Vault Enterprise Academy

Summary

This instructor-led course provides in-depth comprehensive knowledge of HashiCorp Vault Enterprise for both operators and developers. Learn how to design, deploy and configure a Vault installation, as well as integrate applications and leverage various features of Vault. The following topics are covered in this course:

Module 1: Vault Architecture
Module 2: Vault Deployment Guide
Module 3: Vault Configuration
Module 4: Vault Operations
Module 5: Enterprise Replication
Module 6: Deployment Automation
Module 7: Incident Management
Module 8: Tokens
Module 9: Policies
Module 10: Authentication Methods
Module 11: Static Secrets
Module 12: Deploying Secrets
Module 13: Dynamic Secrets
Module 14: Onboarding Users and Applications

Duration

3 days

Audience

Developers, DevOps, Security and Operations

Detailed Agenda

Day 1

Vault Enterprise Architecture	Overview of Vault, Vault Workflow, Terminology, Server Architecture, and Intro to Replication
Vault Deployment Guidelines	Production Deployment Best Practices, Deployment Considerations, Deployment Security Model, and Consul Storage Security Model
Vault Configuration	Configuration Overview, Initialization, and Seal Key Overview
Lab - Deploy a Vault Cluster	Deploy a secure, production-quality Vault Enterprise cluster
Operations and Management	Management of Seal Keys and Root Tokens, Configuring Logging and Monitoring, API Endpoints for Operations
Lab - Vault Operations	Learn about Vault operations including audit logs, root token management, and rekeying and rotating of Vault's keys. Then migrate a Vault cluster to the GCP Auto-Unseal option.
Deployment Automation	Things to consider when looking at deployment automation
Incident Management	What to do when things go wrong, Troubleshooting and Prevention

Day 2

Enterprise Replication	Replication Overview, Disaster Recovery Replication, Performance Replication
Lab - Vault Replication	Learn How To Configure Disaster Recovery and Performance Replication Between Vault Clusters
Tokens	Authentication Workflow, Token Overview, Token Types, Token Lifecycle, Token Use Cases
Policies	Policy Overview, Tokens and Polices, Writing Polices, Associating Policies
Lab - Vault Tokens and Policies	Learn How To configure and use Vault Tokens and Policies
Authentication Methods	Authentication Overview, People Auth Methods, Machine Auth Methods
Lab - LDAP Authentication Method	Learn How To configure and use Vault's LDAP authentication method
Lab - AWS Authentication Method	Learn How To configure and use Vault's AWS authentication method
Lab - AppRole Authentication Method	Learn How To configure and use Vault's AppRole authentication method
Lab - Kubernetes Authentication Methods	Learn How To configure and use Vault's Kubernetes authentication method

Day 3

Static Secrets	Secrets Engines Overview, Static Secrets
Lab - Versioned Secrets	Learn How To use and manage versioned secrets stored in Vault's Key/Value Version 2 (KVv2) secrets engine
Deploying Secrets with vault	Deploying Secrets Overview, Vault Agent
Lab - Vault Agent	Learn How To configure and use Vault agent as a way of injecting secrets
Dynamic Secrets	Dynamic Secrets Overview, Databases, PKI, Cloud Credentials, Encryption Keys
Lab - PKI Secrets Engine	Learn how to setup a vault server to generate dynamic PKI certificates
Lab - AWS Secrets Engine	Learn How To dynamically generate short-lived AWS credentials with Vault
Lab - Google Cloud Secrets Engine	Learn How To dynamically generate short-lived GCP credentials with Vault
Lab - Database Secrets Engine	Migrate a Python web application from using static database credentials to credentials dynamically generated by Vault's Database secrets engine
Onboarding Applications and Users	Operational Readiness, Namespaces ,User/Service Onboarding, Vault Service Usage Patterns