

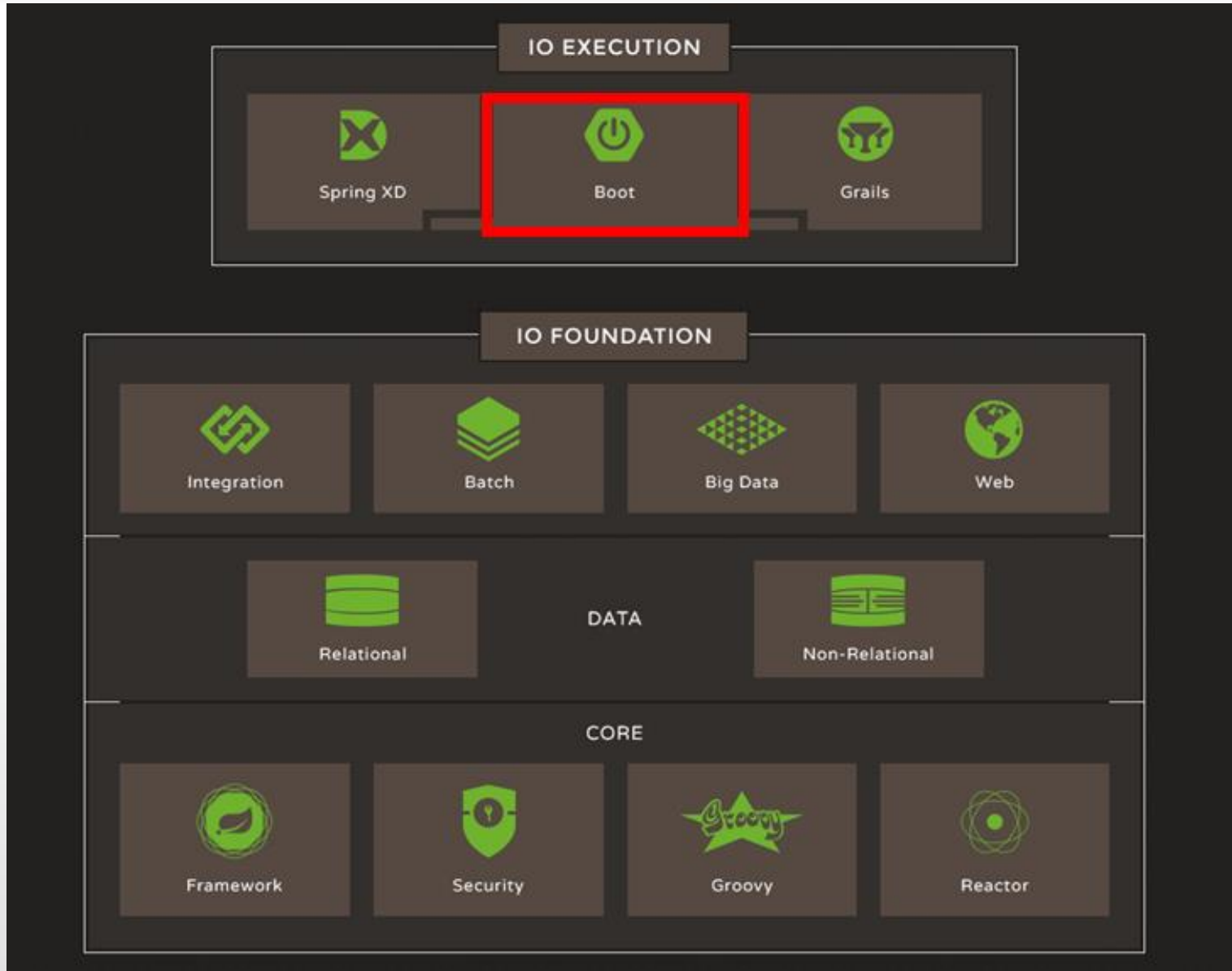


BOOTylicious Spring



Sadržaj

- Zašto Spring Boot?
- Standalone Spring aplikacije
- Konfiguracija
- Kako radi Spring Boot?
- Primjer REST servisa
- Spring Boot Actuator
- Testiranje
- Perspektiva



Zašto Spring Boot?

