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Sign up

CockroachDB training

3 days (21 hours)

Presentation

Scale horizontally quickly and easily with CockroachDB. In fact, the system's architecture makes it easy to add new nodes without having to manipulate data. What's more, Cockroach automatically rebalances and distributes ranges across clusters.

This database management system has many other advantages, such as :

- Good redundancy, so data can be recovered quickly after a failure or error
- Intuitive, easy-to-use interface for data management and administration clusters
- Use of ACID transactions for secure transactions
- Simple node synchronization and fast query execution
- Compatible with many languages such as Java, Node.js, Ruby, Python, Apache, etc...

Our CockroachDB training course will teach you how to create and administer your databases, as well as how to deploy and optimize Cockroach in a Kubernetes cluster.

We'll teach you the latest version of the program: [CockroachDB 21.1](#).

Objectives

- How to manipulate data with CockroachDB
- Deploying, optimizing and securing Kubernetes clusters
- CockroachDB architecture and features

Target audience

- Business analysts

- Data analysts
- Data scientists
- Data engineers
- Data miners

Prerequisites

- Knowledge of SQL and database management
- Knowledge of Big Data
- Knowledge of container orchestration

CockroachDB training program

Introduction

- The different types of database
- The evolution of relational databases
- The advent of CockroachDB and distributed SQL
- Why use Cockroach?
- Use cases

CockroachDB architecture

- Cluster architecture
- The key-value system
- SQL layer
- Transaction layer
- Distribution layer
- Replication layer
- Storage layer

First step with Cockroach

- Installation
- Create a local cluster
- Launch a workload
- Access the DB console
- Scaling the cluster
- Stop the cluster

Managing the database

- Add, update, delete data
- Read these data
- Check replication
- Creating temporary tables
- Debugging
- Improving performance

Cockroach with Kubernetes

- Setting up a single node server
- Cockroach in a Docker container
- Launch a secure server
- Creating a Kubernetes cluster
- Using a GUI client
- Handling your data

Orchestrated deployment

- Monitoring Cockroach on Kubernetes
- Deploying Kubernetes with multiple clusters
- Optimizing Kubernetes performance
- Cluster maintenance
- Good safety practices

Special features

- Access historical data
- Adding nodes
- Data rebalancing
- Serializable transactions
- Keeping clusters healthy
- Multi-region performance
- Check data validity

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.