AMBIENT-IT

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Updated on 12/17/2024

Sign up

Akka training

2 days (14 hours)

Presentation

Akka is a framework for writing highly concurrent, distributed and fault-tolerant applications on the JVM. Akka is based on an actor- and message-based abstraction, inspired by the Erlang actor model. Open-source, the framework is mainly guided and maintained by a team from Lightbend, who also provide commercial support. Written in Scala, Akka provides both a Java and a Scala API. This course focuses on using Akka in Scala.

Our training covers the latest version of this toolkit (Akka 2.6).

Objectives

- Understand what Akka is, when and why to use it
- How to write your first Akka applications
- Master the framework's main features

Target audience

- Developers
- Architects

Prerequisites

- Have attended our java and Scala training courses

Akka training program

Introduction

- What is Akka?
- Key features
- When to use it

Key concepts

- Players
- Props
- Messages
- Actor System
- Mailboxes

First steps

- Creating an Actor System
- Creating players
- Sending and receiving messages

Akka general rules

- Message delivery guarantees
- Unprocessed messages
- Player life cycle

Advanced tools

- Player methods
- The "Ask" pattern
- ActorRefs, paths and addresses
- Routing
- Persistence
- Scheduling
- Logs

Fault tolerance

- Hierarchy of players
- Supervision strategies
- Monitor an actor's life cycle

Additional advanced module (on request only, 1 to 2 additional days)

- Introduction to Akka Stream
- Introduction to Akka HTTP
- Tools: FSM
- Akka-typed: managing the absence of type!
- Clustering
  - How it works
  - Prerequisites
  - Configuration

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 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.