



Why we don't use the term DevOps

DESTINATION AARHUS

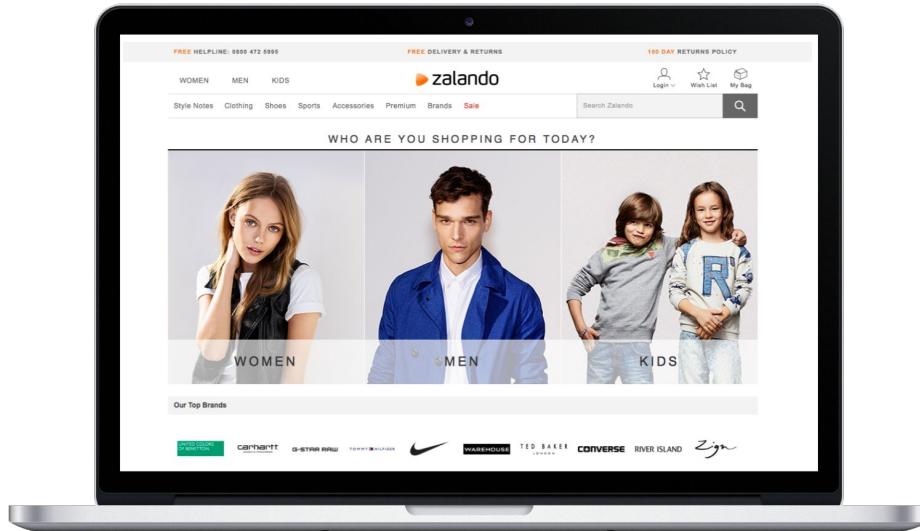
2019-06-04

HENNING JACOBS

@try_except_



EUROPE'S LEADING ONLINE FASHION PLATFORM



ZALANDO AT A GLANCE

~ **5.4** billion EUR

revenue 2018

> 15.000

employees in
Europe

> 79%

of visits via
mobile devices

> 250
million

visits
per
month

> 26

million
active customers

> 300.000

product choices

~ 2.000

brands

17

countries

THE BIRTH OF DEVOPS - 2009

"10+ Deploys per Day: Dev and Ops Cooperation at Flickr."



DevOps Days Belgium

The business **requires** change

Lowering risk of change
through tools and culture

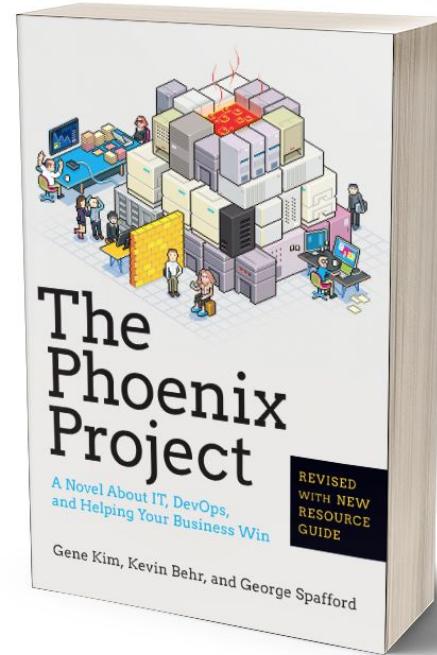
1. Automated infrastructure
2. Shared version control
3. One step build and deploy
4. Feature flags
5. Shared metrics
6. IRC and IM robots

1. Respect
2. Trust
3. Healthy attitude about failure
4. Avoiding Blame

THE PHOENIX PROJECT - 2013

"The Three Ways"

1. Systems Thinking
2. Amplify Feedback Loops
3. Culture of Continual Experimentation And Learning



WHAT HAPPENED NEXT

devops engineer Job Trends



Creating a DevOps department will solve all our problems

Hello, I am the Head of DevOps here

When are we done with DevOps?

On-call is a DevOps problem

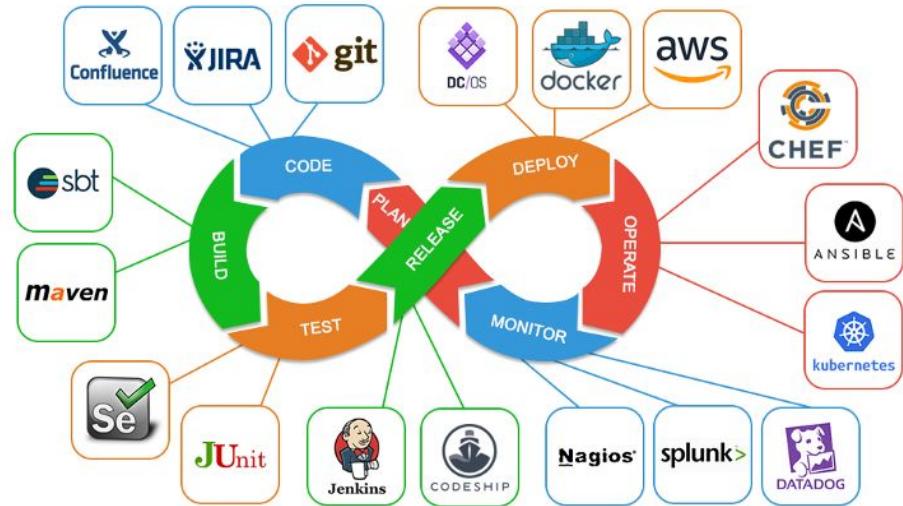
Our DevOps team does all that Ops stuff now.

Let's hire more DevOps Engineers!

The DevOps guys do on-call for us

We need to transition our engineers to DevOps

CARGO CULTING



DEVOPS IS

- ... if every person uses the **same tool** for the same job
- ... **codified knowledge** - everybody contributing their part to common automation
- ... if all people have the **same privileges** in their tooling
- ... if human error is **equally possible** for Dev and Ops
- ... **replacing people interfaces** by automated decisions and processes

... a result



DevOps is normal





BAUZENTRUM

ANTO
PILOTI
SPENGLER - DÄCHER
ZALANDO

FÜHRER
Schein

D

FÜHRERSCHEIN BUNDESREPUBLIK DEUTSCHLAND

1.

2. And



DEV + OPS ⇒ DEVOPS



Devs



Ops



"DevOps"
Team

DEV + OPS ⇒ ENGINEERING



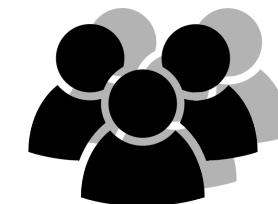
Devs



Ops



"DevOps"
Team



Engineering
Team

PRODUCT DEVELOPMENT TEAMS

"Great products emerge from empowered, fully cross-functional teams."

- *John Cutler, 2019*



DEVOPS IS

It is a **culture**, in which **people** work **together** to **improve** the product delivery cycle.

DEVOPS ANTI-PATTERNS

Dev and Ops Silos

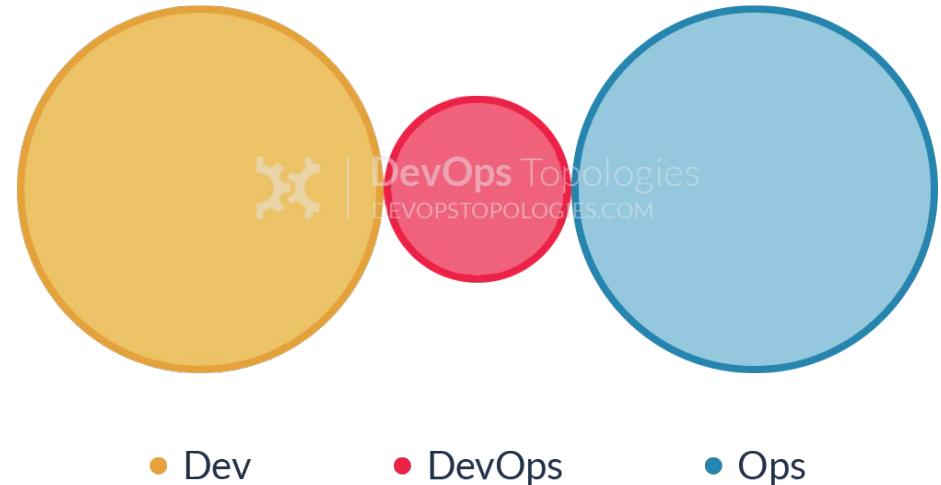
DevOps Team Silo

Dev Don't Need Ops

DevOps as Tools Team

Rebranded SysAdmin

Ops Embedded in Dev Team





Eric Minick

@EricMinick

The goal for a "DevOps Team" should be to put itself out of business by enabling the rest of the org.

Tweet übersetzen

17:27 - 1. Okt. 2014

40 Retweets 31 „Gefällt mir“-Angaben



1



40



31



TEAM INTERACTION MODES

- **Collaboration:** 2 teams working together
- **X-as-a-Service:** 1 provides, 1 consumes
- **Facilitating:** 1 team helps another





A BRIEF HISTORY OF ZALANDO TECH

2010

Zalando (Magento-)Shop-Deploy Checkliste

Tag: _____ SysOP: _____ Datum: _____

- () Releasefreigabe erfolgt
SVN-Tag angelegt
create tag zal_1X_XX-XX-XX\n\n<Freigabe Mail>
- () Datenbankänderungen auf Reihenfolge prüfen
- () Falls Solr-Update (<https://devwiki.zalando.de/Sysop/Deployment>)
 - Booster-Config im LiveOverlay auf **solr02** ändern (solr01 auskommentieren)
 - 'set_update live' mit dem alten Release (neu config deployen)
 - Replikation von Solr02 beenden
 - booster-cron 'cron.d/zalando-booster' deaktivieren
 - Booster-Config in LiveOverlay auf **solr01** ändern (solr02 auskommentieren)
- () Konfigurationsänderungen aus Datenbankänderungen in LiveOverlay übernehmen
- () deploy-wizard mit neuem Tag starten
- Vor deaktivieren von http01, im LB, admin01 mit rsync-deploy-live_all updaten**
 - Konfigurationsänderungen aus Wiki nach zalando-live übernehmen
admin wird nicht von LiveOverlay bedient!
 - solr01 updaten
 - booster-full-update starten und prüfen
- () Deaktivierung/Swtich von http01
Sysop-Test http01
 - Fehler, fehlende/falsche Bilder sofort an QA melden und weiteren verlauf klären
- () Aktivierung von http01 im LB
- () QA-Test auf http01
- () Deaktivierung/Switch von http01-http03
- () Sysop-Test http01-http03
- () Aktivierung von http01-http03 im LB
- () QA-Test auf http01-http03
- () Nach Okay: Switch auf allen https und squids
- () Falls kein Solr-Update, jetzt **admin01 mit rsync-deploy-live_all updaten**
 - Konfigurationsänderungen aus Wiki nach zalando-live übernehmen
admin wird nicht von LiveOverlay bedient!
- () Cronns testen und aktivieren

Bei Probleme die **nicht innerhalb von 5 Minuten** behoben werden können folgende Personen Anrufen und informieren!



DEVOPS IS ABOUT SKIN IN THE GAME

Absence of skin in the game:

People who are isolated from the impacts of their decisions **do not learn.**

They remain **captive to their erroneous ideas** about how the world works.

