Java CDI
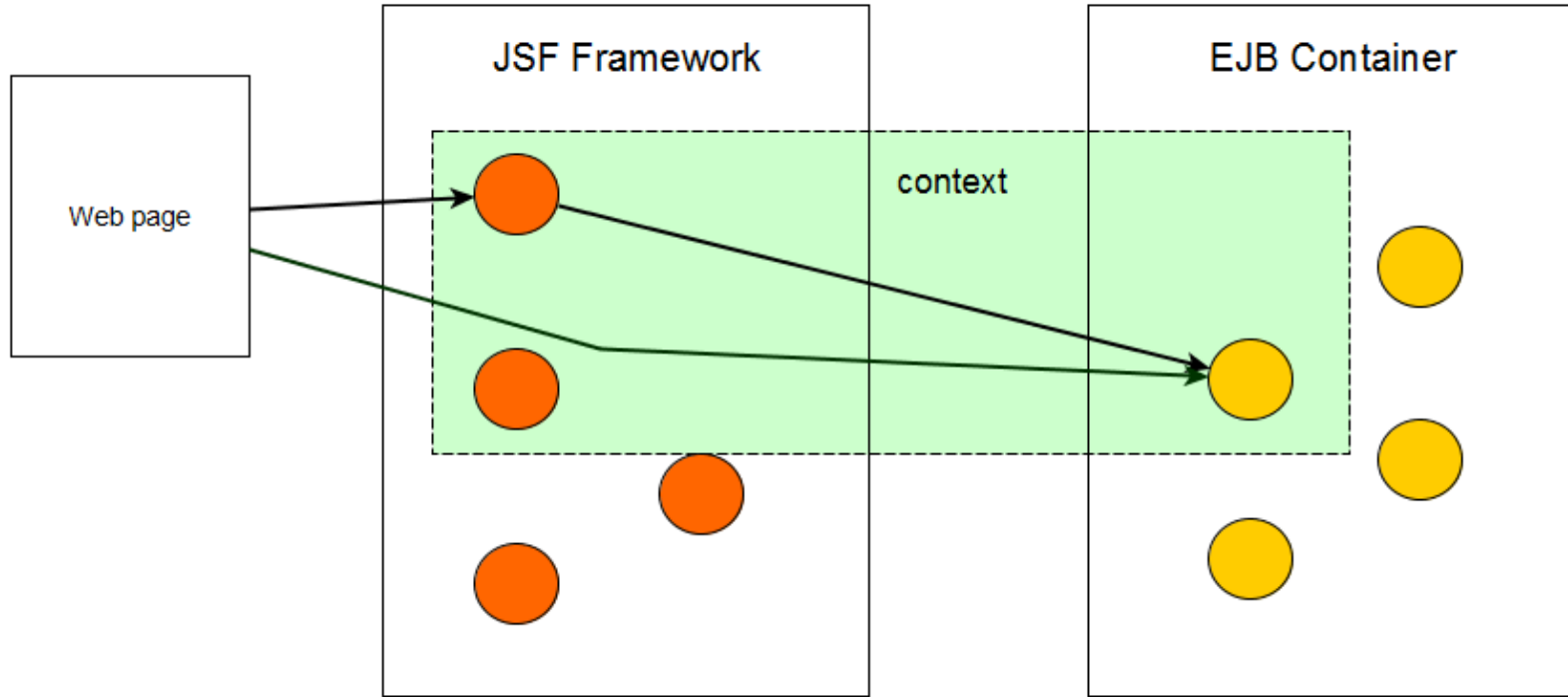
Ivan Macalák

JSR-000346

- part of the JEE standard
- typesafe dependency injection
- lifecycle for stateful objects bound to lifecycle contexts
