
Vault
CERTIFIED
OPERATIONS
PROFESSIONAL

Welcome to the HashiCorp Certified: Vault Operations Professional course

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Summary

Bryan Krausen is a Principal Consultant with over 20 years in enterprise IT. Currently, Bryan specializes in HashiCorp tools. Bryan is also the first person to earn the HashiCorp Vault Expert partner certification.

Proven Expertise

- Worked with HashiCorp for over 1.5 years to build this exam
- Wrote most of the multiple-choice questions and multiple hands-on scenarios
- Continue to contribute to the exam with additional content

Stay Connected

Follow Me on Twitter

@btkrausen

User: @btkrausen

github.com/btkrausen/hashicorp

Use the Q&A to ask questions

Use message platform for private conversations

Course Introduction

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The primary objective of this course is to help you pass the **HashiCorp Certified: Vault Operations Professional** certification

- Assumes you have **working knowledge of Vault**
- Students should understand Vault components, such as **storage backends**, **auth methods**, **secrets engines**, and **audit devices**
- Prepare you to answer **multiple-choice questions** and perform **hands-on tasks** on a Vault node/cluster

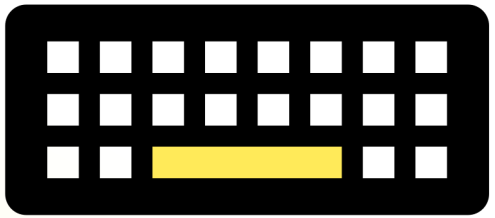
What This Course is NOT

This is a ***Professional-level certification***, and you should have a very good understanding of Vault and its components.

This course will not cover Vault basics. You should have the Vault Associate certification or relevant experience.

If you are new to Vault, please start with my "Getting Started with HashiCorp Vault" course

Course Content



Lecture & Slides

- Provide basis for discussion and topic at hand
- Make sure students understand terms and definitions
- Will set the stage for Vault lab environment

Vault Demo and Lab

- Hands-on discussions using one or more Vault clusters
- For the most part, demos will use Vault CLI and UI
- Vault will be deployed on AWS or use local dev server

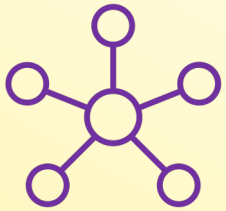
Course Resources

Slides

Available in PDF in Each Section

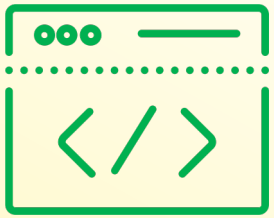
Resources

References Links Available in Each Section



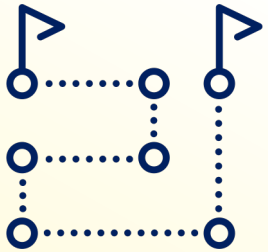
Mind Map

PDF of a Mind Map for Each Section



Lab Guides

PDF of Each Lab Demonstration



Quiz

Quizzes Test Your Understanding

HashiCorp Certified: Vault Operations Professional

Exam Introduction

THIS EXAM IS NOT EASY

Exam Summary

The Vault Operations Professional exam is for Cloud Engineers focused on deploying, configuring, managing, and monitoring HashiCorp Vault.

Well-qualified candidates hold the Vault Associate Certification (or equivalent knowledge), have experience operating Vault in production, and can evaluate Vault Enterprise functionality and use cases.

Certification holders have proven they have the skills, knowledge, and competency to perform the Vault operational tasks listed in the objectives.

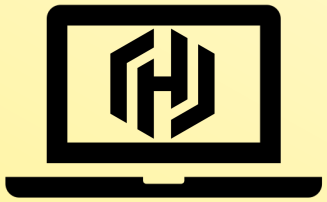
Exam Objectives

1. Create a working Vault server configuration given a scenario
2. Monitor a Vault environment
3. Employ the Vault security model
4. Build fault-tolerant Vault environments
5. Understand the Hardware Security Module (HSM) integration
6. Scale Vault for Performance
7. Configure Access Control
8. Configure Vault Agent

Exam Details

Type	Lab-Based Scenarios and Multiple-Choice Questions
Format	Online Proctored (camera and mic enabled)
Duration	Four Hours to Complete the Exam
Language	English (only)
Expiration	Valid for Two Years after Completion

Fun Facts about the Exam



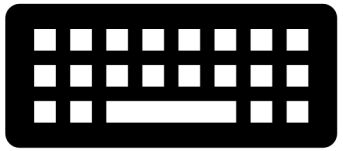
You will have access to Vault documentation during the exam. However, this does NOT include learn.hashicorp.com