THE #1 NEW YORK TIMES BESTSELLER BY THE AUTHOR OF

THE BLACK SWAN

SKIN IN THE GAME

Hidden Asymmetries
in Daily Life



NASSIM
NICHOLAS TALEB

2013: SELF SERVICE

```
$ grep description ~/Projects/zalando/deployctl/project.desc
description: Deployment tool with ncurses frontend and
project/instance database with web frontend
```

The screenshot shows the Deployctl application interface. On the left, a terminal window displays the main menu:

```
Main menu: Select what to do
Deploy
Deploy (force rebuild of all projects)
Deploy DB API schemas only
Build only (does not switch instances)
Deploy only (use precompiled WAR)
Expert Mode
View Log
Exit
```

On the right, there are two tables. The top table is titled "Current Deploy Locks (1 / 7 slots used)" and shows one entry:

Created	Environment	Tag	Projects	User	Stage	Comment	
2013-10-31 11:41:29 ago	12 m	PATCH-STAGING	R13_00_44	shop cms export recommendations-servlet recommendations-admin shop-config-service	mrosemann	switch	Instances

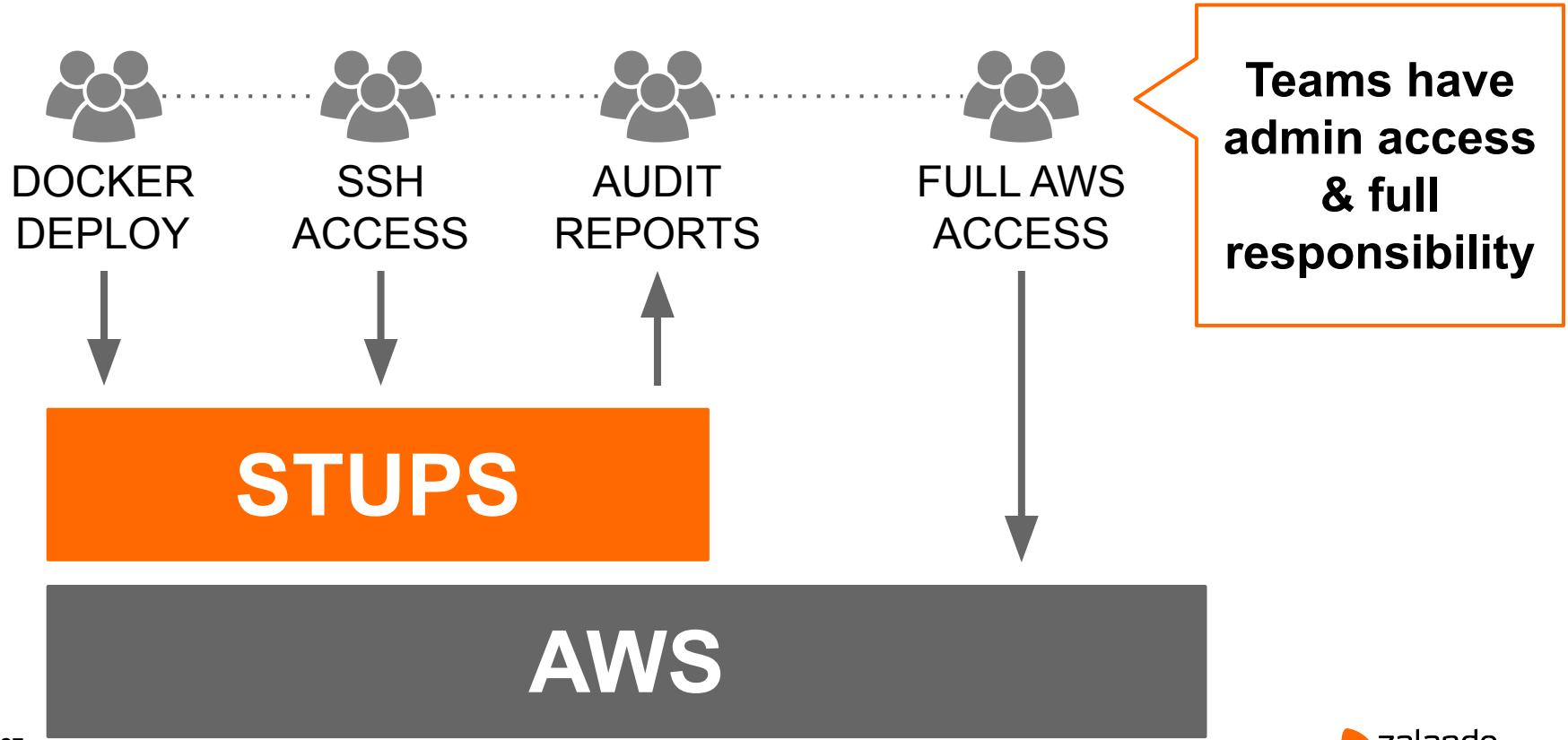
The bottom table is titled "Recent Deployments" and shows four entries:

Time	Environment	Tag	Projects	User	Stage	Comment	
2013-10-31 11:51:38 ago	2 m	INTEGRATION	trunk	production-tools-jeting	froske	done	Instances
2013-10-31 11:51:13 ago	2 m	INTEGRATION	trunk	shop	sharder	done	Instances
2013-10-31 11:50:12 ago	3 m	INTEGRATION	trunk	production-tools-jeting	froske	switch	Instances
2013-10-31 11:50:12 ago	3 m	INTEGRATION	trunk	production-tools-jeting	froske	api-schema-check	Instances

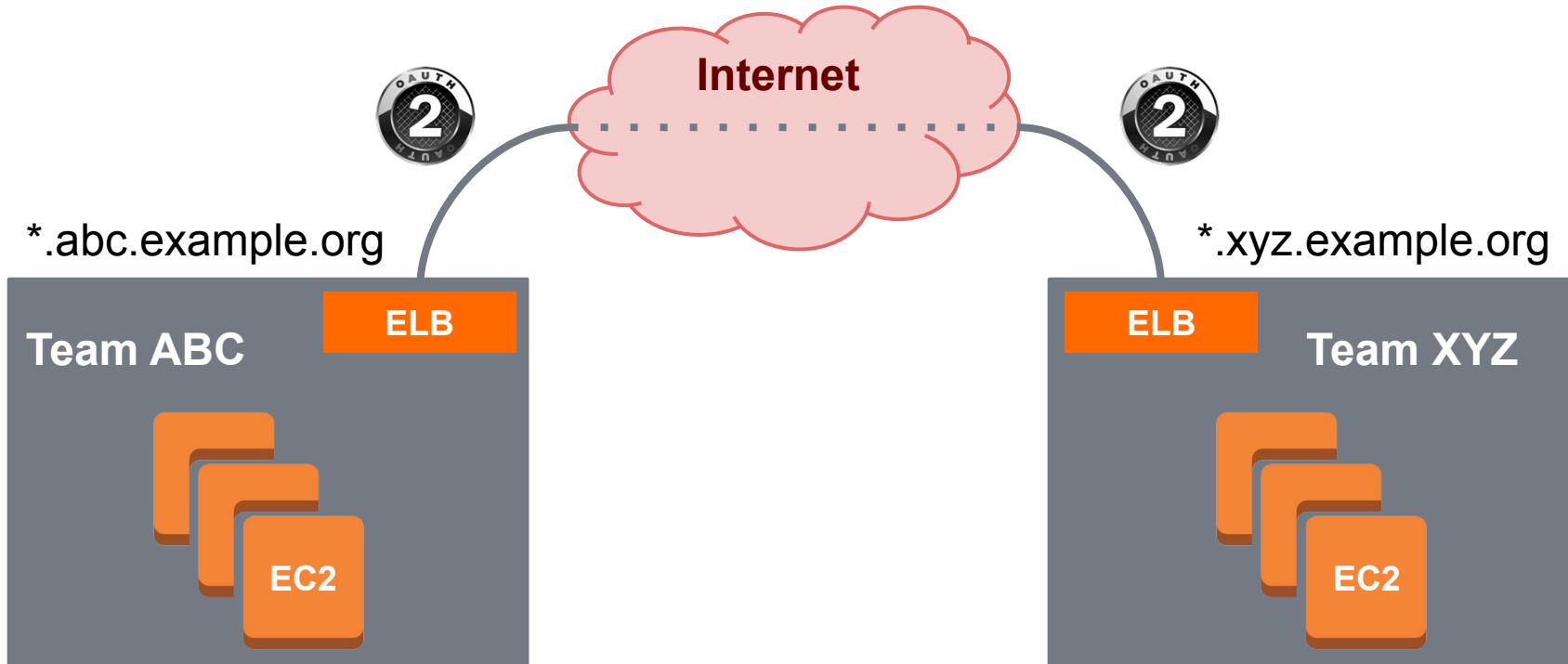
At the bottom of the interface, a debug message is visible:

```
DEBUG root: FESN segments: {u'customer': [(u'fesn01', u'9620'), (u'fesn04', u'9620'), (u'fesn07',
```

