

Web Applikationen mit Clojure

rheinjug 2017

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Clojure

- › Lisp-Variante auf JVM
- › Funktionale Sprache
- › Dynamisch typisiert
- › Immutable Datenstrukturen

Datenstrukturen

3 3.14 3/2 nil true false

“Hello World” \a #“Ch.*se”

foo :first (“Hello”, :first)

{ :name “Michael”, :company “innoQ” } [3 4 3] # { 3 4 3 }

Syntax

“You’ve just seen it”

- Rich Hickey

Funktionen

(+ 1 2)

› 3

(:city {:name "OOP"
 :city "München"})

› "München"

(map inc [1 2 3])

› (2 3 4)

Funktionen

```
(fn [x y] (+ x y))
```

```
(def add  
  (fn [x y] (+ x y)))
```

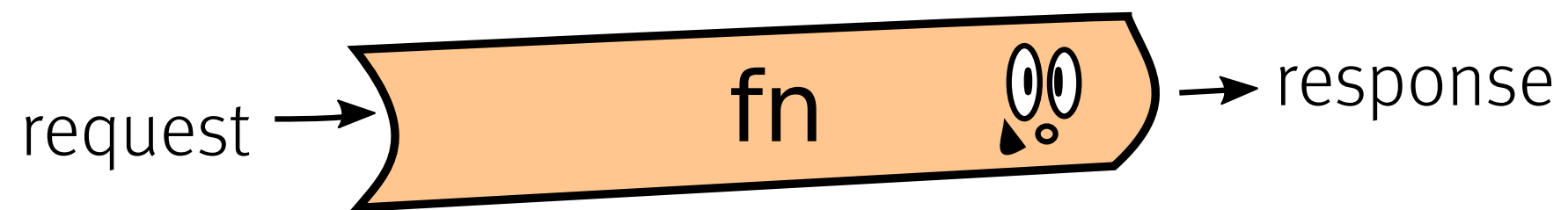
```
(defn add  
  [x y]  
  (+ x y))
```

Links

- › <http://clojure.org>
- › <http://blog.cognitect.com/blog/2017/1/31/state-of-clojure-2016-results>
- › <https://juxt.pro/radar.html>
- › <http://www.clojure-toolbox.com>

Web-Applikationen

Web-Applikation



Web-Applikation

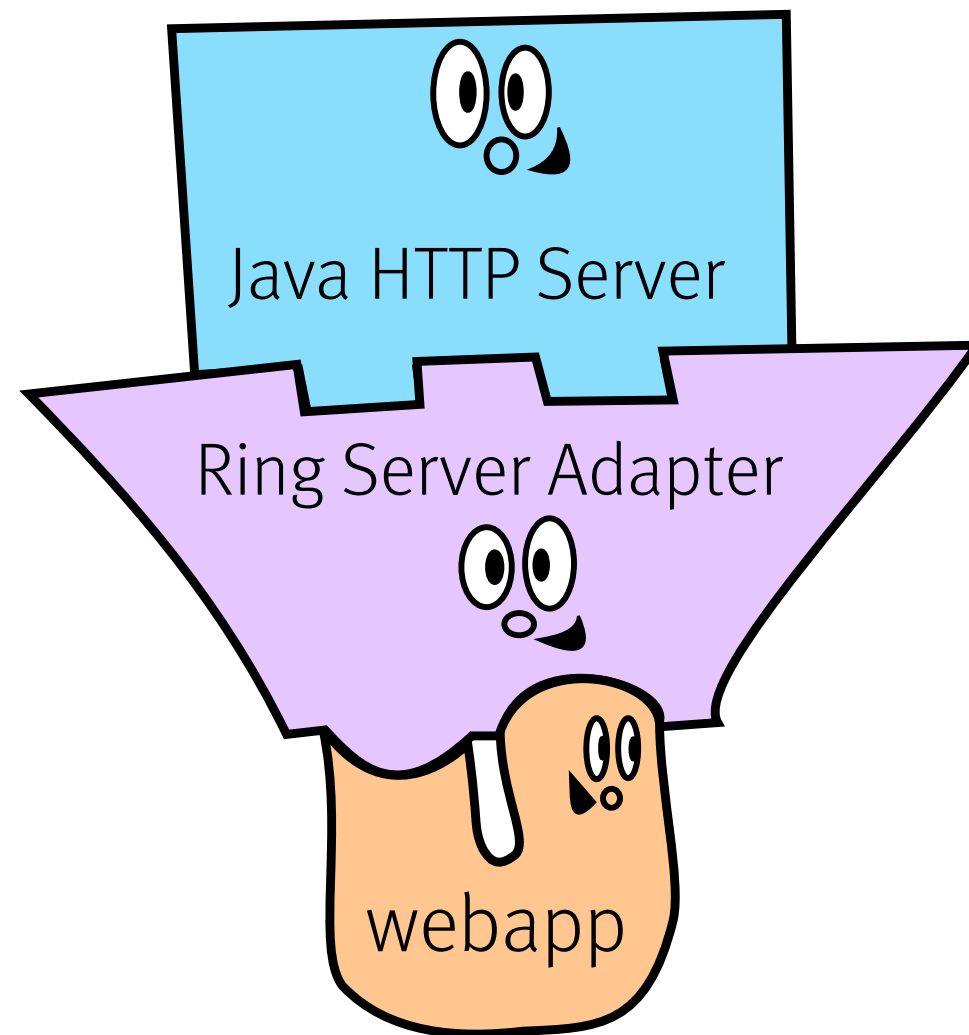
```
(defn greet-controller  
  [request]  
  {:status 200  
   :headers {"Content-Type" "text/plain"}  
   :body "Hello, world!"})
```