- Standalone aplikacije s ugrađenim serverom spremne za produkciju:
 - Metrike, health checkovi, remote spajanje na server (SSH, Telnet) itd.
 - Mikroservisi
- Konfiguracija bez XML-a
- Starter POM-ovi, lakši dependency management
- **Rješava Spring boilerplate**

Standalone Spring aplikacije

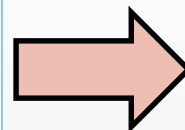


Konfiguracija (1/5)

- Maven starter POM-ovi, dependency management
- Autokonfiguracija bez XML-a
 - Opinionated
- Jednostavan override auto konfiguracije
- Eksterna konfiguracija

Konfiguracija (2/5)

```
<dependency>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter</artifactId>
</dependency>
<dependency>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-tomcat</artifactId>
</dependency>
<dependency>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-validation</artifactId>
</dependency>
<dependency>
  <groupId>com.fasterxml.jackson.core</groupId>
  <artifactId>jackson-databind</artifactId>
</dependency>
<dependency>
  <groupId>org.springframework</groupId>
  <artifactId>spring-web</artifactId>
</dependency>
<dependency>
  <groupId>org.springframework</groupId>
  <artifactId>spring-webmvc</artifactId>
</dependency>
```



Starter POM

```
<dependency>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-web</artifactId>
</dependency>
```

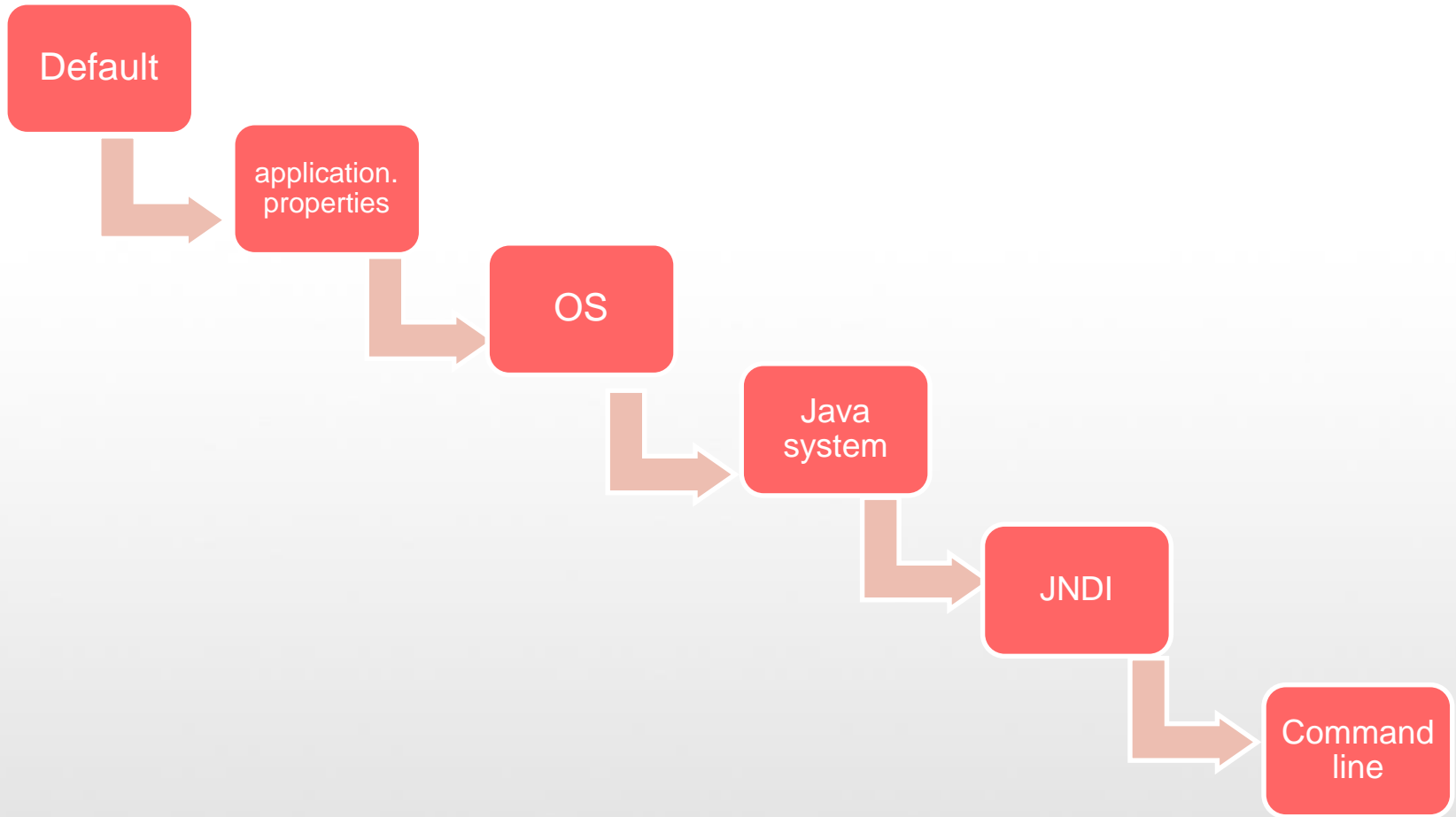
Konfiguracija (3/5)