2015: RADICAL AGILITY



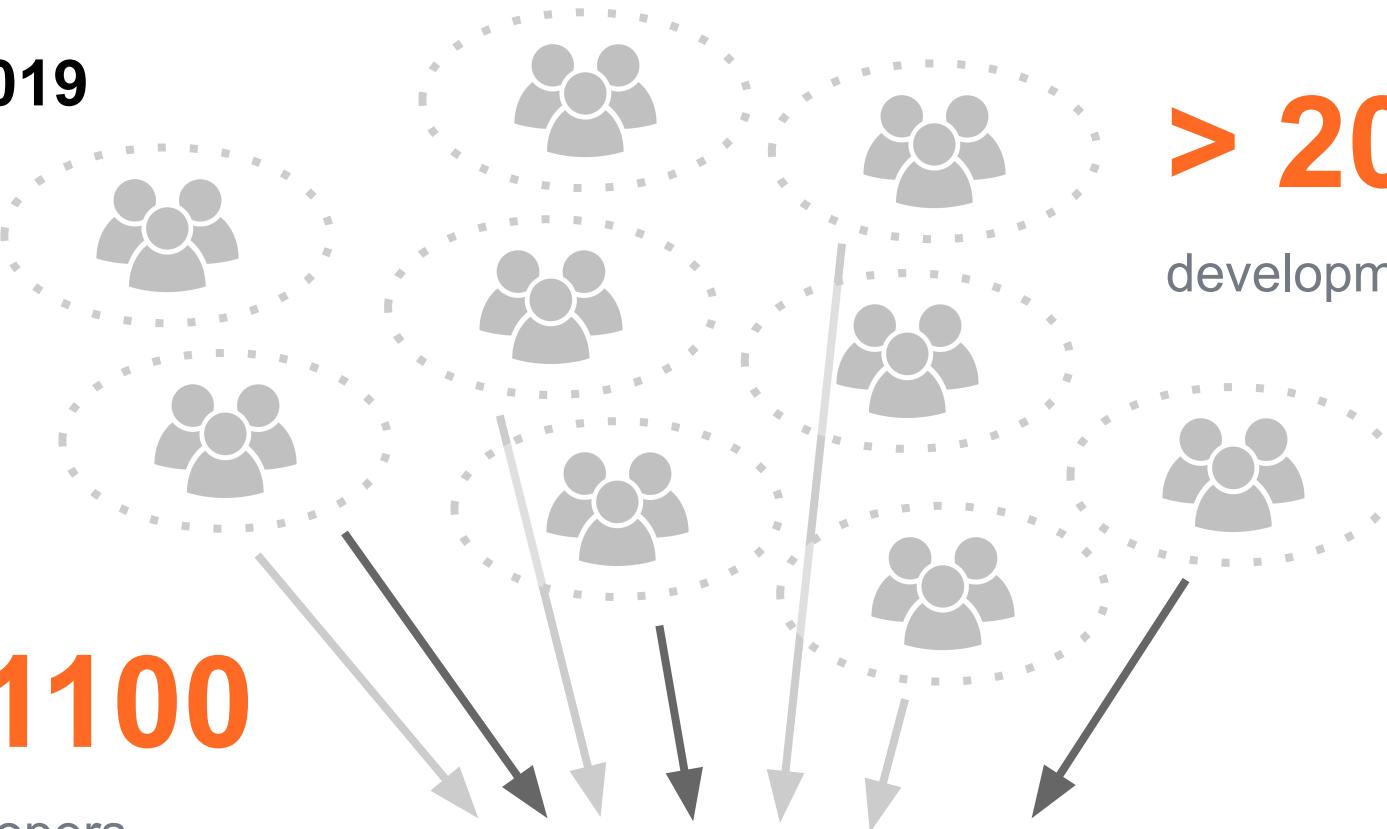
2015: ISOLATED AWS ACCOUNTS



2019

> 1100

developers



> 200

development teams

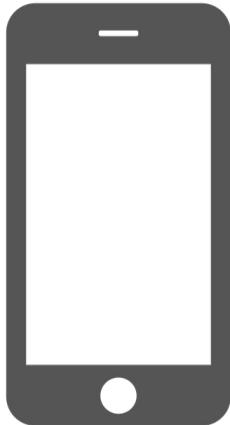
YOU BUILD IT, YOU RUN IT

The traditional model is that you take your software to the wall that separates development and operations, and throw it over and then forget about it. Not at Amazon.

You build it, you run it. This brings developers into contact with the day-to-day operation of their software. It also brings them into day-to-day contact with the customer.

- A Conversation with Werner Vogels, ACM Queue, 2006

ON-CALL: YOU OWN IT, YOU RUN IT



*When things are broken,
we want people with the best
context trying to fix things.*

- [Blake Scrivener, Netflix SRE Manager](#)



Charity Majors

@mipsytippsy

If you are a software engineer, your job is delivering value to users. Not to jenkins or circle-ci. Your job is not done until your SLO is met for your users.

Your development process extends waaaaaaayyyyyy into prod. You should be up to your elbows in prod every goddamn day.

Tweet übersetzen

21:05 - 30. März 2019 aus **Manhattan, NY**

151 Retweets **342** „Gefällt mir“-Angaben



3

151

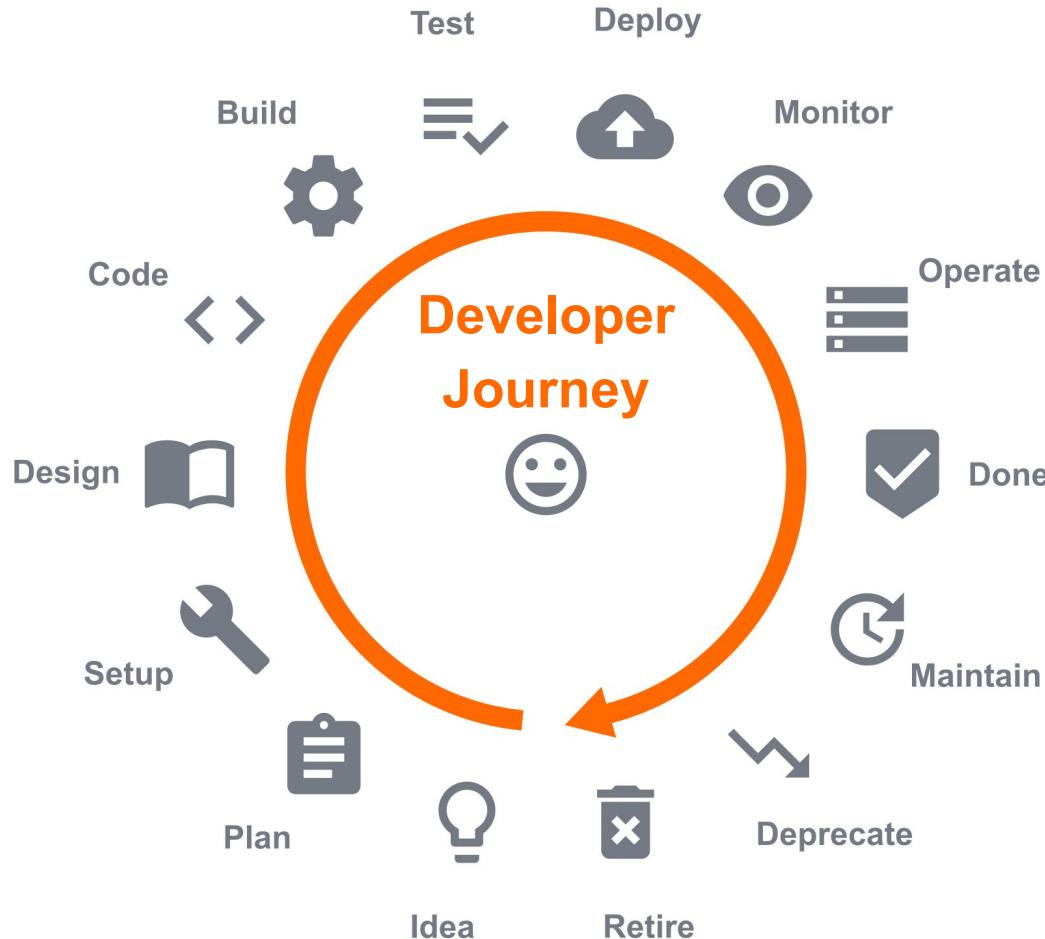
342





DEVELOPER JOURNEY

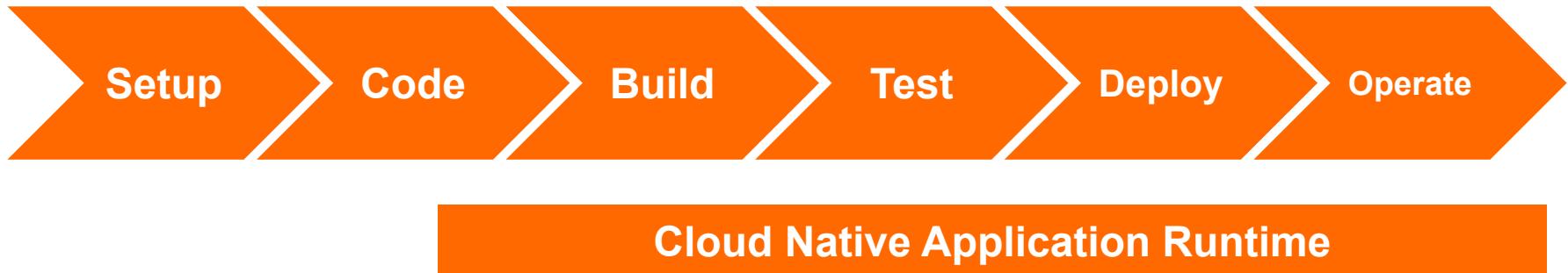
**Consistent story
that models
all aspects of SW dev**



Correctness
Compliance
GDPR
Security
Cost Efficiency
24x7 On Call
Governance
Resilience
Capacity
...



DEVELOPER PRODUCTIVITY



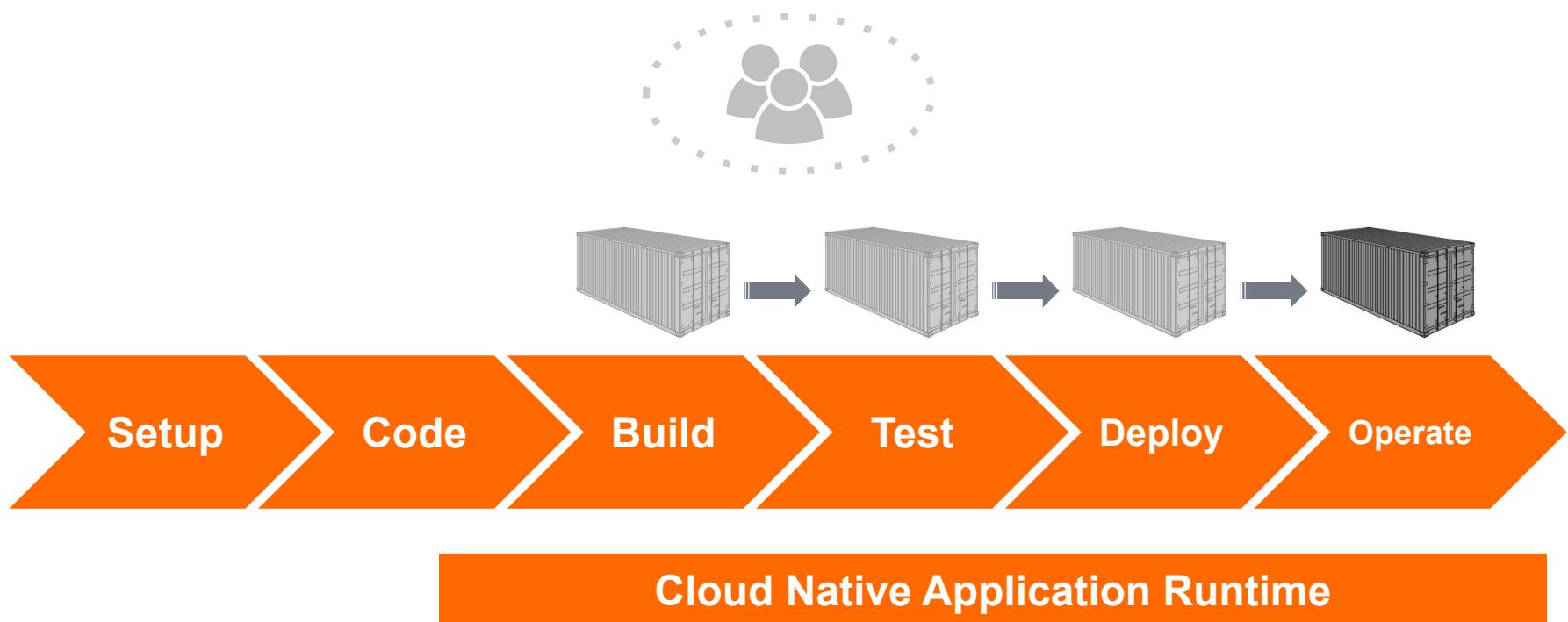
CLOUD NATIVE

*.. uses an **open source** software stack to deploy applications as **microservices**, packaging each part into its own **container**, and **dynamically orchestrating** those containers to optimize resource utilization.*

