



Pimp your Jakarta EE applications

GEDOPLAN GmbH

Dirk Weil

Dirk Weil

- ≡ Studied Informatik at RWTH Aachen
- ≡ Living in Bielefeld
- ≡ CEO of GEDOPLAN GmbH (www.gedoplan.de)
- ≡ JEE since 1999
- ≡ Speaker and author



Starting Point

- ≡ Java EE 8
- ≡ `war` deployable in WildFly 26 or similar
- ≡ REST API, CDI based business logic, JPA based persistence
- ≡ Demo: `https://github.com/GEDOPLAN/pimp-jee.git`



Demo

Java EE 8 to Jakarta EE 10

- ≡ Renaming hell: `javax` → `jakarta`:
 - ≡ JEE package names
see <https://gedoplan.de>
 - ☛ Blog
 - ☛ Migration zu Jakarta EE 10 – neue Paketnamen
 - ≡ Configuration property names
- ≡ Deployment descriptor XML namespaces: ...
`http://xmlns.jcp.org/xml/ns/...`
→ `https://jakarta.ee/xml/ns/...`
- ≡ Update of standard dependencies:
`javax:javaee-api:8.0`
→ `jakarta.platform:jakarta.jakartaee-api:10.0.0`

Java EE 8 to Jakarta EE 10

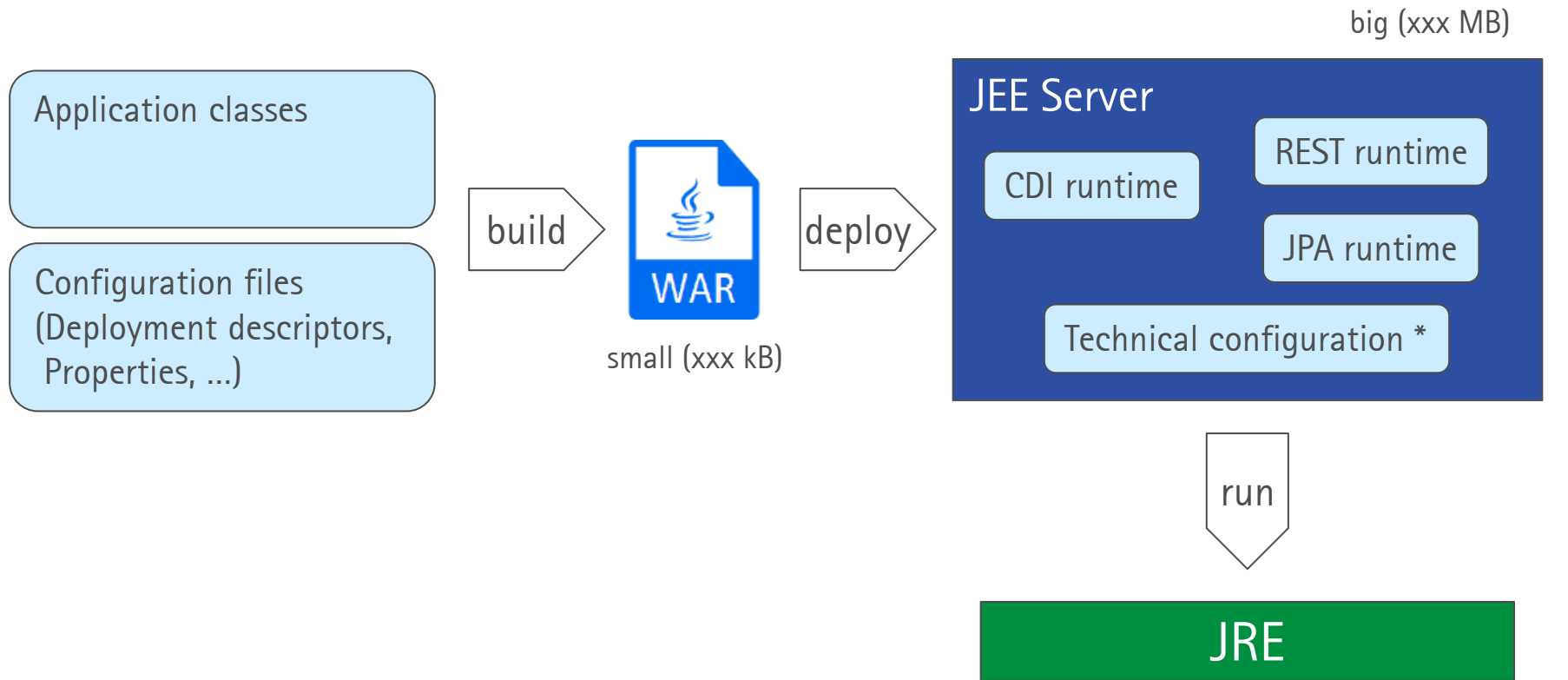
≡ Open Rewrite

- ≡ <https://docs.openrewrite.org/>
- ≡ (Source) Code refactorings
- ≡ specified in recipes
- ≡ using Lossless Semantic Trees (LST)



Demo

Classical / traditional JEE Runtime: Application Server



* Subsystem connections (database, messaging, ...)
Security
...

