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Sign up

Apache ActiveMQ Training

3 days (21 hours)

Presentation

Learn to master the most popular open-source message broker with our ActiveMQ training course.

Our training program is structured to give you an in-depth understanding of this messaging platform. First, we'll introduce you to the tool through its various components, and then we'll take you step-by-step through the process of installing it via Docker.

You'll know the different protocols and APIs to use via JMS and Jakarta. You'll learn how to configure routing using different methods. You'll also learn about clustering for high availability.

We'll also teach you how to monitor your performance and [secure ActiveMQ](#) (authentication, authorization).

As with all our training courses, this one will introduce you to the latest version of ActiveMQ ([ActiveMQ 6.1](#)).

Objectives

- Understanding the basics of Apache ActiveMQ
- Installing and configuring ActiveMQ
- Mastering messaging protocols and APIs
- Set up clustering and security on ActiveMQ

Target audience

- Developers
- Project Manager

- Technical architects
- Data engineers

Prerequisites

Knowledge of Java.

Software requirements

- Access to a virtual machine via Virtualbox
- Docker installed

OUR ACTIVEMQ TRAINING PROGRAM

INTRODUCTION

- Apache ActiveMQ overview
- Why use ActiveMQ in messaging systems?
- The main concepts
- Architecture
- Main components

INSTALLATION

- Installing ActiveMQ with Docker
- Getting started with the ActiveMQ server
- Using the command line (CLI)
- Classpath configuration for JMS and Jakarta clients

PROTOCOLS AND API

- Overview of messaging protocols and their interoperability
 - AMQP
 - STOMP
 - MQTT
 - OpenWire
- Using and configuring the Core protocol
- Handling connection failures with the Core client
- Correspondence between JMS and API Core
- Using JMS
- Using Jakarta

ADDRESSING AND ROUTING ON ACTIVEMQ

- Understanding the ActiveMQ address model
- Configuring address parameters
- Using wildcard syntax for routing
- Message flow management with splitting and diversion
- Message processing and filtering

CLUSTERING

- Core bridges for inter-broker connectivity
- Configuring clustering
- Setting up the federation
- High availability
- Switching
- Network insulation

SAFETY

- Authentication
- Authorization
- Securing passwords and communications
- Limiting resource use

MONITORING

- Management methods
- Using the Web management console
- Monitor and interpret metrics

TUNING AND PERFORMANCE

- Best practices for performance tuning on ActiveMQ
- Using performance and thread management tools
- Analysis and optimization of persistence and pagination

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.

Positioning on entry to training

Positioning on entry to training complies with Qualiopi quality criteria. As soon as enrolment is confirmed, the learner receives a self-assessment questionnaire enabling us to

assess their estimated level of proficiency in different types of technology, and their 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 internal security difficulties within the company (intra-company or virtual classroom) that 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.