- typesafe interceptor bindings
- decorators
- event notification model and more...
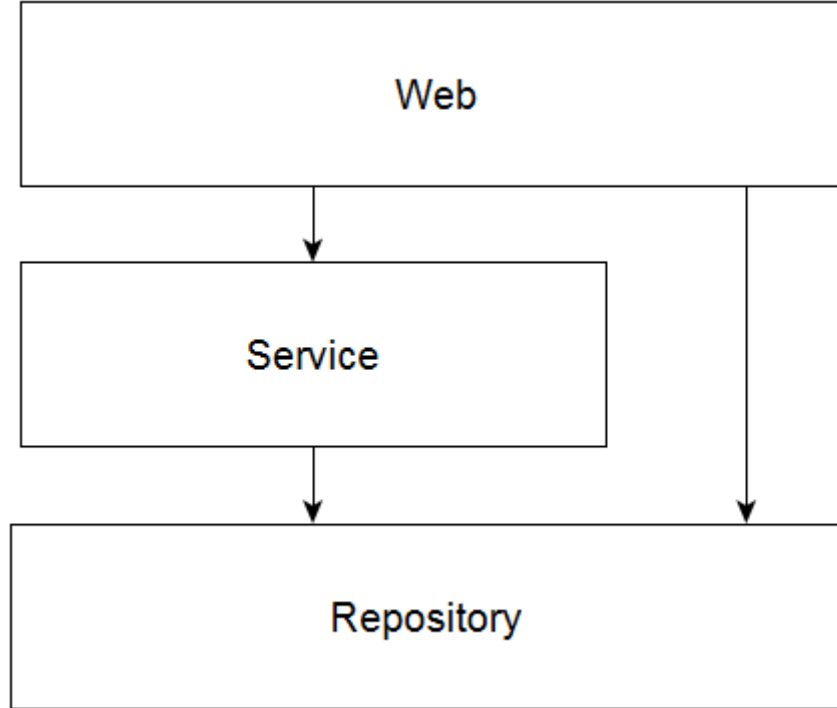
JSF without CDI
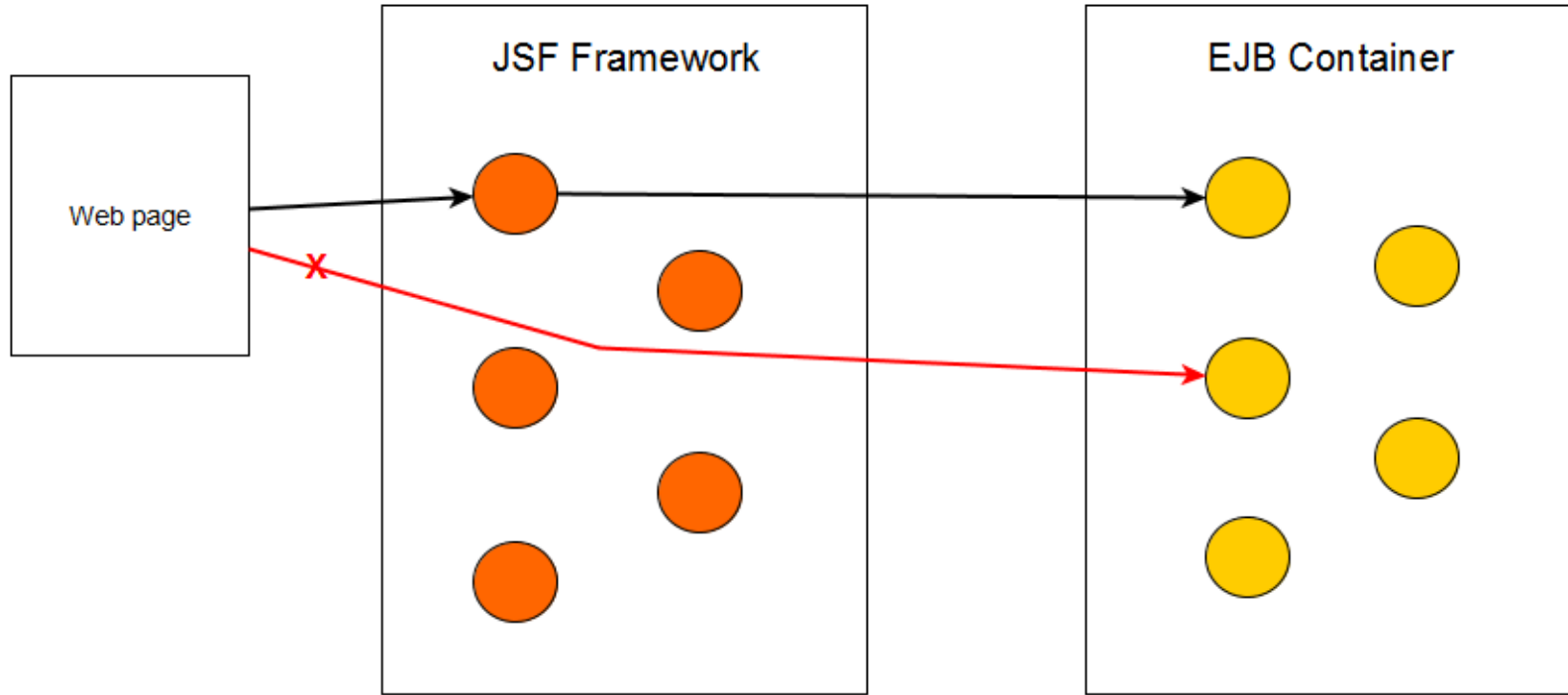
JSF with CDI