Ring

<https://github.com/ring-clojure/ring>

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Ring



Ring: Request

```
{:uri “/greet”  
 :query-string “name=Michael”  
 :request-method :get  
 :headers { ... }  
 ...}
```

Ring: Response

```
{:status 200  
 :headers { ... }  
 :body “Hello, Michael!”}
```

Ring: Handler

```
(defn greet-controller  
  [request]  
  {:status 200  
   :headers {"Content-Type" "text/plain"}  
   :body "Hello, world!"})
```

Ring: Adapter

- › Jetty
- › Servlet
- › http-kit
- › Tomcat
- › ...

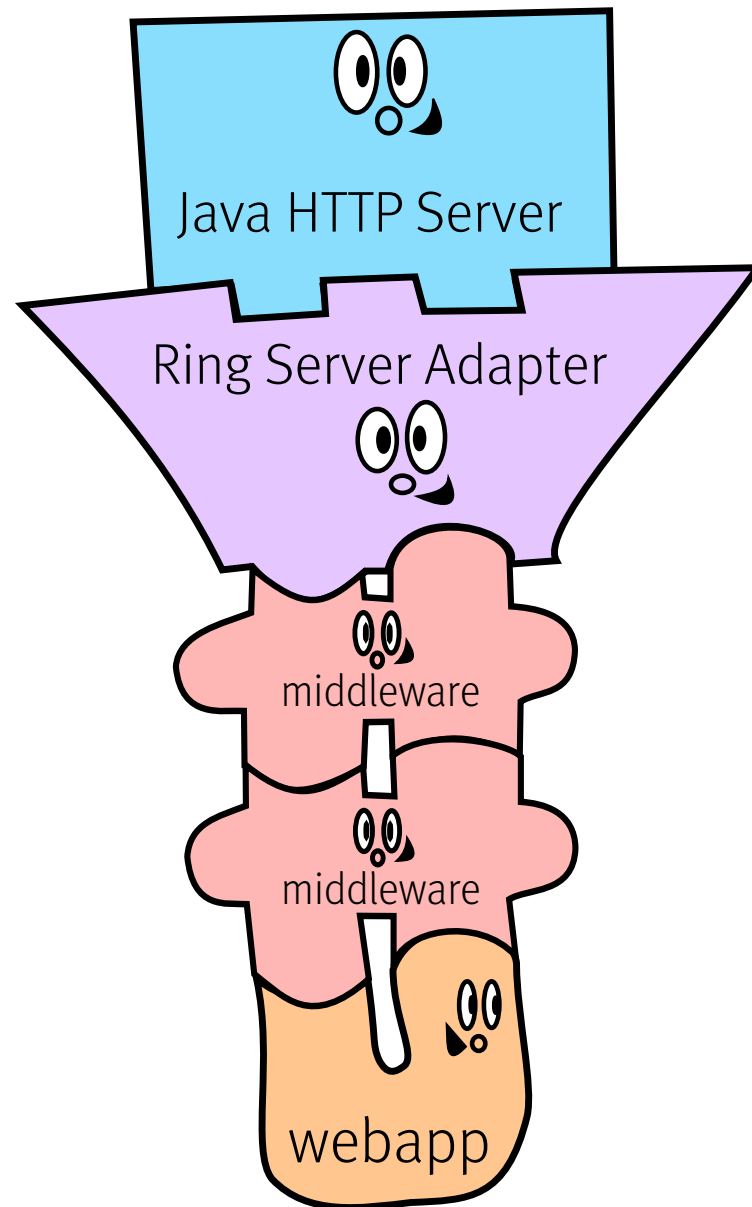
Ring: Middleware

```
(defn wrap-logging  
  [handler]  
  (fn [request]  
    (print request)  
    (let [response (handler request)]  
      (print response)  
      response))))
```

