Deploying CockroachDB with Terraform Essentials - TTDV7562

Master deploying and managing distributed databases with CockroachDB using Terraform for infrastructure automation

Duration: 2 Days
Skill Level: Introductory
Available Format: Instructor-Led Online ; On Public Schedule

In the rapidly evolving world of IT, mastering distributed databases and infrastructure automation is key to staying ahead. Our **Deploying CockroachDB with Terraform Essentials** course offers a comprehensive, two-day journey into the world of database management and automation.

What You'll Learn

Overview

In the rapidly evolving world of IT, mastering distributed databases and infrastructure automation is key to staying ahead. Our **Deploying CockroachDB with Terraform Essentials** course offers a comprehensive, two-day journey into the world of database management and automation. This hands-on training is designed to equip IT professionals with the skills to boost operational efficiency and elevate database management. Throughout the course you will delve into the integration of CockroachDB, a sophisticated distributed database, with Terraform, the forefront technology in Infrastructure as Code (IaC), learning how to harness these powerful tools to refine your workflows and strengthen your organization's IT backbone.

Working in a hands-on learning environment you'll gain experience in deploying and managing CockroachDB databases, along with automating tasks using Terraform. You'll leave this course with a solid understanding of deploying and managing databases with CockroachDB and leveraging Terraform for infrastructure automation. Key operations, essential maintenance tasks such as backup, recovery, and security measures will be

part of your toolkit. You'll exit able to apply these new skills in your workplace, paving the way for more efficient, resilient, and scalable database solutions in your professional endeavors.

Objectives

This course combines engaging instructor-led presentations and useful demonstrations with valuable hands-on labs and engaging group activities.

Working in a hands-on learning environment led by our expert practitioner you'll explore:

- **Database Deployment**: Learn to deploy and manage CockroachDB clusters.
- **Terraform Automation**: Gain skills in automating infrastructure with Terraform.
- **Security Implementation**: Understand and implement basic database security.
- **Backup and Recovery**: Master techniques for data backup and restoration in CockroachDB.
- **Monitoring and Troubleshooting**: Develop skills in monitoring CockroachDB and resolving common issues.

If your team requires different topics, additional skills or a custom approach, our team will collaborate with you to adjust the course to focus on your specific learning objectives and goals.

Audience

This introductory-level course is geared for IT professionals seeking to expand their expertise in database management and automation, including system administrators, database administrators, and infrastructure engineers. It's also beneficial for those involved in or transitioning to roles that require managing large-scale, distributed databases or implementing Infrastructure as Code (IaC) practices. Individuals in DevOps teams, cloud architects, and software engineers looking to enhance their skill set in deploying and managing modern, cloud-native applications will find this training especially valuable.

Pre-Requisites

To ensure a smooth learning experience and maximize the benefits of attending this course, you should have the following prerequisite skills:

- **Basic Understanding of Databases**: Familiarity with fundamental database concepts and operations, such as creating and managing databases and tables. This foundational knowledge will help in grasping more advanced database management concepts taught in the course.
- **Fundamentals of Infrastructure Management**: Some awareness of infrastructure management principles, even at a basic level, will be advantageous. This includes understanding what servers, storage, and networks are, and how they interact in an IT environment.
- **Introductory Knowledge of Cloud Computing**: A general understanding of cloud computing concepts, such as what cloud platforms are and how they operate, will aid in comprehending the deployment and management of cloud-based database solutions.
- **Basic Command Line Interface (CLI) Skills**: Comfort with using command line interfaces, as both CockroachDB and Terraform involve interactions through the CLI. This skill will assist in effectively following along with the hands-on components of the course.

Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We'll work with you to tune this course and level of coverage to target the skills you need most. Topics, agenda and labs are subject to change, and may adjust during live delivery based on audience skill level, interests and participation.

Day 1: Foundations of CockroachDB and Terraform

Introduction to Distributed Databases
- Understanding databases: A brief overview
- What are distributed databases?
- Basic features and advantages of CockroachDB

Getting Started with Terraform
- Introduction to Infrastructure as Code (IaC)
- Terraform: What it is and why it's important
- Setting up a basic Terraform environment

Initial Deployment of CockroachDB with Terraform
- Understanding Terraform syntax and basic commands
- Creating a simple script to deploy CockroachDB

- Lab: Deploying a single-node CockroachDB cluster using Terraform

Basic Operations in CockroachDB Exploring the CockroachDB interface

- Basic database operations: Creating databases and tables
- Lab: Simple data operations in CockroachDB

Introduction to CockroachDB Clusters

- CockroachDB clustering
- Basic concepts of cluster management

Day 2: Practical Application and Basic Administration

Expanding Terraform Knowledge

- Building upon basic Terraform knowledge
- Simple automation with Terraform
- Lab: Modifying the Terraform script to update the CockroachDB deployment

Security Fundamentals in CockroachDB

- Basic security concepts in database management
- Implementing simple security measures in CockroachDB
- Lab: Securing your CockroachDB instance

Backup and Recovery in CockroachDB

- Importance of data backup and recovery
- Basic backup and restore operations in CockroachDB
- Hands-on Lab: Performing a backup and restore operation

Simple Monitoring and Troubleshooting

- Basic monitoring tools for CockroachDB
- Introduction to troubleshooting common issues
- Lab: Monitoring your CockroachDB cluster and identifying simple issues

All applicable course software, digital courseware files or course notes, labs, data sets and solutions, live coaching support channels, CodeCoach.AI anytime tutor access, and rich extended learning and post training resources are provided for you in our easy access, single source, no install required online **Learning Experience Platform (LXP),** remote lab and content environment. Access periods vary by course. We'll collaborate with you to ensure your team is set up and ready to go well in advance of the class. Please inquire about set up details and options for your specific course of interest.

For More Information

Please contact us or call 844-475-4559 toll free for more information about our training services (instructor-led, self-paced or blended), coaching and mentoring services, public course enrollment or questions, partner programs, courseware licensing options and more.