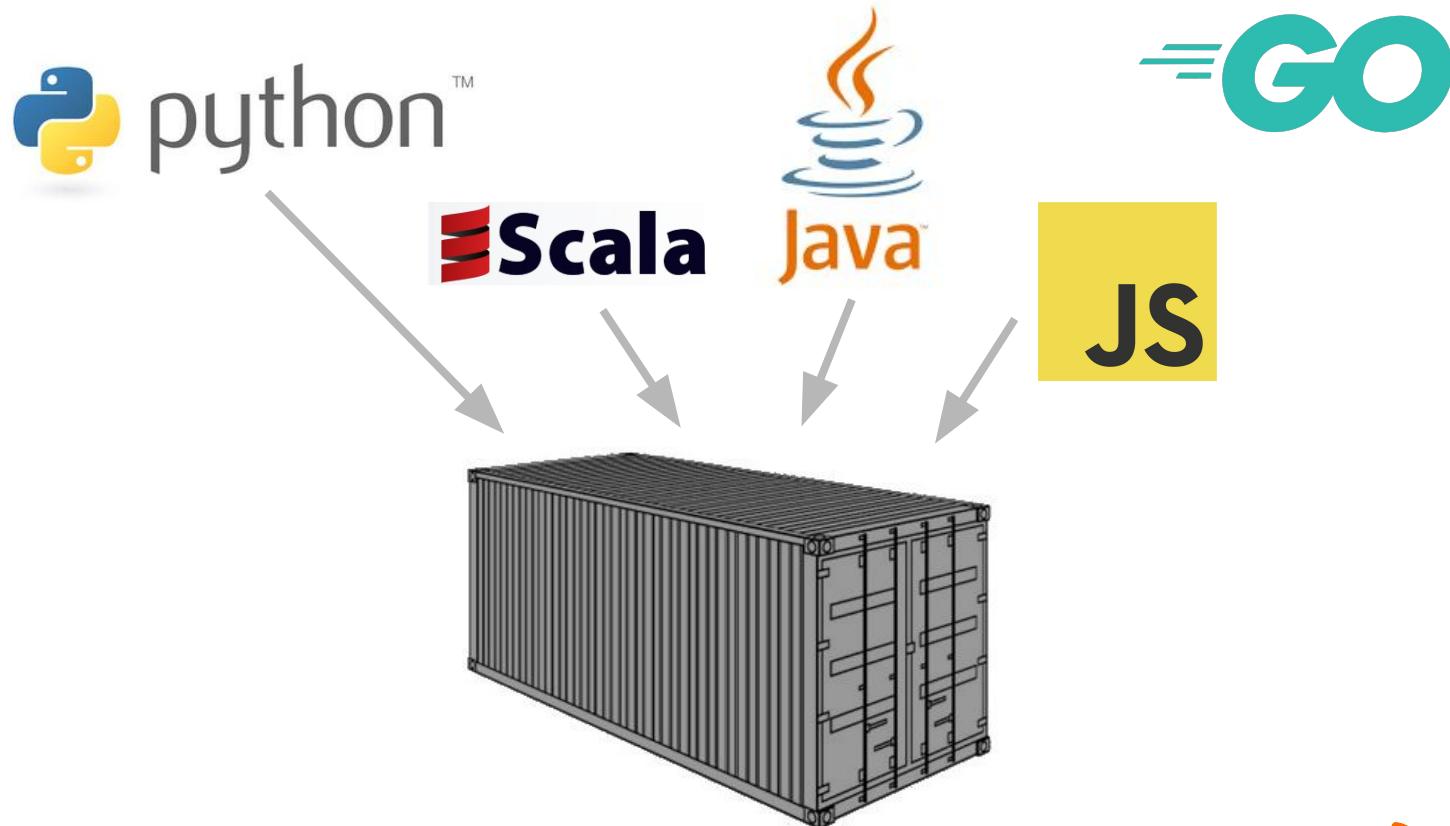
*Cloud native technologies enable software developers to **build great products faster**.*

- <https://www.cncf.io/>

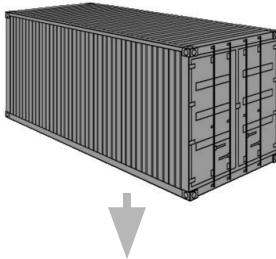
CONTAINERS END-TO-END



CONTAINERS



CONTAINERS



kubernetes



PLATFORM AS A PRODUCT

*"A good platform is treated as a product
(reliable, usable, fit for purpose)."*

- *Manuel Pais, 2019*



Welcome to the Developer Journey

APPLICATIONS

The Developer Console is your guide for all the things you need to take an application from conception to production within 30 minutes. Every application starts as an idea, which subsequently undergoes planning, design, coding and testing phases until, at the end of its lifetime, it is retired.

You will find links to documentation, tools and information for your journey in this Idea Developer Console.

We here in Developer Productivity want to support you as best we can and if something is missing, you need more information or features, do not hesitate to reach out to us by clicking on the feedback icon in the top right. Any feedback is highly appreciated.

Design

→ RESTful API Guidelines

→ API Portal

→ Zally API Linter

→ Fashion Content Platform (AI & Data APIs)

Test

Welcome to the Developer Console

You can now find updated documentation

updated documentation for the whole Developer Journey in one place:

The Developer's Journey



Build



Code



Design



Setup



Plan



Idea



Deploy



Test

Test

Unit tests, contract tests, integration tests, end-to-end tests and smoke tests can be automated via our build-tooling.

Learn more...

→ Rules of Play

→ Tech Radar

→ Confluence

→ Database as a Service

→ Open Source One-Stop-Shop

→



Monitor



Operate



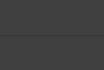
Done



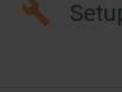
Maintain



Deprecate



Retire



Setup

→ ZACK Role Management

→ GitHub Enterprise

→ Create Git Repository

→ YOUR TURN

→ Zappr

→ Create database cluster

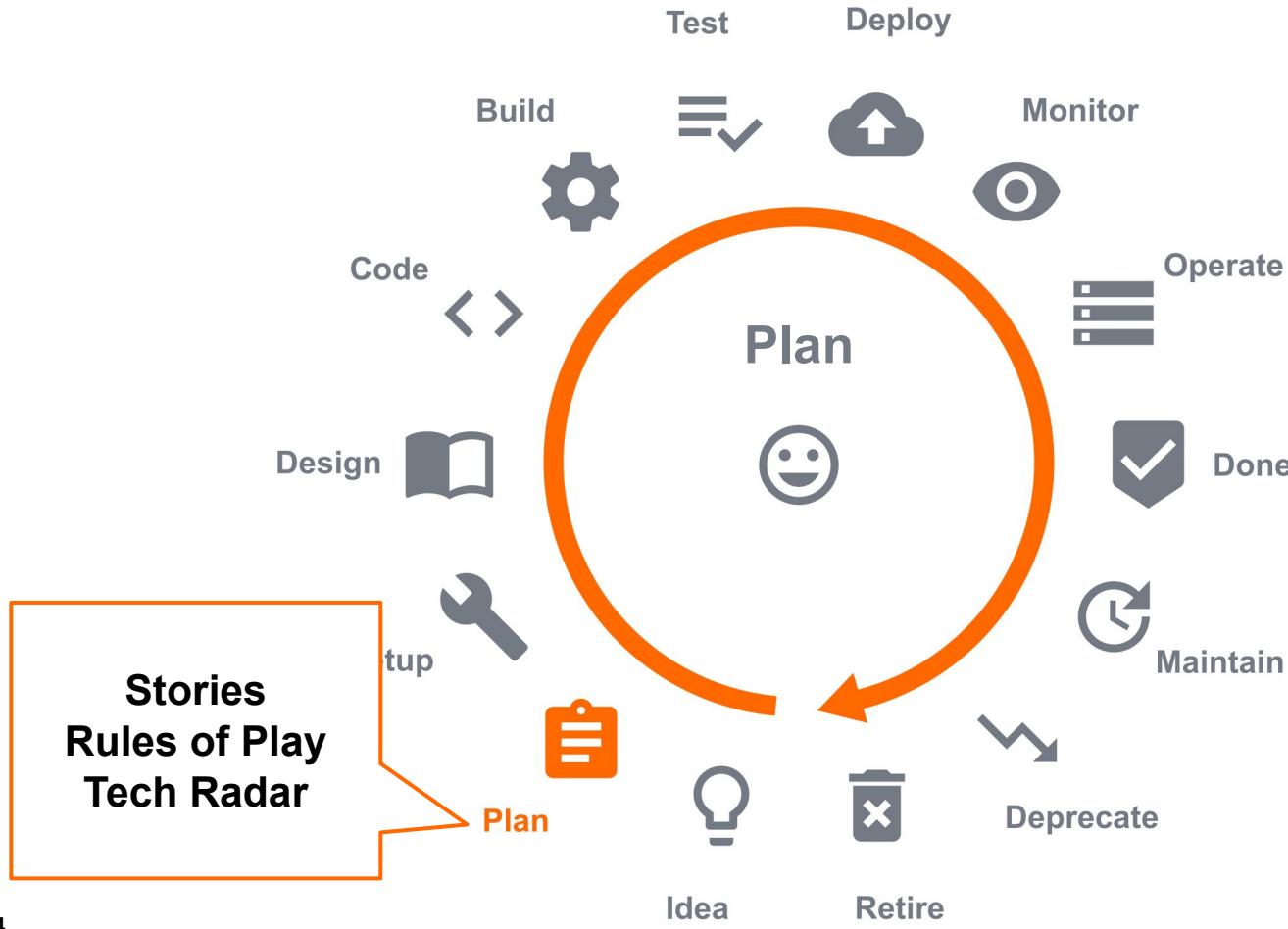
→ AWS Account Chooser

Build

→ Continuous Delivery Platform (CDP)



PLAN & SETUP



Zalando Tech Radar — 2018.02

Frameworks

ADOPT	ASSESS
1. Akka (Scala)	15. Akka-Http
2. Node.js	16. Aurelia
3. OpenAPI (Swagger)	17. Ember.js
4. Play (Scala)	18. gRPC
5. React.js	19. Http4s
6. RxJava (Android)	20. JOOQ
7. scikit-learn	21. Redux
8. Spring	22. Vert.x
	23. Vue.js

TRIAL

HOLD	ADOPT
9. Angular	24. Activiti
10. AspectJ	25. AngularJS 1.x
11. Camel	26. BackboneJS
12. Camunda	27. Drools
13. OpenNLP	28. Spray
14. Thymeleaf	

Infrastructure

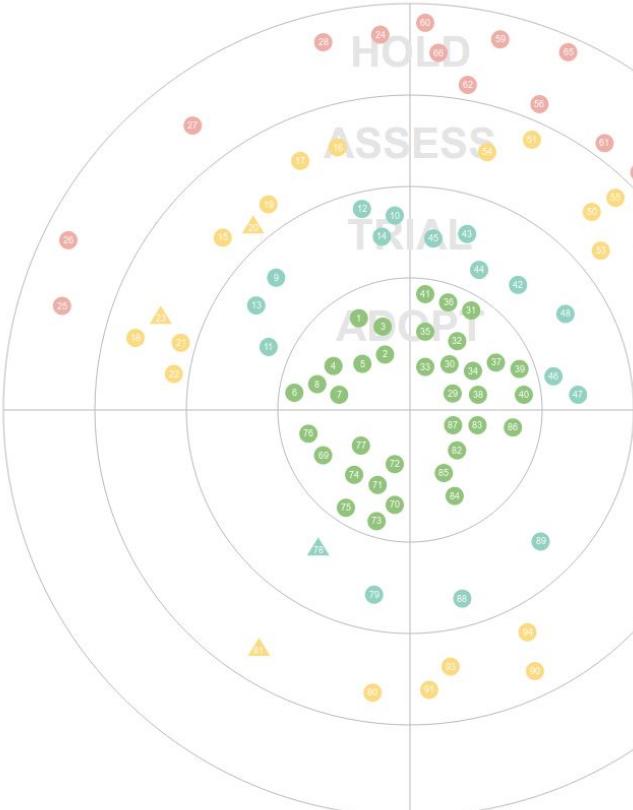
ADOPT	ASSESS
69. Docker	80. AWS Lambda
70. HAProxy	81. OpenTracing
71. Hystrix	
72. Jetty	
73. Kubernetes	
74. Nginx	
75. S3 UPS	
76. Tomcat	
77. ZMON	

HOLD

TRIAL

78. Failsafe
79. Undertow

▲ moved up ▼ moved down



ZALANDO TECH RADAR

Kotlin ASSESS

[edit this page](#)

Kotlin is a pragmatic, multi-paradigm, multi-platform, modern, safe, interoperable and toolable programming language by JetBrains. Its primary focus is and has been the JVM ecosystem.

