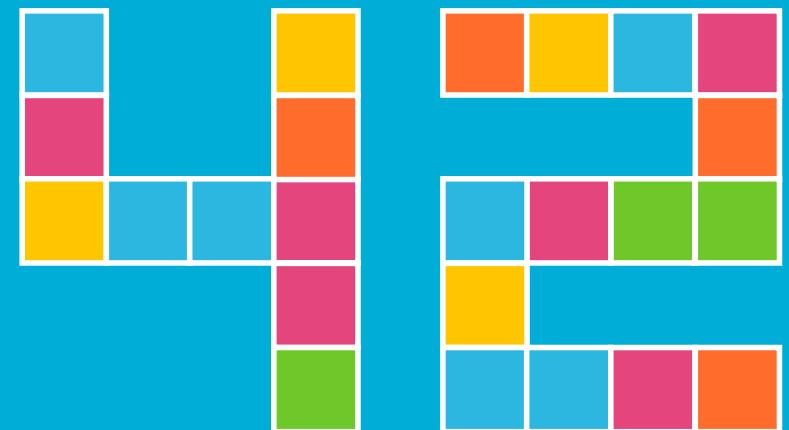


Spring Boot 3 Tutorial

Getting Ready for the New Season!

Patrick Baumgartner
42talents GmbH, Zürich, Switzerland

@patbaumgartner
patrick.baumgartner@42talents.com



TALENTS

Abstract

Spring Boot 3

Beschreibung

Mit Spring Boot 3 steht die dritte Generation eines Ecosystems zur Verfügung welches Entwickler:innen dabei unterstützt neue Applikationen im Handumdrehen zu erstellen. Mittels AutoConfiguration, Dependency-Management und weiteren Werkzeugen reduziert sich der Aufwand der markant. In diesem Tutorial zeigt Ihnen Patrick Baumgartner, wie Sie Java-Anwendungen effektiv mit Spring Boot und weiteren Projekten aus dem Spring Ecosystem entwickeln. Eignen Sie sich aktuelles Spring-Boot-Know-how an, um moderne Applikationen zu entwickeln.

Spring Boot 3

**Getting Ready for the
New Season!**

**Patrick Baumgartner
42talents GmbH, Zürich, Switzerland**



Introduction



Patrick Baumgartner

Software Crafter & Technical Agile Coach @ 42talents

My focus is on the development of software solutions with humans.

Coaching, Architecture, Development, Reviews, and Training.

[@patbaumgartner](https://twitter.com/patbaumgartner)

We Are Going to Cover ...

We Are Going to Cover ...

- Spring Boot Configuration
- Data Access with Spring Boot
- Restful Web Services with Spring Boot
- Spring Boot Testing
- Spring Boot Observability
- Deployment and Production Considerations

Spring Boot

What is Spring Boot?

- Spring Boot is based on the very popular Spring Framework
- It's an opinionated framework that makes it easy to create stand-alone, production-grade Spring based Applications that you can "just run"
- Spring Boot is designed to get you up and running as quickly as possible
- Spring Boot favors convention over configuration

Spring Boot Main Building Blocks

- Spring Boot Starters
- Spring Boot Auto Configuration
- Spring Boot Actuator
- Spring Boot Tooling Support (CLI, Maven, Gradle, IDEs)

Spring Boot Demo

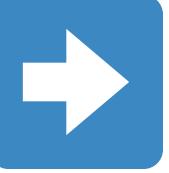
Spring Boot 3

- Spring Framework 6.x
- Java 17 Baseline & Java 19 Support
- JakartaEE 10 with EE 9 baseline
- Native Images with GraalVM
- Improved Observability with Micrometer and Micrometer Tracing
- ...

Minimal Requirements

- Kotlin 1.7
- Lombok 1.18.22 (JDK17 support)
- Micrometer 1.10
- Hibernate 6.1
- Flyway 9
- Gradle 7.5
- ...

