AMBIENT-IT

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Sign up

Aerospike training

2 days (14 hours)

Presentation

Control your way to infinite speed, scalability and savings with our Aerospike training. This real-time database will enable you to deploy your applications on the cloud in minutes.

During our training session, we'll cover data modeling, complex queries, consistency management and cluster configuration for scalability.

You'll explore CRUD operations, multi-datacenter replication, memory caching and compatibility with cloud architectures.

By mastering Aerospike, you'll develop skills in data modeling, performance optimization, high availability and scalability management in high-load environments.

As with all our training courses, we'll be using the latest stable version of the program and the latest resources: Aerospike 7.0.0.9.

Objectives

- Develop application development skills
- Gain an in-depth understanding of basic CRUD operations and data types
- Explore advanced operations such as Operate() commands
- Understand Aerospike's underlying architecture (cluster management, distributed transaction consistency mechanisms...)

Target audience

- Engineers

- Developers
- Data analysts

Prerequisites

- Knowledge of NoSQL databases
- Software development skills
- Basics of databases and data storage concepts

OUR AEROSPIKE TRAINING PROGRAM

INTRODUCTION TO AEROSPIKE AND INSTALLATION

- Introducing Aerospike and its advantages in NoSQL systems
- Aerospike installation on various operating systems (Mac, Windows, Linux)
- Initial configuration and verification of database operation
- Overview of the user interface and basic commands
- Discussion of typical Aerospike use cases

DATA ARCHITECTURE AND DESIGN

- Understanding horizontal and vertical scaling architecture
- Overview of design, data distribution and cluster management
- Exploring hybrid memory architecture and multi-core processor management
- Memory fragmentation and process prioritization
- Case study in data structure planning and optimization

BASIC AND ADVANCED OPERATIONS

- CRUD operations (Create, Read, Update, Delete)
- Data type usage and data lifecycle management
- Introduction to light operations, batch operations and arbitrary operations
- Practice with the Operate() command and list manipulation
- Practical exercises to reinforce understanding of operations

INDEXING AND QUERIES

- Create and manage secondary indexes to optimize queries
- Building and executing queries with multiple predicates
- Using expressions and trilinear logic for advanced filtering
- Practical workshop on complex query scenarios
- Performance analysis of queries and adjustments

CONSISTENCY, TRANSACTIONS AND SAFETY

- Understanding the strong consistency of Aerospike transactions
- Introduction to distributed transaction consistency management
- Techniques to prevent divided brain conditions and rack awareness
- Approaches to securing data in Aerospike
- Workshops on configuring security policies and access management

ADMINISTRATION TOOLS, MONITORING AND BEST PRACTICES

- Use of administration tools such as Asinfo, Asadm, Asbackup, Asrestore
- Setting up and using Aerospike Quick Look for rapid monitoring
- Aerospike environment monitoring with Prometheus and Aerospike Exporter
- Discussion of best practices for software updating and preparation
- Troubleshooting sessions to identify and solve common problems

Companies concerned

This training 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.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

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.