Nonetheless, it supports compilation to [JavaScript](#) and native code via LLVM. More than just compilation, Kotlin makes sure to integrate very well with the respective ecosystem, be it package managers or build tools. Plus, for each additional feature the designers deeply think about its implications with respect to toolability, compilation performance, learning costs and multi-platform suitability. All of this is a reflection of Kotlin's philosophy: Pragmatism and interoperability over fancy but costly language features.

Kotlin was developed mostly in the open with constant feedback from the community. A handful of companies were using the language in production even before the 1.0 release. Nowadays, many companies use Kotlin in critical applications. Notable examples include: Android, Gradle, Netflix, Pinterest, Atlassian, Coursera, Evernote, Trello and Uber.

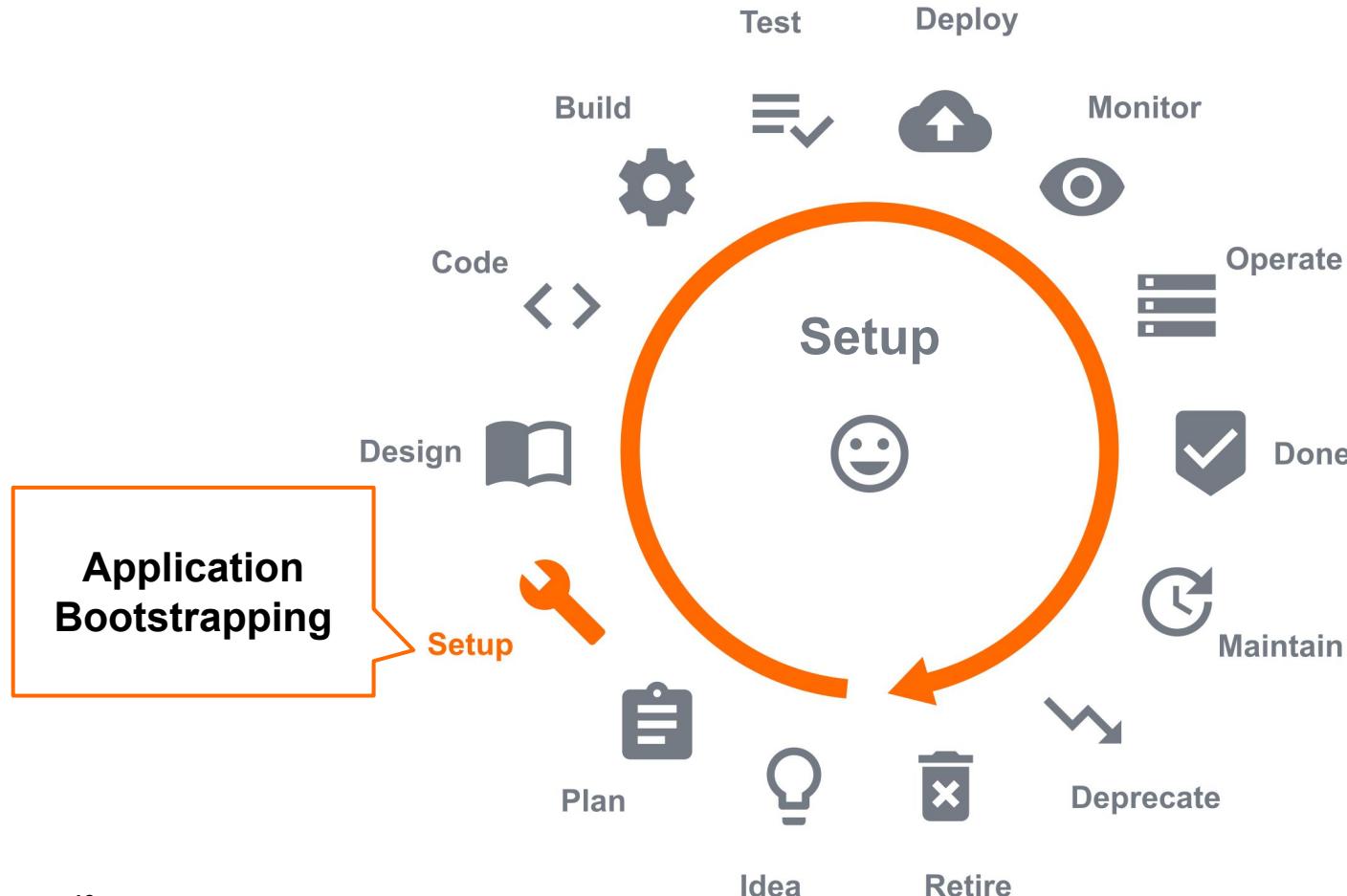
Notable language features:

1. Nullable types — with compiler checking on dereferencing
2. Smart casts — type narrowing based on control flow
3. Extension methods — define methods on any type
 1. extend APIs with discoverable methods
4. Data classes — create POJOs easily with auto-generated equals, hashCode and toString methods
5. Properties — auto-generated properties for class fields
6. Functional programming — supports closures, (explicit) tail recursion and higher order functions

Index
Changelog
Common choices

Data Processing
Datastores
Frameworks
Infrastructure
Languages

- Go
- Java
- JavaScript
- Python
- Scala
- Swift
- Clojure
- TypeScript
- Elm
- Haskell
- **Kotlin**
- R
- Rust
- C languages
- CoffeeScript
- Erlang
- Groovy
- .NET languages
- Perl
- PHP
- Ruby
- GraphQL
- JRuby
- Jython



Create a new repository

A repository contains all the files for your project, including the revision history

Organisation * —

hackweek



Repository Name * —

myapp



Description

Team ID *



Repository type *

Code



Bootstrap with application template

web-java-spring-boot-rest



Add .gitignore template



* Mandatory fields

Create Repository

Branch: master ▾

New pull request

Create new file

Upload files

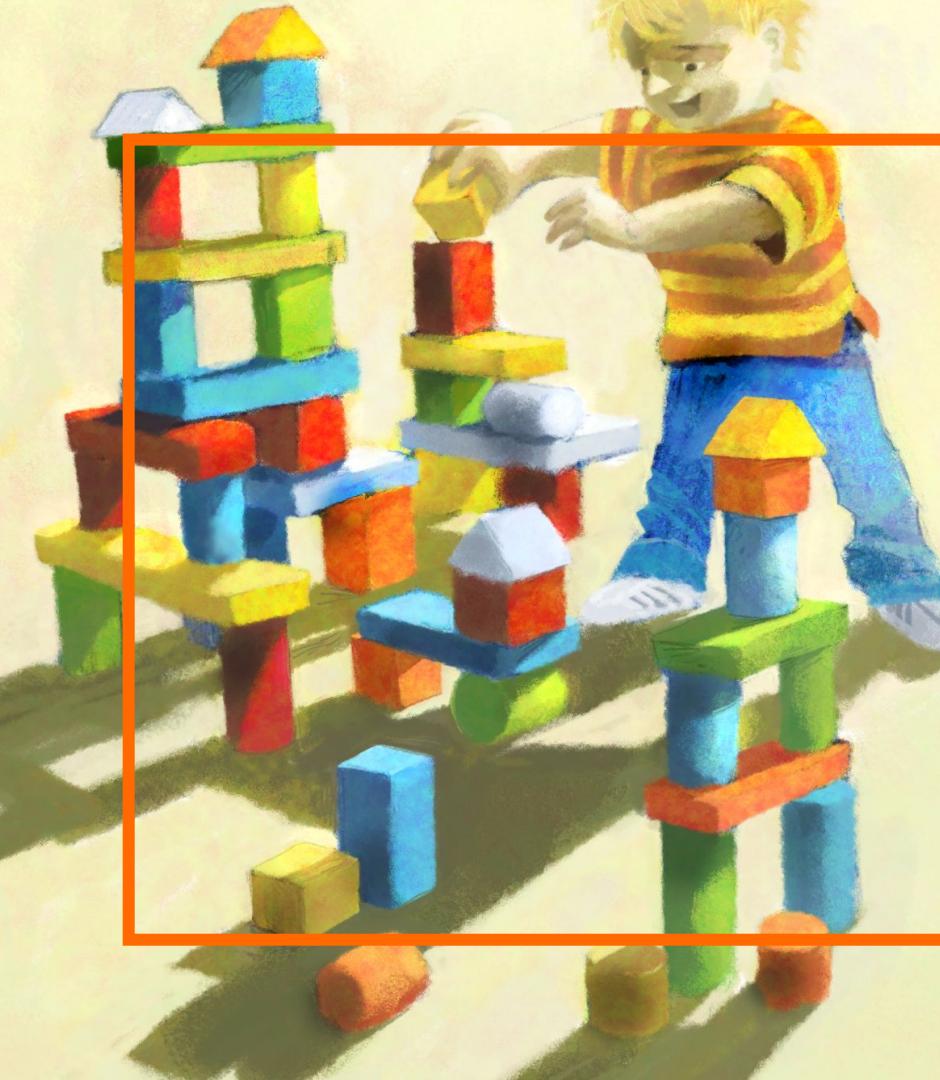
Find file

Clone or download ▾

 [REDACTED]	committed with  Updated readme due to switch to riptide (#34)	Latest commit 965218e 7 hours ago
 api	Migrated out of twintip (#29)	20 days ago
 deploy/apply	Remove not existing uid privilege (#7)	7 months ago
 gradle/wrapper	Upgrade dependencies to newest versions (#16)	5 months ago
 src	Run Docker build from project root (#33)	18 days ago
 .gitignore	Move over to riptide (#31)	18 days ago
 .zappr.yaml	Add match label selector (#4)	7 months ago
 Dockerfile	Run Docker build from project root (#33)	18 days ago
 README.md	Updated readme due to switch to riptide (#34)	7 hours ago
 build.gradle	Move over to riptide (#31)	18 days ago
 configure.sh	Configure script adapted to osx (#30)	18 days ago
 delivery.yaml	Run Docker build from project root (#33)	18 days ago
 gradlew	Upgrade dependencies to newest versions (#16)	5 months ago
 gradlew.bat	Transition to single repo per template	7 months ago
 settings.gradle	Use  as team to prepare for deployment (#1)	7 months ago
<hr/>  README.md		