Ring: Middleware

- › <https://github.com/ring-clojure/ring-defaults>
- › <https://github.com/ring-clojure/ring-json>

Ring

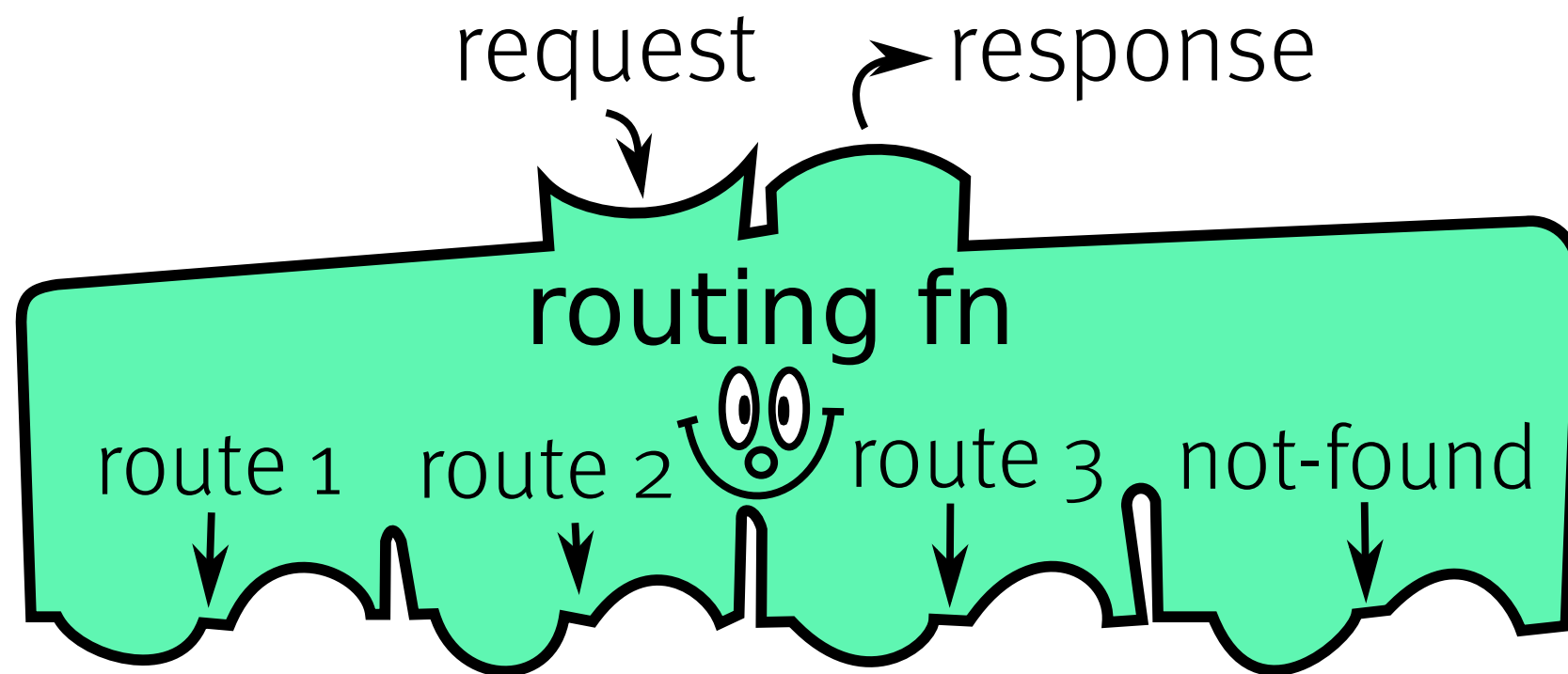


Compojure

<https://github.com/weavejester/compojure>

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Compojure



Compojure: Handler

```
(def handler
```

