




About


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The question is

 w:800

What we can do?

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So what is the solution?

java 4ever


What is GraalVM ?

GraalVM is a high-performance JDK distribution designed to accelerate the execution of applications written in Java and other JVM languages along with support for JavaScript, Ruby, Python and *a number of other popular languages*. GraalVM's polyglot capabilities make it possible to mix multiple programming languages in a single application while *eliminating foreign language call costs*.

What can GraalVM give me?

- Mix multiple programming languages in a single application
- Native executables
- Amazingly fast boot time
- Incredibly low RSS memory (not just heap size!)
- Instant (relatively) scale up and high density memory utilization in container orchestration platforms like Kubernetes .

GraalVM Architecture

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Native Image

The native executable for our application will contain the application code, required libraries, Java APIs, and a reduced version of a VM. The smaller VM base improves the startup time of the application and produces a minimal disk footprint.

Truffle language implementation framework

The Truffle language implementation framework (henceforth “Truffle”) is an open source library for building tools and programming languages implementations as interpreters for self-modifying Abstract Syntax Trees. Together with the open source GraalVM compiler, Truffle represents a significant step forward in programming language implementation technology in the current era of dynamic languages.

Supported Frameworks and Tech

- Spring Framework (Experimental)
- Quarkus
- Play Framework
- Camel
- Prometheus
- JavaFX
- ...

Disadvantages

- The main downside of this approach is the platform-dependent native code.

That means you need to compile source code for linux/windows etc.

Meanwhile ??

SystemAdmin01: server_api.so doesn't work on my server !

Customer\$\$\$__: customer_api.exe doesn't work on my pc !

DevGuy42____: api.jar works on my workstation !

F1rat_____: In some cases, problems may arise from the libraries or build scripts used. In other words, it is necessary to pay attention to **tests**.

SystemAdmin01: himm, server_api.so doest work on my server !

.....

DevGuy42 writing ...


Tests : Sure

```
package org.acme.quickstart;

import io.quarkus.test.junit.NativeImageTest;


@NativeImageTest
public class NativeGreetingResourceIT extends GreetingResourceTest {
    // Run the same tests
}
```

Performance


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Quarkus Test

After this experience i made a demo application for my requirement. It's really reducing startup and memory footprint dramatically. :)

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Spacial thanks to

- Oracle
- Quarkus
- Spring
- JavaFX / GluonHQ
- Google and Wiki
-  w:360