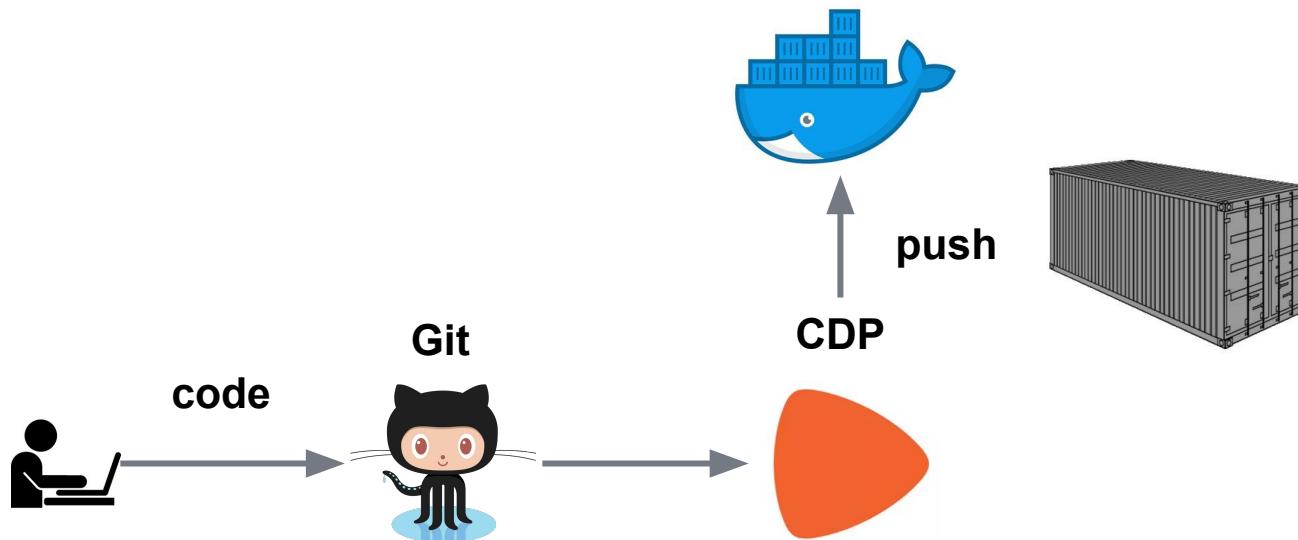
Java - Spring Boot - REST

This project is a highly opinionated template for a Java Spring Boot based REST service. It includes various Zalando specific libraries like e.g. [ZMON Actuator](#), [Tracer](#) and [Failsafe Actuator](#). See the full list below.



BUILD & TEST

CONTINUOUS DELIVERY PLATFORM: BUILD





Some checks haven't completed yet

[Hide all checks](#)

1 pending and 4 successful checks

- **zappr** Pending — This PR needs 2 more approvals (0/2 given).

Required

- ✓ **pipeline** — Pipeline succeeded.

[Details](#)

- ✓ **process/[REDACTED] dev** — Process step succeeded.

[Details](#)

- ✓ **process/[REDACTED] test** — Process step succeeded.

[Details](#)

- ✓ **zappr/pr/specification** — PR has passed specification checks

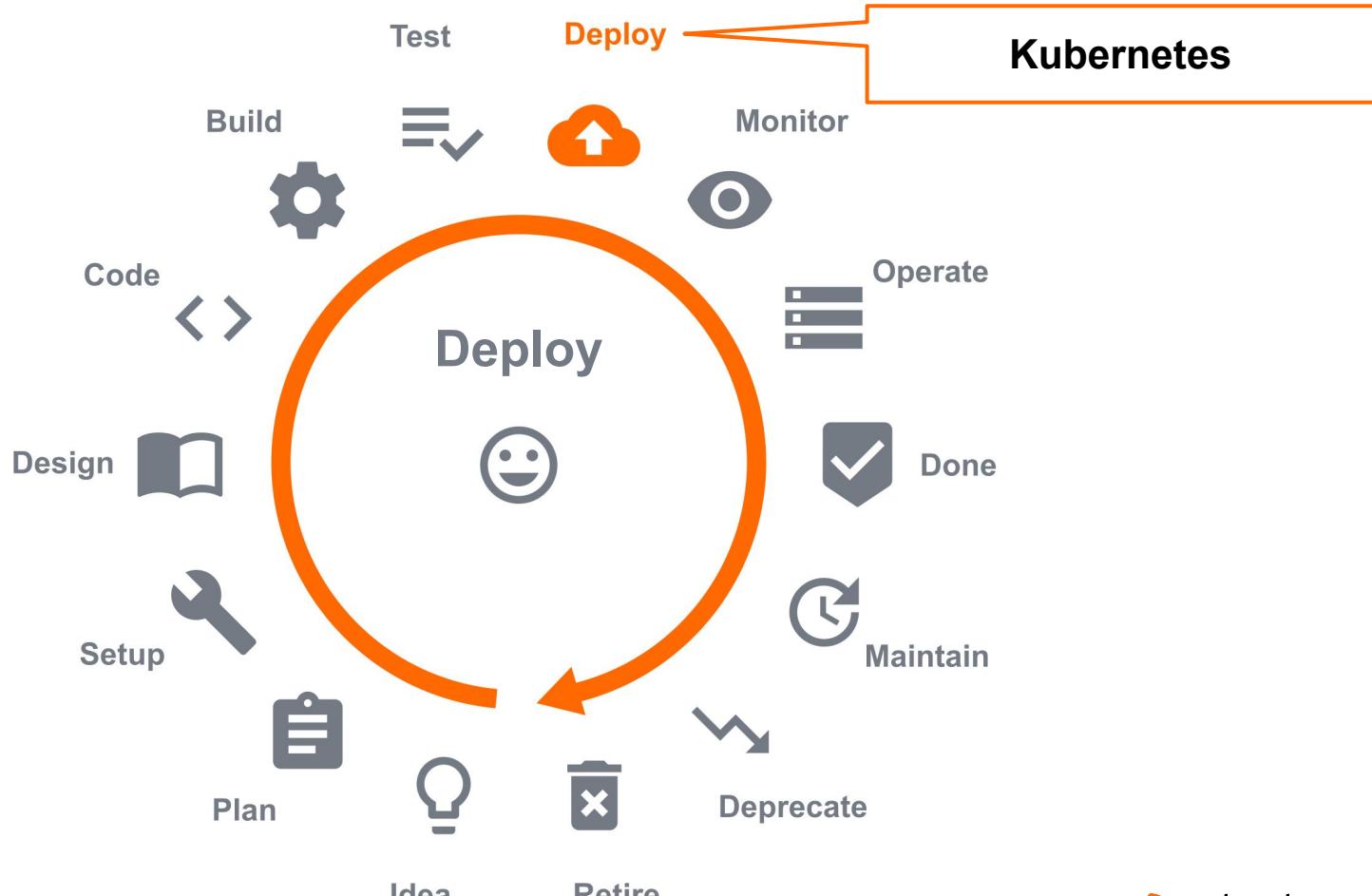
Required

This pull request can be automatically merged by project collaborators

Only those with [write access](#) to this repository can merge pull requests.



DEPLOY



DEPLOYMENT CONFIGURATION

```
└── deploy/apply
    ├── deployment.yaml
    ├── credentials.yaml # Zalando IAM
    ├── ingress.yaml
    └── service.yaml
    delivery.yaml          # Zalando CI/CD
```



INGRESS.YAML

```
kind: Ingress
metadata:
  name: "..."
spec:
  rules:
    # DNS name your application should be exposed on
    - host: "myapp.foo.example.org"
      http:
        paths:
          - backend:
              serviceName: "myapp"
              servicePort: 80
```



TEMPLATING: MUSTACHE

```
kind: Ingress
metadata:
  name: "..."
spec:
  rules:
    # DNS name your application should be exposed on
    - host: "{{{APPLICATION}}}example.org"
      http:
        paths:
          - backend:
              serviceName: "{{{APPLICATION}}}"
              servicePort: 80
```

CONTINUOUS DELIVERY PLATFORM

DEPLOYMENT UNITS	RENDERING-ENGINE	Exclude PRs: <input type="checkbox"/>					
Pipeline	Started	Action	Pipeline Runs				
pr-1785-2	3h ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
pr-1785-1	3h ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
Remove `any` usage from our code pr-1784-1	6h ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
master-1188 master-1188	1d ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
Do not bundle node_modules in re package pr-1783-1	1d ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
master-1187 master-1187	1d ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
Document the renderer contribution workflow pr-1775-2	2d ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
master-1186 master-1186	2d ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
pr-1778-1	2d ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS
Document the renderer contribution workflow pr-1775-1	6d ago	i	 BUILD	 PERF	 DEPLOY-BRANCH	 TEST-BRANCH	 DEPLOY-DOCS

CDP: DEPLOY

The screenshot shows a deployment management interface with the following key elements:

- Top Navigation:** DEPLOYMENT UNITS, TRACKING-DEPLOY, MASTER-91.
- Environment Headers:** TRACKING-DEPLOY, TEST, STAGING, PROD.
- Deployment Status:** TEST and STAGING are green, indicating success. PROD is grey, indicating it has run for 1 minute and 16 seconds.
- Deployment Details:** Deployment **merchant-parcels** (status: success). It includes a ReplicaSet (**merchant-parcels-bd76cbc9b**) with three Pods:
 - Pod merchant-parcels-bd76cbc9b-s84kp** scalyr logs
 - Pod merchant-parcels-bd76cbc9b-bwzff** scalyr logs
 - Pod merchant-parcels-bd76cbc9b-hgj5p** scalyr logs
- Ingress merchant-parcels**: Hostname [REDACTED] open
- PlatformCredentialsSet**: [REDACTED]
- postgresql**: [REDACTED]-db
- Secret**: [REDACTED]-credentials
- Service merchant-parcels**

Feedback Form:

Please give us your feedback

Do you like the new deployment status?

Yes No

What could be improved upon?

Submit

"glorified kubectl apply"

CDP: OPTIONAL APPROVAL

The screenshot shows the Zalando Developer Console interface. At the top, there's a navigation bar with 'Developer Console' on the left, a search bar in the center, and 'Feedback' and 'Support' links on the right. Below the navigation bar, there are tabs for 'DEPLOYMENT UNITS', 'FEED-SERVICE', and 'MASTER-16'. The 'FEED-SERVICE' tab is selected, indicated by a grey background. On the right side of the header is a circular orange progress or status indicator.