- Starter POM-ovi pokrivaju većinu ovisnosti:
 - spring-boot-starter
 - spring-boot-starter-web
 - spring-boot-starter-thymeleaf
 - spring-boot-starter-data-jpa
 - spring-boot-starter-redis
 - spring-boot-starter-social-facebook

Konfiguracija (4/5)

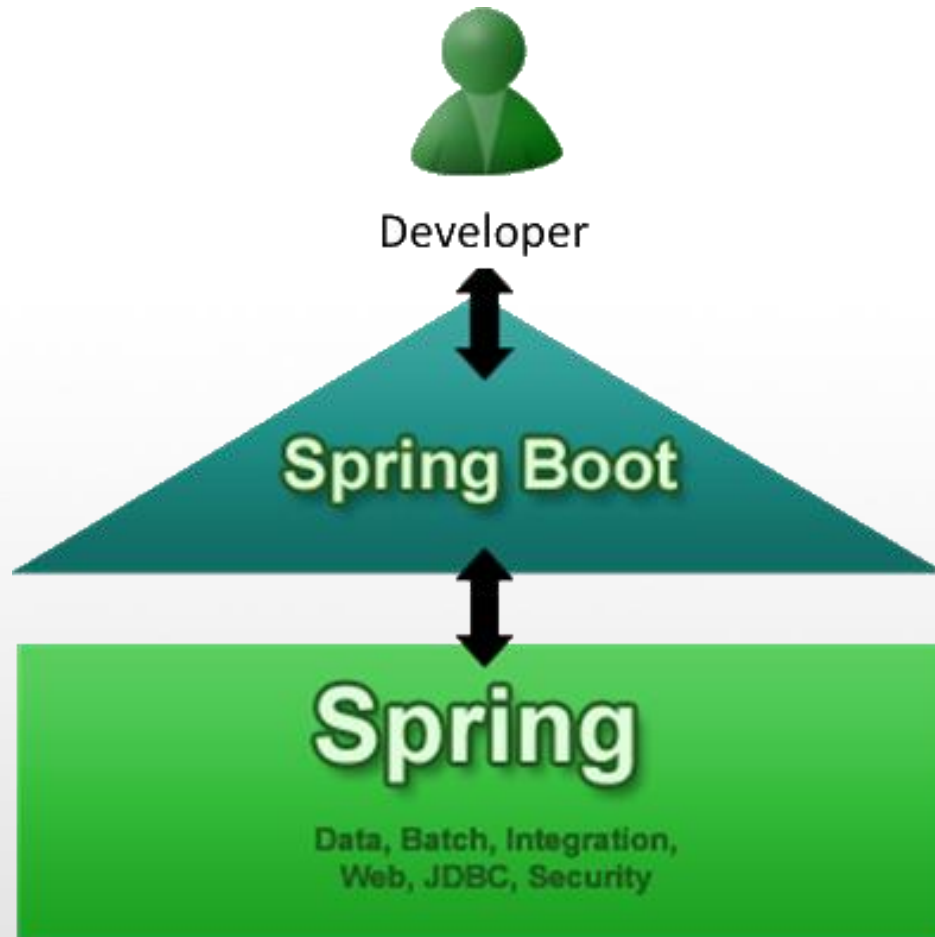
- application.properties ili application.yml
 - spring.profiles.active
 - logging.path
 - server.port
 - server.context-path
 - spring.datasource.url=jdbc:mysql://localhost/test
- @Value("\${server.port}")

Konfiguracija (5/5)



Kako radi Spring Boot?