Several implementations

- JBoss Weld
- Apache OpenWebBeans

Penetrates other JEE specs

- EJBs and Namaged beans as contextual instances
- Named beans usage within a JSF page
  - @Named EJB as JSF Managed bean
- Interceptors, Bean Validators, etc… can use injection

GOPAS®

Architecture

@Inject and @Qualifier

- constructor , field, method, method parameter
- qualified injection
  - no direct dependency on implementation
- static injection
  - concrete type of injected bean is known

GOPAS®

@Alternative

- must be explicitly enabled in beans.xml
  - otherwise bean is unavailable for injection
- deployment-type polymorphism
  - different bean injection for dev, test and prod

@Produces

- provides runtime polymorphism
  - concrete type of the bean to be injected may vary at runtime
- factory pattern
- produces scoped instances for injection
  - practically instance of any class
  - EntityManager, JMS factory and destination…

GOPAS®

@Interceptor

- cross-cutting concerns implementation
  - security, transactions, auditing…
- abstraction of EJB 3 interceptors
- interceptors binding
  - type-safe interceptor association to beans
- interceptors enabling and priority
  - `@Priority` or `beans.xml`
- invocation context

@Decorator

- business concerns implementation
  - bean that is business semantics aware of decorated bean
- decorator has delegate injection point
  - injection of beans of same type it decorates
  - can be qualified
- decorators enabling and priority
  - `@Priority` or `beans.xml`

Scope

- bean is in a scope and is associated with context
- context manages life cycle and visibility of all beans in scope
  - @RequestScoped, @SessionScoped, @ApplicationScoped, @ConversationScoped, @Dependent (default scope)
  - contextual reference is proxy except for @Dependent scope
  - new scope can be defined using extensible scope model

@Stereotype

- encapsulates architectural patterns or common metadata
  - scope, interceptor bindings, qualifiers, and other properties
- a stereotype is a meta-annotation annotated with @Stereotype

Events

- annotation-based event model based upon the observer pattern
- decoupled communication among beans
- qualified events
- transactional observers

Life cycle callback

- @PostConstruct
- @PreDestroy

GOPAS®

Portable extensions

- container functionality extensions using SPI
  - providing its own beans, interceptors, and decorators to the container
  - providing a contextual implementation for a custom scope, and more…
  - Apache DeltaSpike: https://deltaspike.apache.org/

Informácie na záver

GOPAS®

Garancia IT školiaceho strediska GOPAS

- **Garancia získaných vedomostí**
  prihláste sa do 1 mesiaca po absolvování vášho kurzu na klientskom servise GOPAS a využite možnosť navštívit už absolvovaný kurz ešte raz
- **Garancia termínov konania**

info na

www.gopas.sk/Kurzy/Garancia/Garancia-ziskanych-vedomosti.aspx

GOPAS®

IT Klub

- Vernostný klub GOPASu s rôznymi výhodami pre účastníkov kurzov MOC, GOC, UNIX/Linux, EC-Council, Apple a programovania.

info na www.itklub.cz

Kurzy PLUS

- Účastníci kurzov Office majú možnosť si zakúpiť samoštudijnú knihovňu E-learning Office za polovičnú cenu
- DVD obsahuje výučbu Wordu, Excelu, PowerPointu, Outlooku a Accessu.
- Lekcie sú spracované odborníkmi IT školiaceho strediska GOPAS, obsahujú teóriu, cvičenia i správne riešenia.

info na elearning.gopas.eu

DOVIDENIA

Pri ďalších kurzoch v IT školiacom stredisku GOPAS SR, a.s.