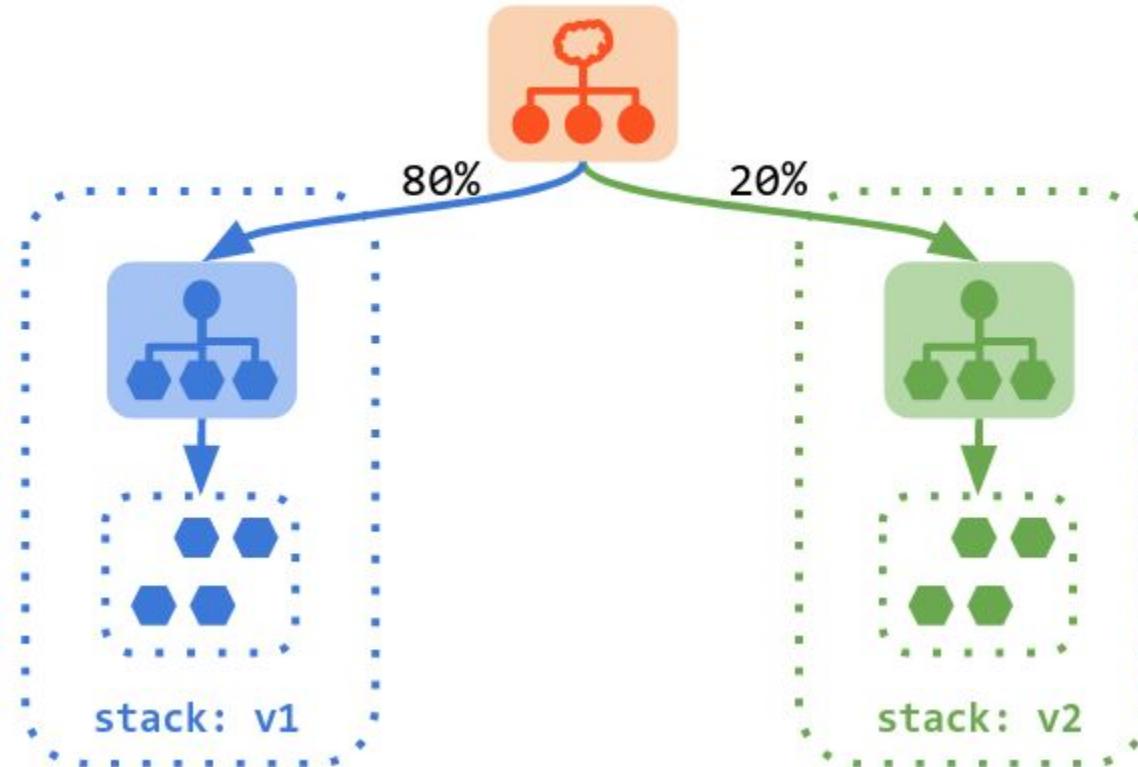
The main content area has several sections:

- GENERAL** and **LOGS** tabs are visible at the top of a grey sidebar.
- ACTIONS** section contains two buttons: **APPROVE** (with a green thumbs-up icon) and **REJECT** (with a red thumbs-down icon).
- DETAILS** table:

Id	n/a
Type	process
Status	PENDING_APPROVAL
Deployment	deploy-prod
Cluster	[redacted]
Started at	n/a
Finished at	n/a
- ERRORS & WARNINGS** section:

Error	No Error
Warning	No Warnings

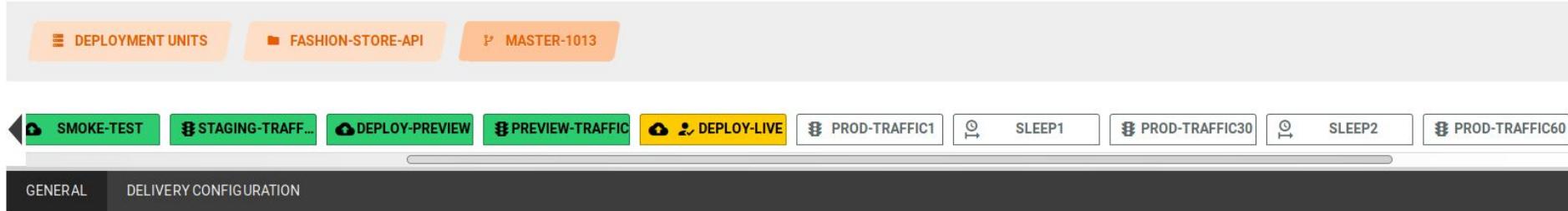
STACKSET: TRAFFIC SWITCHING



STACKSET CRD

```
kind: StackSet
...
spec:
  ingress:
    hosts: ["foo.example.org"]
    backendPort: 8080
  stackLifecycle:
    scaledownTTLSeconds: 1800
    limit: 5
  stackTemplate:
    spec:
      podTemplate:
        ...
...
```

TRAFFIC SWITCHING STEPS IN CDP



EMERGENCY ACCESS SERVICE

Emergency access by referencing Incident

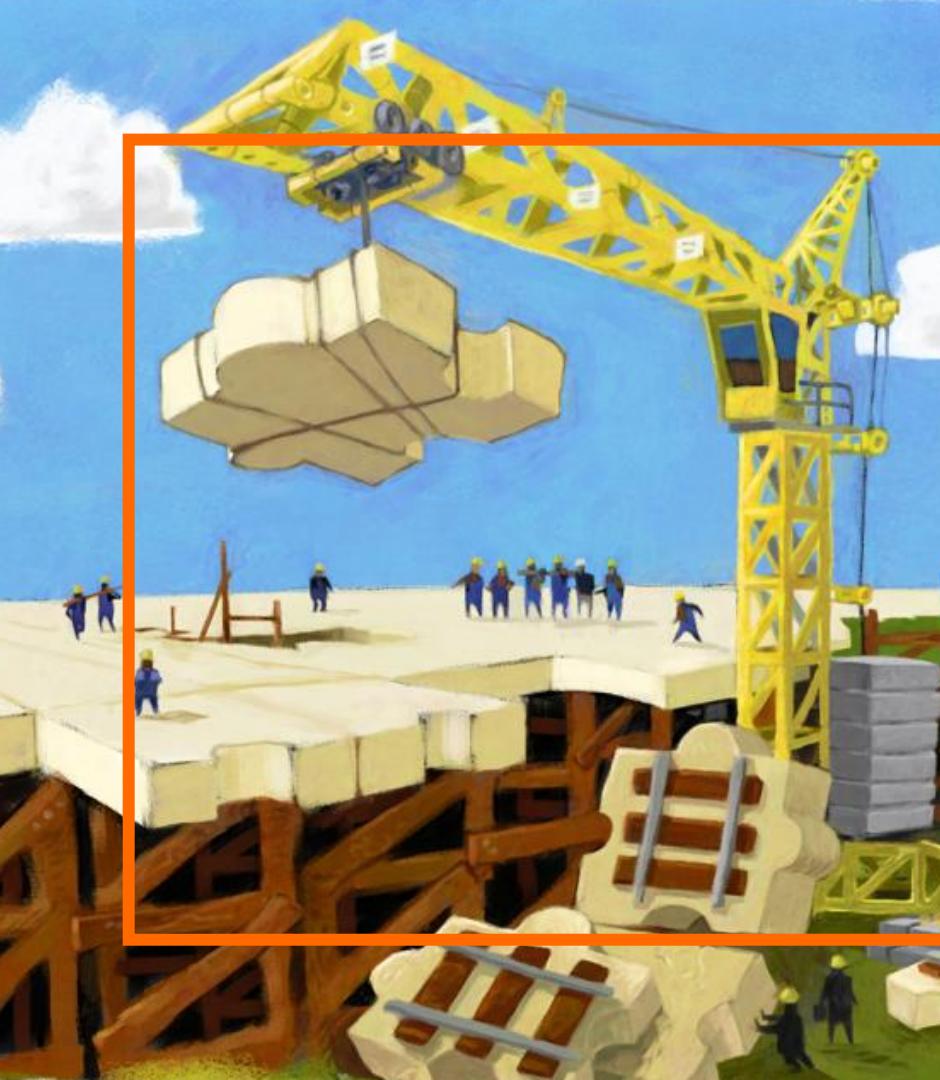
```
zkubectl cluster-access request \
    --emergency -i INC REASON
```



Privileged production access via 4-eyes

```
zkubectl cluster-access request REASON
zkubectl cluster-access approve USERNAME
```





INTEGRATIONS



CLOUD FORMATION VIA CI/CD

"Infrastructure as Code"

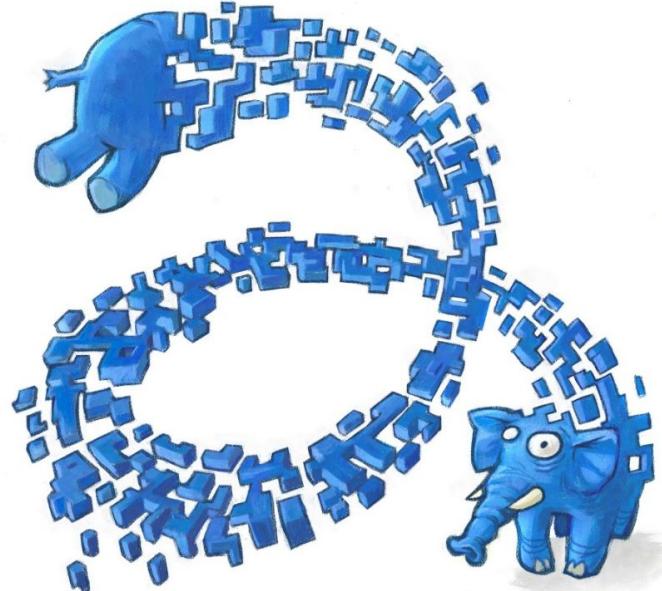
```
└── deploy/apply
    ├── deployment.yaml          # Kubernetes
    ├── cf-iam-role.yaml        # AWS IAM Role
    ├── cf-rds.yaml              # AWS RDS Database
    ├── kube-ingress.yaml
    ├── kube-secret.yaml
    └── kube-service.yaml
└── delivery.yaml            # CI/CD config
```

ZALANDO IAM/OAUTH VIA CRD

```
kind: PlatformCredentialsSet
..
spec:
  application: my-app
  tokens:
    read-only:
      privileges:
        - com.zalando::foobar.read
  clients:
    employee:
      grant: authorization-code
      realm: users
      redirectUri: https://example.org/auth/callback
```

