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Sign up

GraalVM training

2 days (14 hours)

Presentation

Launch your programs faster on any machine. With GraalVM, you can reduce the latency of your applications and compile them into self-contained native binaries.

GraalVM is a universal virtual machine suitable for a wide range of programming languages, including JavaScript, Python, Ruby, C, C++, etc.

As far as microservices are concerned, [native images are triggered 50 times faster](#) and require 5 times less storage resources.

This GraalVM training course will introduce you to the tool's main features, and show you how to optimize the JIT compiler, native images and polyglot programming. You'll also learn how to manage GraalVM containers.

Our GraalVM training course will introduce you to its latest version, [GraalVM 21.2](#).

Objectives

- Using GraalVM for microservices
- Understanding the importance and architecture of the Graal virtual machine
- Master the main functions

Target audience

- Developers
- Technical architects
- Directors

Prerequisites

- Mastery of a programming language
- Knowledge of Java
- Basic knowledge of containers

GraalVM Training Program

Introduction

- What is a JVM (Java Virtual Machine)?
- How a JVM works
- Architectural overview
- Why use GraalVM?
- Installation
- Launch applications

Overview of tool technologies

- Native images
- Compiler
- Multilingual programming
- GraalVM Updater
- Embedding

The Just-In-Time compiler

- Setting up the environment
- Configure Graal
- What is the JIT compiler?
- Optimization best practices
- GraalVM Dashboard
- Debugging and monitoring

Native images with Graal

- Analyze native images
- Understanding the GOP
- Image configuration
- Generating graal graphs with native images
- Managing heaps
- Troubleshooting

Multilingual programming

- Setting up the environment

- The Truffle framework
- Java, Python and R
- LLVM, Ruby and WASM
- Debugging

Microservices

- Introduction to microservices architecture
- GraalVM containers
- Functional architecture and deployment
- Creating BookInfoServices

Companies concerned

This course is aimed at companies, large or small, wishing to train their teams in a new, advanced computer technology.

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.