment variables
- Hard to rotate and change secrets
- Difficult to revoke secrets when people leave the company

Challenges with secrets

Storing & managing



HashiCorp Vault



HashiCorp Vault

Core functionality

- Centralizes storage to combat secret sprawl
- Encrypts both at rest and in transit
- Allows for access control management
- Audit logs to easily know who access what
- Provides Encryption as a Service (EaaS)

HashiCorp Vault

Dynamic secrets

- Short lived secrets that will expire
- Additional layer of security by creating a moving target scenario
- Uniqueness
- Smooth revocation system

Reflection

“Every secret creates a
potential failure point”

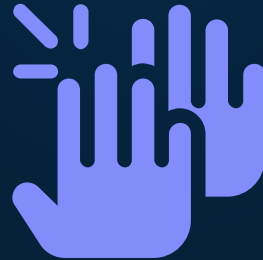
—Bruce Schneier

Take home

- Do Not be lazy
- Even if it is a small test, take the appropriate steps
- Whatever you do, do NOT EVER store secrets in source code for any reason

Thank you for listening!

Questions?



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