- `@EnableAutoConfiguration`
 - Skeniranje classpatha, zaključivanje, instanciranje objekata
 - Npr. ako na classpathu pronade Thymeleaf automatski će kreirati view i view resolver, te Spring template engine
 - Daje prednost user beanovima
- NE GENERIRA KOD




Primjer REST servisa

```
@SpringBootApplication
@RestController
public class JavaCro {

    @RequestMapping("/")
    public String hello() {
        return "Hello JavaCro!";
    }

    public static void main(String[] args) throws Exception {
        SpringApplication.run(JavaCro.class, args);
    }
}
```



```
@Configuration
@EnableAutoConfiguration
@ComponentScan
```

```
<dependencies>
  <dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-web</artifactId>
  </dependency>
</dependencies>
```

Spring Boot Actuator

- Nefunkcionalne pogodnosti za produkciju
- Dodaje HTTP endpointove:
 - /beans
 - /dump
 - /health
 - /info
 - /metrics
 - /trace
 - /shutdown ...

```
{
  "mem" : 190976,
  "mem.free" : 163288,
  "processors" : 4,
  "instance.uptime" : 8128,
  "uptime" : 12793,
  "systemload.average" : -1.0,
  "heap.committed" : 190976,
  "heap.init" : 126976,
  "heap.used" : 27687,
  "heap" : 1793536,
  "threads.peak" : 22,
  "threads.daemon" : 19,
  "threads" : 22,
  "classes" : 5340,
  "classes.loaded" : 5340,
  "classes.unloaded" : 0,
  "gc.ps_scavenge.count" : 7,
  "gc.ps_scavenge.time" : 75,
  "gc.ps_marksweep.count" : 1,
  "gc.ps_marksweep.time" : 56,
  "httpsessions.max" : -1,
  "httpsessions.active" : 0
}
```

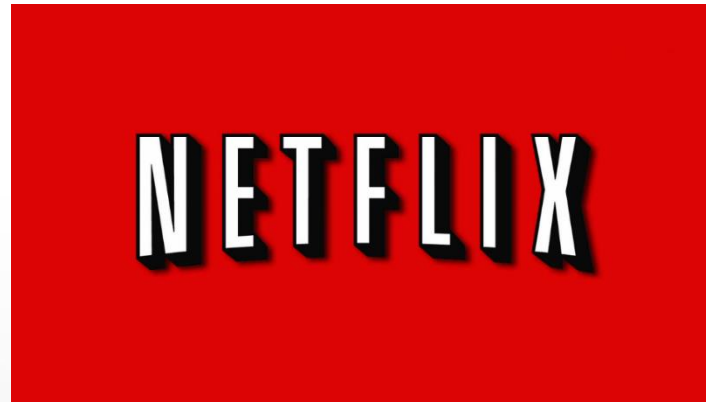
Testiranje

- spring-boot-starter-test
- Spring Test, JUnit, Hamcrest, Mockito
- @SpringApplicationConfiguration
 - Spring Boot konfiguracija ApplicationContext-a
- @IntegrationTest
 - Za testiranje koristi embeddani server

Perspektiva



JHipster
Angular
Spring Boot



Netflix aktivno i intenzivno koristi
Spring Boot, uglavnom za razvoj
mikroservisa



I mi ga koristimo 😊

Nije mi to dosta

SPRING INITIALIZR

Bootstrap your application now

Project metadata

Group	<input type="text" value="org.test"/>
Artifact	<input type="text" value="demo"/>
Name	<input type="text" value="demo"/>
Description	<input type="text" value="Demo project for Spring Boot"/>
Package Name	<input type="text" value="demo"/>
Type	<input type="text" value="Maven Project"/>
Packaging	<input type="text" value="Jar"/>

Project dependencies

Core

- Security
- AOP
- Atomikos (JTA)
- Bitronix (JTA)

Template Engines

- Freemarker

Web

- Web
- Websocket
- WS
- Jersey (JAX-RS)
- Vaadin
- Rest Repositories
- HATEOAS
- Mobile

