

Whats new in Spring Boot 3

Spring Boot 3 - Spring Framework 6

Marten Deinum, 12-12-2022

“Change is the only constant in life”

Heraclitus, Greek philosopher ~500BCE

About Me

- Java Professional since 2000
- Spring since 2003/2004
- Part of team Loki
- Author
- Owner & Technical Diving Instructor @ Rebel Diving
- Father
- Husband



Whats new

Spring Boot 3 / Spring Framework 6

- Java 17 Baseline
- JakartaEE 9 Baseline
 - Support for JakartaEE 10
- Observability improvements
- AOT Support
- Problem Details Support (RFC-7807)
- Declarative HTTP Clients
- Virtual Threads (Project Loom)



Whats New

Baseline JDK 17

- **Language:** text blocks, switch conditions, pattern matching
- **Internal:** Collection Factory methods
- **Type System:** records, sealed classes
- **Modules:** module introspection, module path scanning
- **Virtual Threads:** Polishing in framework for better thread support

Whats New

Baseline Jakarta EE 9

- **Servlet API 5:** `javax.servlet` -> `jakarta.servlet`
- **JPA 3:** `javax.persistence` -> `jakarta.persistence`
- **Bean Validation:** `javax.validation` -> `jakarta.validation`
- **DI 2.0:** `javax.inject` -> `jakarta.inject`

Whats New

Support Jakarta EE 10

- **Servlet API 5 + 6:** Tomcat 10.0/10.1, Jetty 11/12, Undertow
- **JPA 3.0 + 3.1:** Hibernate 6.0/6.1
- **Validation 2 + 3:** Hibernate Validator 7.0 / 8.0

Whats New

Observability

- Logging
- Metrics
- Traces
- Data collection and visualization

How well can we understand the internals of our system by looking at the output?

Whats New

Observability - Strategies

- Java Agent, instrument bytecode
- Using extension points
- Instrumentation directly in the library

Whats New

Observability - Support

- Implemented using Micrometer Observation and Tracing
- WebClient and RestTemplate are instrumented
 - Automatically setup in Spring Boot
- Spring Batch exposes metrics
- Spring Integration exposes metrics
-

DEMO

Whats New

Declarative HTTP Clients

- Better support for declarative clients
- Spring Cloud (Open) Feign
 - Reused Server Annotations
- Dedicated exchange annotations, partially reuse of common annotation
- Build on top of the reactive WebClient

DEMO

Whats New

RFC-7807 - Problem Details Support

- RFC-7807 (<https://www.rfc-editor.org/rfc/rfc7807>)
- Small API describing what can be returned
- Support in Spring Framework
- Auto configuration in Spring Boot (when enabled)
- Easy to add own exception handler
- Support for I18N

DEMO

Whats New

AOT (Ahead of Time)

- Reduce startup time and memory footprint in production
- Runtime hints for reflection, resources, serialization and proxies
- Option to create optimized JVM deployments
- Required for GraalVM native executable
- **AOT tradeoff:** Extra build setup and less flexible at runtime

DEMO

Whats new

Spring Boot 3 / Spring Framework 6

- Java 17 Baseline
- JakartaEE 9 Baseline
 - Support for JakartaEE 10
- Observability improvements
- AOT Support
- Problem Details Support (RFC-7807)
- Declarative HTTP Clients
- Virtual Threads (Project Loom)





Questions

Contact Info

E: marten.deinum@ing.com

E: marten.deinum@conspect.nl

T: @mdeinum



Thank You