

Full Stack Reactive Java

With Spring Framework 5, Spring Boot 2, & Project Reactor

Mark Heckler

Principal Technologist/Developer Advocate

www.thehecklers.com

mark@thehecklers.com

mheckler@pivotal.io

@mkheck

Who am I?

- Author
- Speaker
- Architect & Developer
- Java Champion
- Seeker of a better way



“In a nutshell reactive programming is about **non-blocking, event-driven applications** that **scale with a small number of threads** with **backpressure as a key ingredient** that aims to ensure producers do not overwhelm consumers.”

–Rossen Stoyanchev, Project Reactor team

Reactive Streams: 4 interfaces

- ✦ `Publisher<T>`
- ✦ `Subscriber<T>`
- ✦ `Subscription`
- ✦ `Processor<T,R>`

Project Reactor: a quick overview



REACTIVE CORE

Reactor is a **fully non-blocking** foundation with efficient demand management. It directly interacts with Java 8 *functional API*, *Completable Future*, *Stream* and *Duration*.



TYPED [0|1|N] SEQUENCES

Reactor offers 2 reactive **composable API** Flux [N] and Mono [0|1] extensively implementing Reactive Extensions.



NON BLOCKING IPC

Suited for **Microservices** Architecture, Reactor IPC offers **backpressure-ready network engines** for HTTP (including Websockets), TCP and UDP. Reactive Encoding/Decoding is fully supported.

Let's code!



@mkheck @springcentral @projectreactor

Pivotal

Helpful resources

- ✦ <http://www.reactive-streams.org>
- ✦ <https://projectreactor.io>
- ✦ <https://github.com/mkheck/flux-flix-intro>
- ✦ <https://github.com/joshlong/flux-flix-service>

Thanks for coming!

@mkheck

mark@thehecklers.com

mheckler@pivotal.io



@mkheck @springcentral @projectreactor

Pivotal