Data

- JDBC

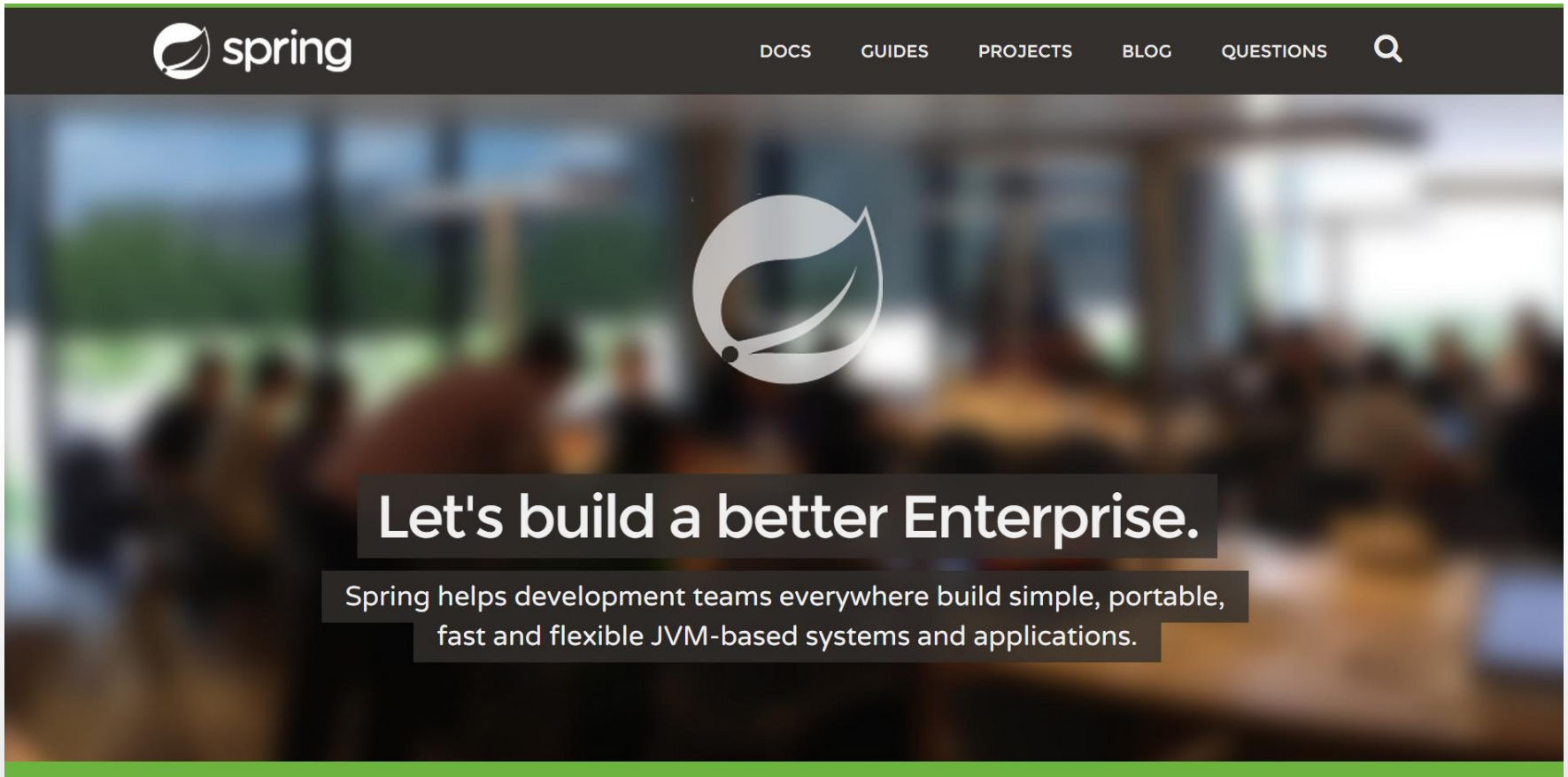
<https://start.spring.io>

Nije mi ni to dosta

- Spring Loaded
 - Omogućuje hot reload aplikacije
 - Prati promjene nad klasama, automatski ih kompajlira i izmjenjuje

```
<plugin>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-maven-plugin</artifactId>
  <dependencies>
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>springloaded</artifactId>
      <version>1.2.0.RELEASE</version>
    </dependency>
  </dependencies>
</plugin>
```

Dosta mi je..

The image shows the top portion of the Spring website. At the top left is the Spring logo, which consists of a stylized leaf icon followed by the word "spring" in a lowercase, sans-serif font. To the right of the logo is a navigation menu with the following items: "DOCS", "GUIDES", "PROJECTS", "BLOG", "QUESTIONS", and a search icon (magnifying glass). Below the navigation is a large hero section with a blurred background image of a crowd of people. In the center of the hero section is a large, semi-transparent version of the Spring leaf logo. Below the logo, there is a dark grey rectangular box containing the text "Let's build a better Enterprise." in a white, bold, sans-serif font. Underneath this box is another dark grey rectangular box containing the text "Spring helps development teams everywhere build simple, portable, fast and flexible JVM-based systems and applications." in a white, sans-serif font. The entire hero section is framed by a thin green border at the top and bottom.

<https://github.com/spring-io/sagan>

Zaključak



- Pojednostavljen razvoj
- Konfiguracija
- Fokus na aplikaciji
- Puštanje u produkciju



- Opinionated
- Deploy na aplikacijske servere?

Spring Boot je i dalje Spring!

A sad vi...

