Onboarding Applications to Vault

Best practices from the field

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This presentation ---> https://bit.ly/2SojvYn

Agenda

- Challenge

- Key milestones

- Solution approach

- Demo

- Q/A

About HashiCorp

Leading Cloud Infrastructure Automation

Our software stack enables the provisioning, securing, connecting, and running of apps and the infrastructure to support them.

We unlock the cloud operating model for every business and enable their digital transformation strategies to succeed.
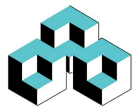
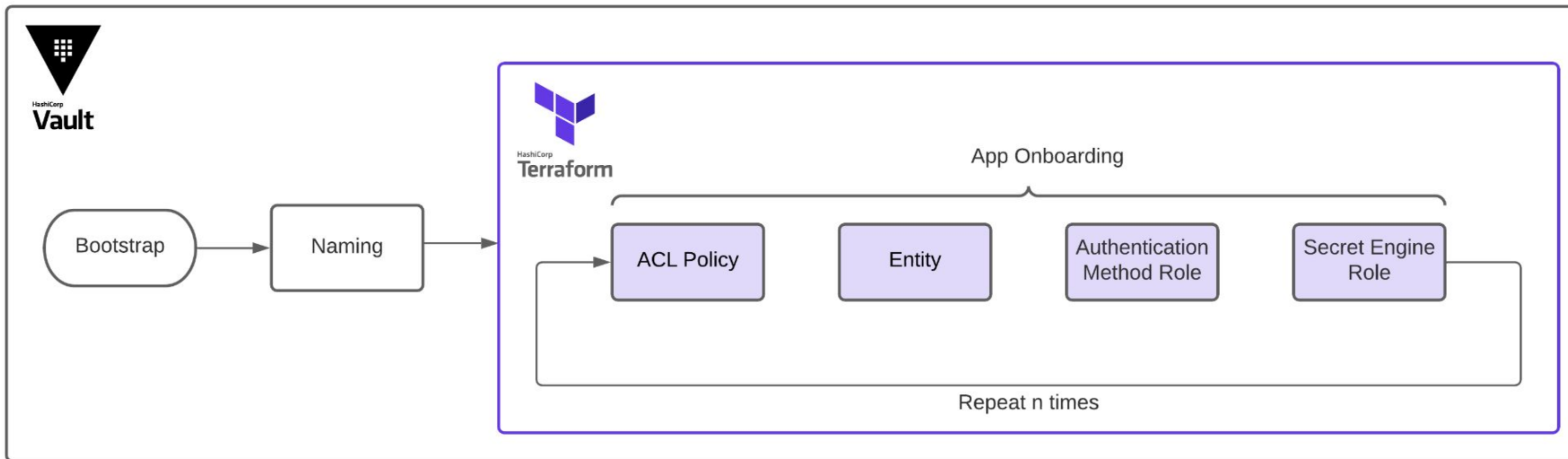| Founded	Employees	Funding
2012	**1200**	**349M**

