

Quarkus Spring Compatibility Layers

Expertenkreis Java, 21.05.2026

GEDOPLAN GmbH

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- Studied Informatik at RWTH Aachen
- Living in Bielefeld
- CEO of GEDOPLAN GmbH
- JEE since 1999
- Speaker and author



GEDOPLAN

- Software development, consulting, training since 1979
- Bielefeld and Berlin
- Jakarta EE, Spring Boot, Angular, Kubernetes, ...

Quarkus vs. Spring Boot

- Spring Framework (2004)
 - Ersatz/Verbesserung für EJB
- Spring Boot (2014)
 - Convention over configuration
 - Standalone applications
- Quarkus (2019)
 - Cloud, Container, Microservices
 - Aufbau wie Spring Boot, aber Basis Jakarta EE / MicroProfile
 - stark optimiert
 - sehr flüssige Entwicklung

Migrationspfade

- Klassische JEE-Anwendungen (JBoss/WildFly, WebSphere, ...)
 - Standard: Jakarta EE
 - → leichter Übergang zu Quarkus
- Spring-Anwendungen
 - proprietäre Libraries
 - einige JEE-Standards
 - → ?

Spring Compatibility Layers

- Quarkus Extensions for ...
 - Spring DI: **spring-di**
 - `@Component`, `@Service`, `@Bean`, `@Autowired`, `@Qualifier`, `@Value` ...
 - Spring Data JPA: **spring-data-jpa**
 - Hibernate
 - Repository "Magic"
 - Spring Web API: **spring-web**
 - `@RestController`, `@RequestMapping`, ...
 - ...



Demo time

(<https://github.com/GEDOPLAN/quarkus-spring-layer>)

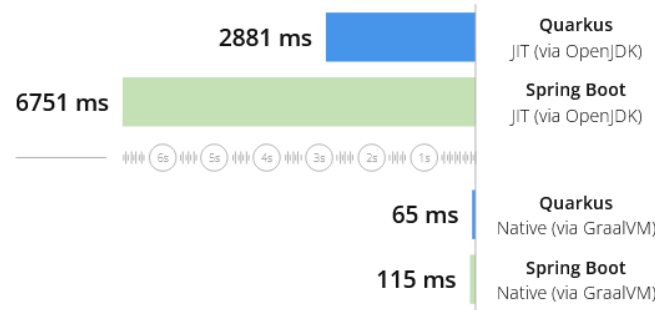
Benchmark

- <https://github.com/quarkusio/spring-quarkus-perf-comparison>
- Branches:
 - **main**: Anwendungen für höhere Performanz getuned,
 - **ootb**: Nutzung der Frameworks Out-of-the-Box, d. h. ohne Tuning.
- Testanwendungen:
 - **quarkus3**: „Normale“ Quarkus-3-Anwendung,
 - **quarkus3-virtual**: dito, aber mit Virtual Threads,
 - **quarkus3-spring-compatibility**: mit Spring Compatibility Layer,
 - **springboot3**: Spring-Boot-3-Anwendung
 - **springboot4**: Spring-Boot-4-Anwendung

Benchmark

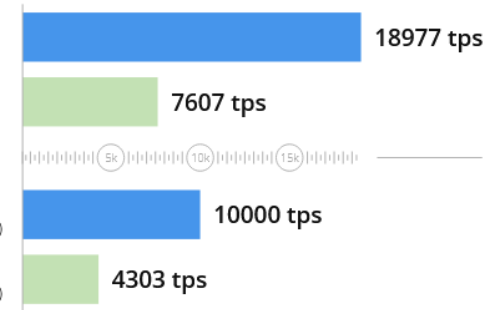
Boot + First Response Time

(Shorter is better)



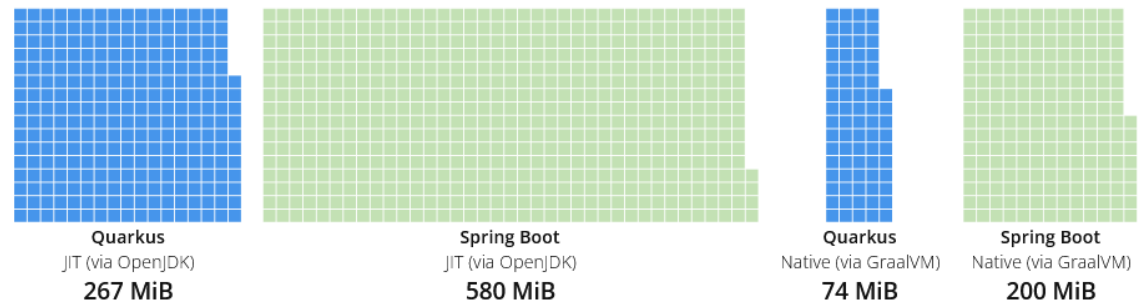
Throughput

(Higher is better)



Memory (RSS after first request)

(Smaller is better)



Quarkus: 3.32.1
 Spring Boot: 4.0.3
 JVM: 25.0.2-tem
 GraalVM: 25.0.2-graalce

Memory: -Xmx512m -Xms512m
 JVM args: -XX+UseNUMA
 CPUS: 4

Source: [quarkusio/spring-quarkus-perf-comparison](https://github.com/quarkusio/spring-quarkus-perf-comparison)
 Scenario: tuned
 Commit: f159f31
 Execution date: 2026-03-03

Spring Compatibility Layers

- Weitere Quarkus Extensions for Spring
 - Security
 - Boot Properties
 - Cache
 - Scheduling
 - Cloud Config
- Limitierungen u.a.
 - Kein Application Context
 - Kein Query by Example, Query DSL, Named Queries, Native Queries