```
  (GET “/hello” [] “Hello, world!"))
```

```
(handler {:request-method :get, :uri “/hello”})
```

```
> {:body “Hello, world!”}
```

```
(handler {:request-method :post, :uri “/hello”})
```

```
> nil
```

Compojure: Path

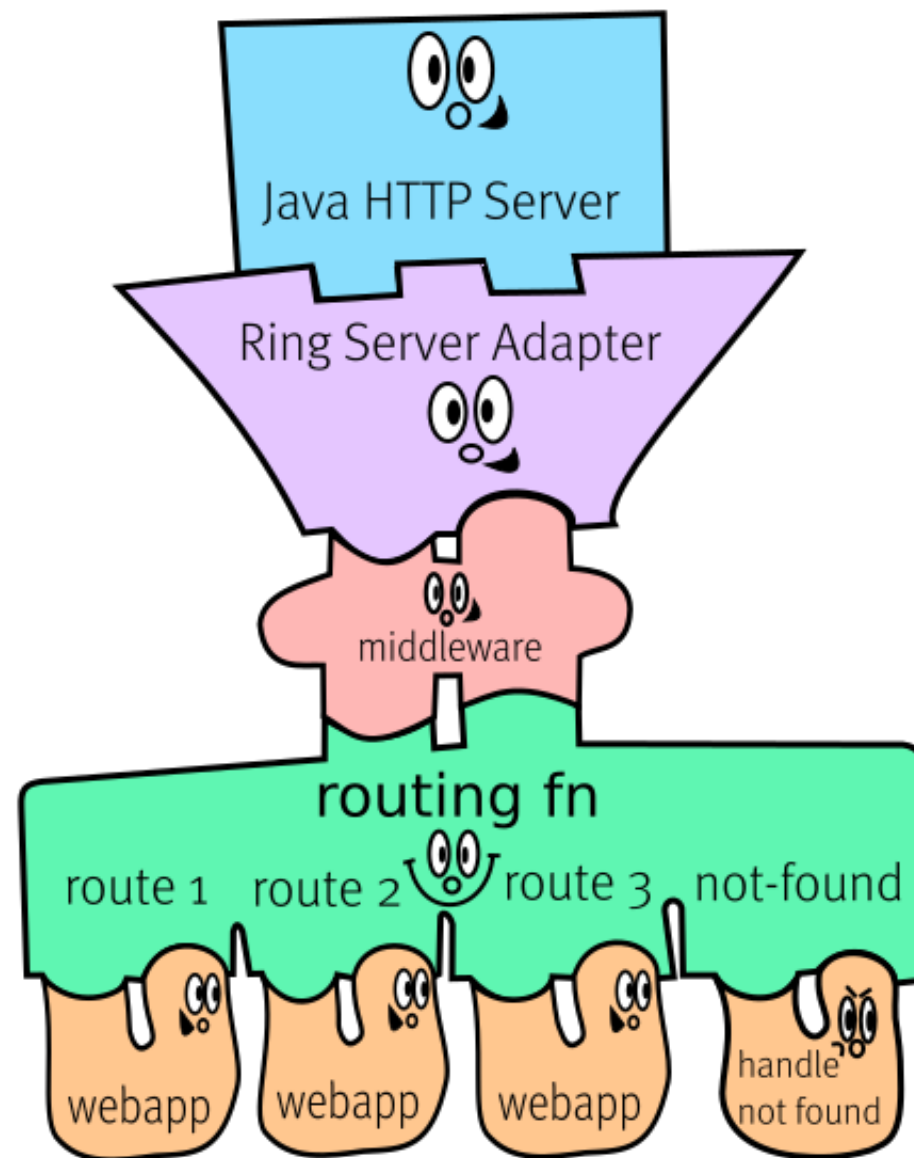
```
(GET “/hello/:name” [name]  
  (str “Hello, ” name “!”))
```