Onboarding challenges

- Variety of Vault use-cases
- Manual or semi-scripted operations
- Application Integration options
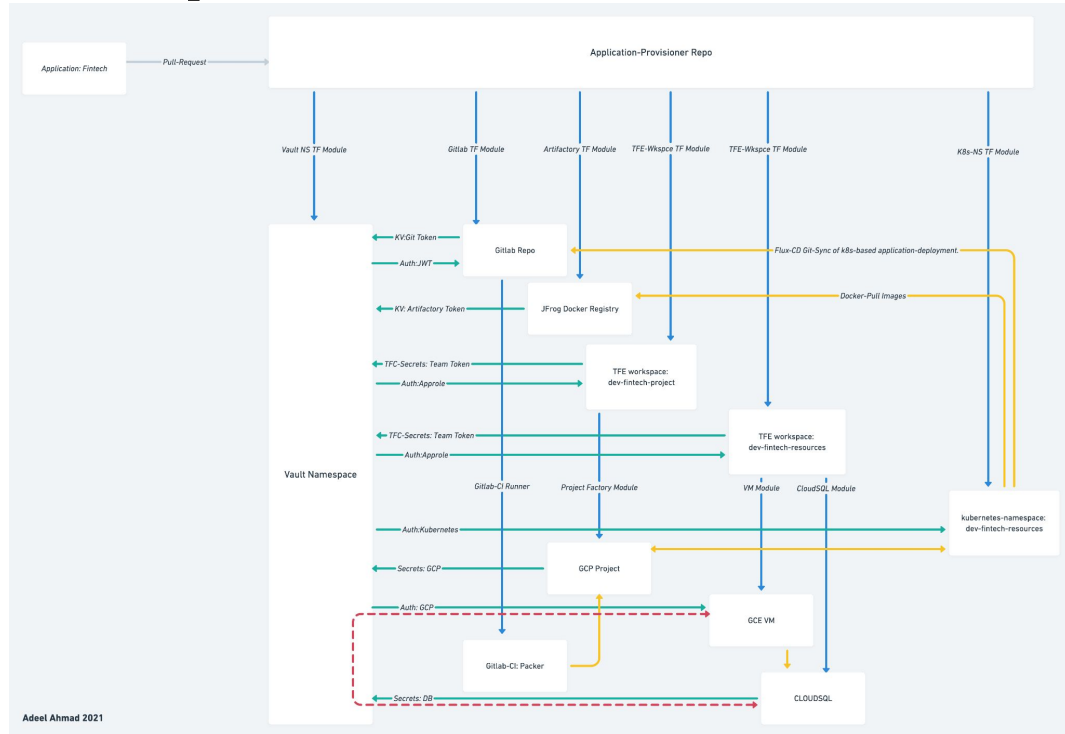
Key adoption milestones

Solution approach

- Use an IaC approach
  - [Demo terraform repository](#)
  - [Example modules](#)
- Establish naming conventions early
- Pre-create Identity/Entity objects
- Leverage Vault ACL Policy templates

Comprehensive Solution

Application: Fintech — Pull-Request — Application-Provisioner Repo

Vault NS TF Module · Gitlab TF Module · Artifactory TF Module · TFE-Wkspce TF Module · TFE-Wkspce TF Module · K8s-NS TF Module

KV:Git Token · Auth:JWT · Gitlab Repo

Flux-CD Git-Sync of k8s-based application-deployment.

KV: Artifactory Token · JFrog Docker Registry · Docker-Pull Images

TFC-Secrets: Team Token · Auth:Approle · TFE workspace: dev-fintech-project

TFC-Secrets: Team Token · Auth:Approle · TFE workspace: dev-fintech-resources

Vault Namespace

Gitlab-CI Runner · Project Factory Module · VM Module · CloudSQL Module · kubernetes-namespace: dev-fintech-resources

Auth:Kubernetes

Secrets: GCP · GCP Project

Auth: GCP · GCE VM

Gitlab-CI: Packer

Secrets: DB · CLOUDSQL

Adeel Ahmad 2021

https://whimsical.com/application-onboarding-flow-KxJTWEtG4xJLe6giNfPSwQ

Quick demo …

- *https://github.com/hashicorp/vault-guides/tree/onboarding-terraform/operations/onboarding*
- Create Vault configurations based on an application entities variable

Resources

Vault-guides repo	https://github.com/hashicorp/vault-guides/tree/master/operations/onboarding
Blog post	Coming soon! Please follow: https://medium.com/hashicorp-engineering
Adeel Ahmad framework	• Terraform modules • https://whimsical.com/application-onboarding-flow-KxJTWEtG4xJLe6giNfPSwQ • https://whimsical.com/application-left-to-right-flow-CGNrPVG3gqbdoDbZo7GsQG
ACL templating for the Kubernetes Auth method	• Recommended Pattern: Vault ACL Policy templates

Summary and Q/A

Efficiency of operators to manage secrets

Optimize secrets access and storage

Control secret access and downtime

Minimize exposure

Thank you

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