„Jar Server“ Runtime

Application classes

Configuration files

Server modules / extensions

- CDI runtime
- REST runtime
- JPA runtime
- Technical configuration *

* Subsystem connections (database, messaging, ...)
Security
...

build



Fat JAR
Hollow JAR + Deployment

run

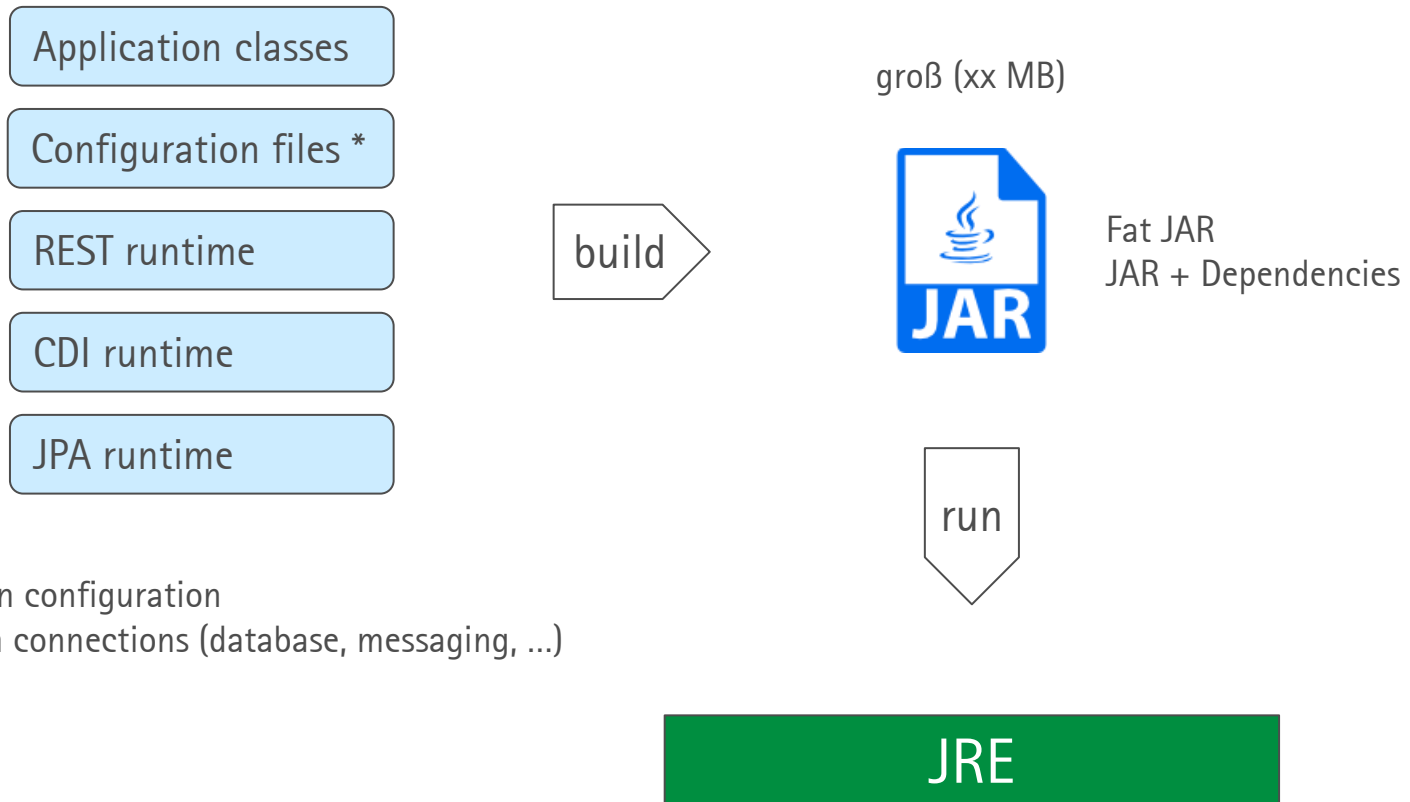
JRE

WildFly Bootable Jar

- ≡ Maven Plugin
`org.wildfly.plugins:wildfly-jar-maven-plugin`
- ≡ Downloads and configures a WildFly server
 - ≡ Just the server: Hollow jar
 - ≡ Server + application: Fat jar
- ≡ Dev mode with automatic hot reload

Demo

„Micro“ Runtime Framework



* Application configuration
Subsystem connections (database, messaging, ...)
Security
...

Quarkus

- ≡ Like Spring Boot
 - ≡ ... but JEE based
- ≡ Optimized
 - ≡ at build time („augmentation“)
 - ≡ for memory usage
 - ≡ and time to first response
- ≡ <https://quarkus.io/>



Demo

Quarkus

- ☰ Cool features
 - ☰ Dev mode with hot reloading
 - ☰ Dev services
 - ☰ Continuous testing
 - ☰ Native mode
 - ☰ Huge eco system

Move ahead: MicroProfile

- ≡ <https://microprofile.io/>
- ≡ Optimizing Enterprise Java for a Microservices Architecture
- ≡ Including
 - ≡ Config
 - ≡ Configure from environment variables, properties and more
 - ≡ API and injection
 - ≡ Health
 - ≡ Is the application up and ready?
 - ≡ Metrics
 - ≡ Publish runtime metrics
 - ≡ ...



Links

- ≡ github.com/GEDOPLAN/pimp-jee
Demo project
- ≡ speakerdeck.com/dirkweil
Slides
- ≡ gedoplan.de
Blog
Trainings in Berlin, Bielefeld, Köln, inhouse
Coaching
Development
- ≡  dirk.weil@gedoplan.de