All nodes run on Docker, and you will be expected to start or restart nodes after configuration

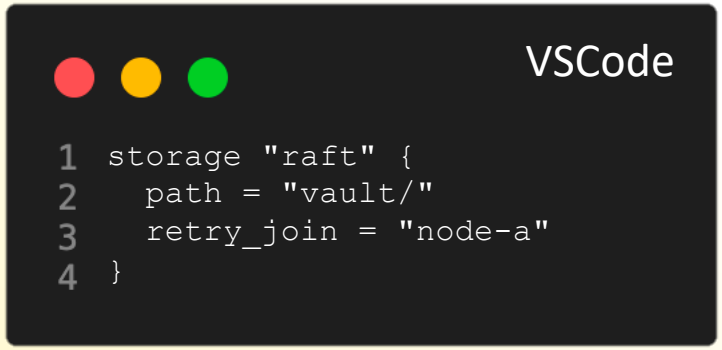
If you fail, HashiCorp gives you a free retake

Lab-Based Scenario

Example



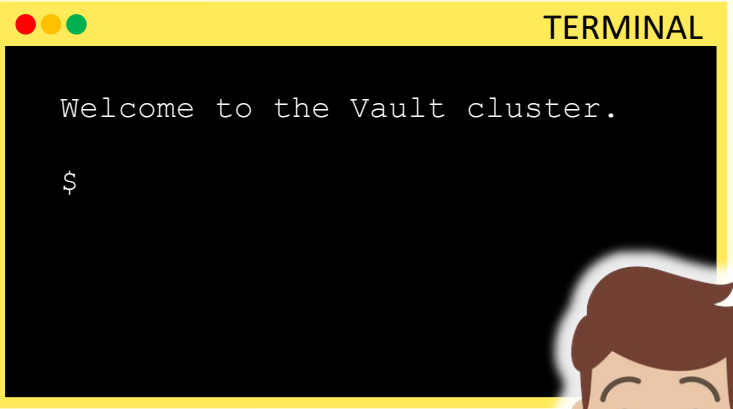
You are configuring a new Vault cluster in your organization, and you need to create a configuration file.



Requirements are as follows:

- Use this seal type
- Disable TLS
- Configure the raft storage backend

Once completed, start and initialize the Vault cluster. Write the unseal keys and root token to `/grading/cluster1.json`.



Click **HERE** to open VSCode. Click **HERE** to open an SSH session to the Vault cluster node.

Multiple-Choice Questions

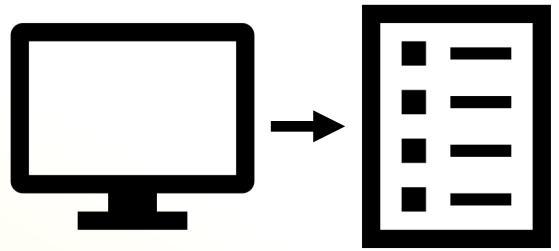
Your organization is running Vault Enterprise for production workloads. Due to high workloads, your production cluster is cannot keep up with the number of reads requests. As a result, applications are displaying errors to customers and the business is at risk of losing significant revenue.

How can you reconfigure the Vault cluster to provide scale-out read capabilities without taking an outage on any of the Vault cluster nodes?

a) Increase the memory for each node by changing the underlying hardware
b) Determine the secrets engine being overused and enable multiple secrets engines to spread the workload across them
c) Reconfigure the load balancer with another listener, point it to the performance standby nodes, and reconfigure read-only applications to send request to the new listener
d) Deploy another Vault cluster and configure disaster recovery replication. Redirect some clients to the new cluster.

Answer: C

Hybrid Questions



You are the Vault engineer at your organization. A user recently stated they cannot log in to Vault and interact with the proper Namespace assigned to their team. Based on the policies that are already created in Vault, determine which policy permits them to authenticate to the root namespace and interact with the namespace called mobile-team-a.

Click **HERE** to open an SSH session to the Vault cluster node. Determine the correct policy to use and select the answer below.

a) operation-policy
b) automation-ro-policy
c) training-team-policy
d) developer-team-a-policy

Additional Resources

Official Documentation

- **Certification Overview** - learn.hashicorp.com/tutorials/vault/ops-pro-overview
- **Study Guide** - learn.hashicorp.com/tutorials/vault/ops-pro-study
- **Review Guide** - learn.hashicorp.com/tutorials/vault/ops-pro-review

Available During Exam

- **Official Docs** - vaultproject.io/docs
- **API Docs** - vaultproject.io/api-docs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Let's Get Started

END OF SECTION