Compojure: Routes

```
(def my-routes  
  (routes  
    (GET "/hello" [] "Hello!")  
    (GET "/bye" [] "Bye!")))
```

```
(defroutes my-routes  
  (GET "/hello" [] "Hello!")  
  (GET "/bye" [] "Bye!"))
```

Compojure



Compojure: Alternativen

- › <https://github.com/juxt/bidi>
- › <http://clojure-liberator.github.io/liberator/>

Hiccup

<https://github.com/weavejester/hiccup>

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Hiccup: Basics

`[:div {:id "foo"}]`

`[:span "bar"]]`

`<div id="foo">`

`<span>bar</span>`

`</div>`

Hiccup: Shortcuts

`[:div#foo`

`[:span "bar"]]`

`<div id="foo">`

`<span>bar</span>`

`</div>`

Hiccup: Links

(link-to “www.innoq.com” “innoQ”)

[:a {:href “www.innoq.com”} “innoQ”]

innoQ

Hiccup: Formulare

```
(form-to [:post “/login”]  
  (text-field “Username”)  
  (password-field “Password”)  
  (submit-button “Login”))
```

Hiccup: Alternativen

- › <https://github.com/danlarkin/clabango>
- › <https://github.com/plakat/clj-thymeleaf>
- › <https://github.com/cgrand/enlive>
- › <https://github.com/yogthos/Selmer>

Fazit

Fazit

- › Funktionale Sprache ideal für Web-App
- › Verbreitung nimmt zu
- › Libraries anstelle von Frameworks
- › Community gesund und hilfsbereit

Interessante Libraries

- › <https://github.com/technomancy/leiningen>
- › <https://github.com/weavejester/environ>
- › <https://github.com/clojurewerkz/route-one>
- › <https://github.com/krisajenkins/yesql>
- › <https://github.com/seancorfield/clj-time>

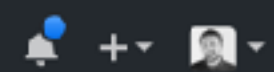
Frameworks

- › <https://github.com/weavejester/duct>
- › <http://www.luminusweb.net>
- › <https://github.com/otto-de/tesla-microservice>
- › <https://github.com/metosin/compojure-api>



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Pull requests Issues Gist



innoq / tutorial-clj-webapp

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A tutorial for getting started with Clojure web applications

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39 commits 1 branch 0 releases 3 contributors Apache-2.0

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joyclark committed on GitHub Update README.md Latest commit 3827375 3 days ago

todo-app	Add abstraction to todos atom so that the user doesn't know how the ...	29 days ago
tutorial	Add abstraction to todos atom so that the user doesn't know how the ...	29 days ago
LICENSE	Add license	a month ago
README.md	Update README.md	3 days ago

README.md

A Tutorial for creating Web Applications in Clojure

Prerequisites

<https://github.com/innoq/tutorial-clj-webapp>

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Düsseldorf, Germany

Founded Mar 1, 2016

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Clojure Coding Dojo

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Thursday, March 23, 2017
6:30 PM



InVision AG

Speditionsstr. 5, Düsseldorf ([map](#))

Bei diesem Meetup wollen wir ein Clojure Coding Dojo veranstalten, bei dem wir uns im Pair Programming Stil spannenden Aufgaben widmen wollen. Durch [Katas](#) vertiefen wir

Want to go?

[Join and RSVP](#)

10 going



Marco P.
Organizer,
Event Host



Christian M.
Co-Organizer,
Event Host

<https://www.meetup.com/Dusseldorf-Clojure-Meetup/events/237988696/>

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Danke!

Fragen?

Kommentare?

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<https://www.innoq.com/de/talks/2017/03/web-applikationen-mit-clojure-rheinjug-march-2017/>



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