Namespace Changes

javax.*  **jakarta.***

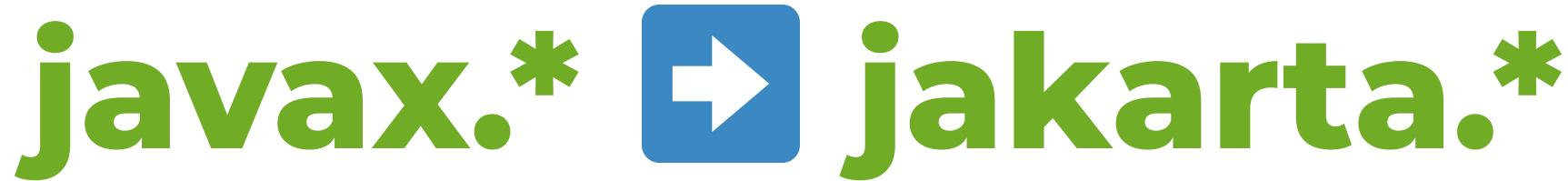
javax.persistence.* → **jakarta.persistence.***

javax.validation.* → **jakarta.validation.***

javax.servlet.* → **jakarta.servlet.***

javax.annotation.* → **jakarta.annotation.***

javax.transaction.* → **jakarta.transaction.***



- Only `javax.*` packages that are part of the Jakarta EE specification will be renamed to `jakarta.*`
- ⚠️ `javax.crypto.*`, `javax.net.*` and `javax.security.*` and `javax.sql` will not change to `jakarta.*`

Ecosystem

Spring Framework

- **Core** - IoC Container, Events, Resources, i18n, Validation, Data Binding, Type Conversion, SpEL, AOP, AOT.
- **Testing** - Mock Objects, TestContext Framework, Spring MVC Test, WebTestClient.
- **Data Access** - Transactions, DAO Support, JDBC, R2DBC, O/R Mapping, XML Marshalling.
- **Web Servlet** - Spring MVC, WebSocket, SockJS, STOMP Messaging.
- **Web Reactive** - Spring WebFlux, WebClient, WebSocket, RSocket.
- **Integration** - REST Clients, JMS, JCA, JMX, Email, Tasks, Scheduling, Caching, Observability.
- **Languages** - Kotlin, Groovy, Dynamic Languages.

Spring Projects

- Spring Boot
- Spring Framework
- Spring Data
- Spring Cloud
- Spring Cloud Data Flow
- Spring Security
- Spring Authorization Server
- Spring for GraphQL
- Spring Session
- Spring Integration
- Spring HATEOAS
- Spring REST Docs
- Spring Batch
- Spring AMQP
- Spring Flo
- Spring for Apache Kafka
- Spring LDAP
- Spring Shell
- Spring StateMachine
- Spring Web Flow
- Spring Web Services

Spring Data

- Spring Data JDBC
- Spring Data JPA
- Spring Data LDAP
- Spring Data MongoDB
- Spring Data Redis
- Spring Data R2DBC
- Spring Data REST
- Spring Data for Apache Cassandra
- Spring Data for Apache Geode
- Spring Data for Apache Solr
- Spring Data for VMware GemFire
- Spring Data Couchbase
- Spring Data Elasticsearch
- Spring Data Envers
- Spring Data Neo4j
- Spring Data JDBC Extensions
- Spring for Apache Hadoop

Spring Cloud

- Spring Cloud Azure
- Spring Cloud Alibaba
- Spring Cloud for Amazon Web Services
- Spring Cloud Bus
- Spring Cloud Circuit Breaker
- Spring Cloud CLI
- Spring Cloud for Cloud Foundry
- Cloud Foundry Service Broker
- Spring Cloud Commons
- Spring Cloud Config
- Spring Cloud Connectors
- Spring Cloud Consul
- Spring Cloud Contract
- Spring Cloud Function
- Spring Cloud Gateway
- Spring Cloud GCP
- Spring Cloud Kubernetes
- Spring Cloud Netflix
- Spring Cloud Open Service Broker
- Spring Cloud OpenFeign
- Spring Cloud Pipelines
- Spring Cloud Security
- Spring Cloud Skipper
- Spring Cloud Sleuth
- Spring Cloud Stream
- Spring Cloud Stream Applications
- Spring Cloud Task
- Spring Cloud Task App Starters
- Spring Cloud Vault
- Spring Cloud Zookeeper
- Spring Cloud App Broker

... and many more
**Spring ❤️ Community
Projects ...**

Advantages of Spring & Spring Boot

Advantages of Spring & Spring Boot

- Open Source
- Modular structure
- Non-invasive (POJO based)
- Reuseable & replaceable code
- Extensible for other frameworks
- Stable and lots of resources
- Well documented
- Enormous community & ecosystem