Extensible Kubernetes API

POSTGRES OPERATOR



Application to manage
PostgreSQL clusters on
Kubernetes

>700

clusters running
on Kubernetes



Elasticsearch
2.500 vCPUs
1 TB RAM

Elasticsearch in Kubernetes

github.com/zalando-incubator/es-operator/

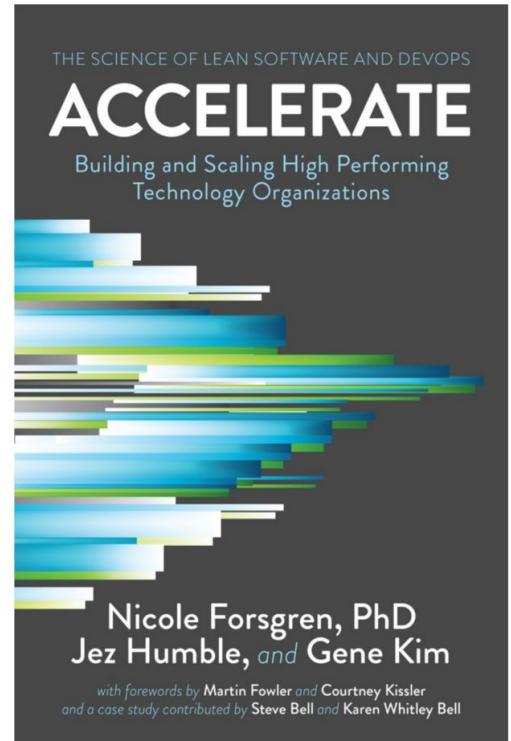
SUMMARY

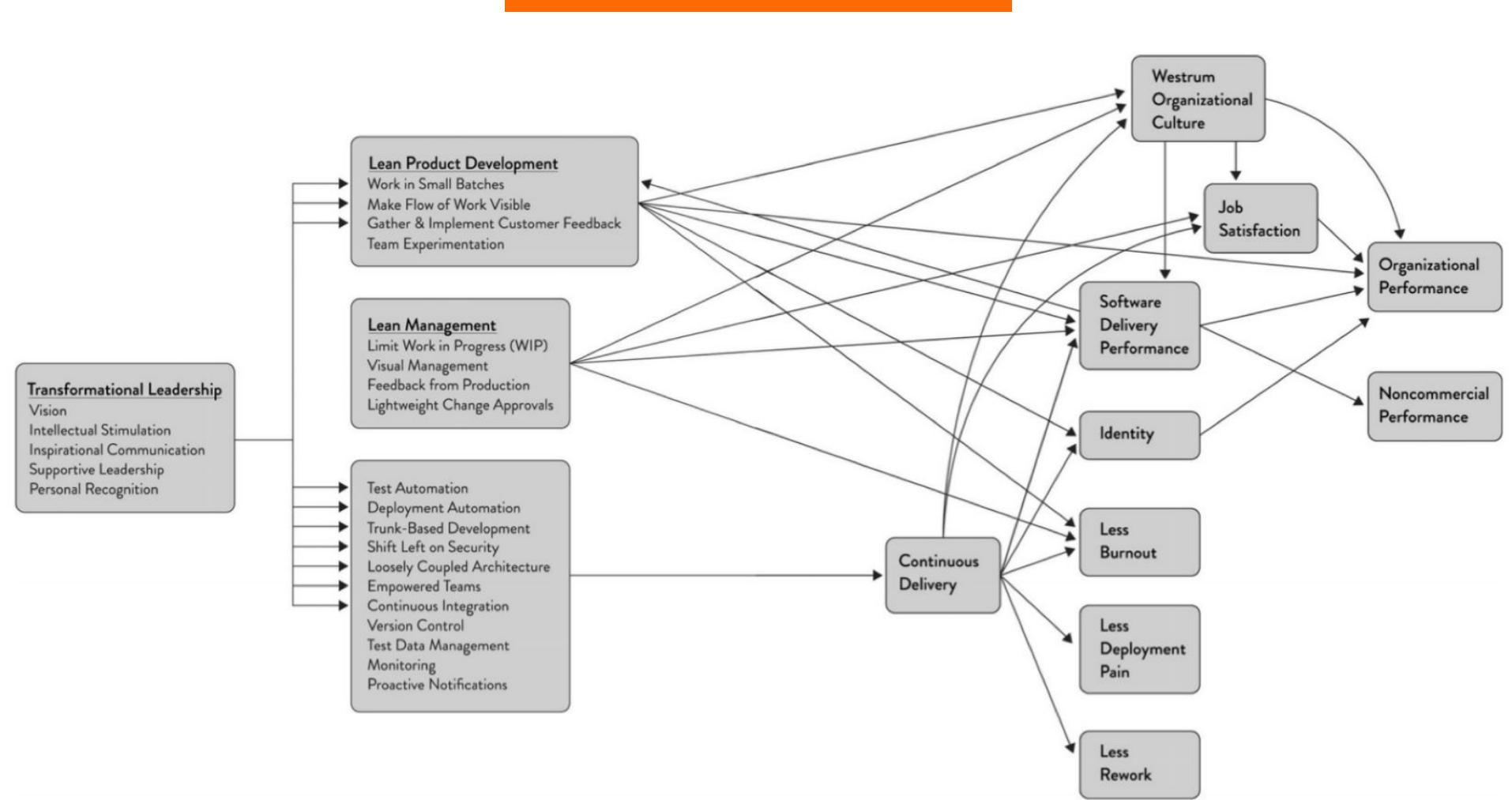
- Application **Bootstrapping**
- **Git** as source of truth and UI
- **4-eyes** principle for master/production
- Extensible **Kubernetes API** as primary interface
 - OAuth/IAM credentials
 - PostgreSQL
- **CloudFormation** for proprietary AWS services



DELIVERY PERFORMANCE METRICS

- Lead Time
- Release Frequency
- Time to Restore Service
- Change Fail Rate





DELIVERY PERFORMANCE METRICS

- Lead Time $\hat{=}$ **Commit to Prod**
- Release Frequency $\hat{=}$ **Deploys/week/dev**
- Time to Restore Service $\hat{=}$ **MTRS from incidents**
- Change Fail Rate $\hat{=}$ **n/a**

Applying product management to internal platforms

TRIAL

We've s
to roll o
access
find tha
Applying
develop
the pla
brand
manag
the pla
underu

NEW

“.. means establishing empathy with internal consumers (read: developers) and collaborating with them on the design. Platform product managers establish roadmaps and ensure the platform delivers value to the business and enhances the developer experience.”

- [ThoughtWorks Technology Radar](#)

oking
vice
We
ng.
read:
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e a
ct
reating
gnant,

PRODUCT MINDSET

... means we are developing all our products
for the **best customer experience**
and **biggest business impact**
while all actions are
aligned with our strategy.

Do you use any software development tools as part of your daily work? *

Yes

No

Overall, how satisfied or dissatisfied are you with your Zalando developer experience? *

1 2 3 4 5 6 7 8 9 10

Extremely
Dissatisfied



Extremely
Satisfied

If you needed support for the developer tools you use, how satisfied or dissatisfied are you with the support you received? *

0 1 2 3 4 5 6 7 8 9 10

Not Applicable

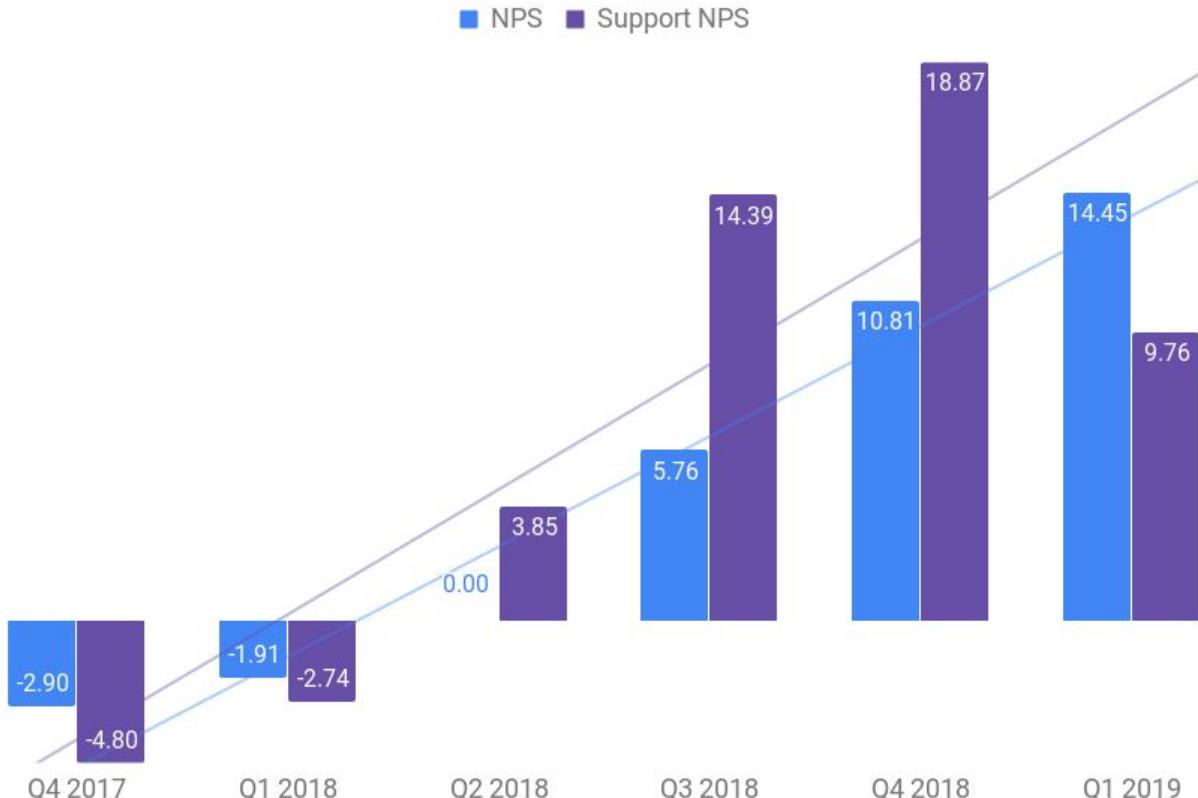


Extremely
Satisfied

What could we do from your perspective to make the developer experience at Zalando even better?

Your answer

DEVELOPER SATISFACTION



DOCUMENTATION

"Documentation is hard to find"

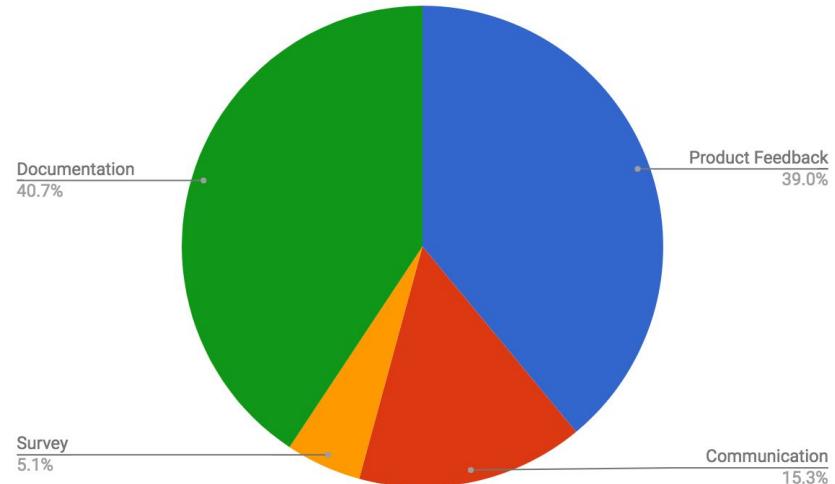
"Documentation is not comprehensive enough"

"Remove unnecessary complexity and obstacles."

*"Get the documentation up to date and prepare
use cases"*

"More and more clear documentation"

*"More detailed docs, example repos with more
complicated deployments."*



DOCUMENTATION

- Restructure following
www.divio.com/en/blog/documentation/
 - Concepts
 - How Tos
 - Tutorials
 - Reference
- Global Search
- Weekly Health Check: Support → Documentation



Documentation (how much did we improve? emphasis on support)

▼ ▼ ▼ ▼ ▼ yellow Red ▼ yellow ▼ yellow ▼

APPLICATIONS

Pipelines

TOOLS

Repositories

Clusters

Kube Resource Report

PUBLISH**DISCOVERABLE****DOCUMENTATION****Learn more****Search Results**

Search finished, found 123 item(s) matching the search query

**Databases - Cloud Native Application Runtime**</reference/using-databases/>

Using Databases from the Cluster It is common for an application to depend on a PostgreSQL database

The first option is to deploy a PostgreSQL cluster into your account using the PostgreSQL operator.
to deploy a PostgreSQL cluster to your K8S cluster.

Just deploy a PostgreSQL manifest to your account (via zkubectl or CDP). kind: " postgresql " apiVersion
\\zalan.do Delete a database cluster: zkubectl get postgresql zkubectl delete postgresql

Rotate PostgreSQL Credentials – Discount Service documentation/operations/guides/rotate_postgresql_keys.html

Rotate PostgreSQL Credentials For security reasons, all PostgreSQL credentials must be rotated every

Postgresql · GitBook</postgresql-24x7.html>

PostgresShort descriptionPostgres is used in Team

Migration from Stups - Cloud Native Application Runtime</reference/migration/>

The application has the following components: RDS PostgreSQL database Docker container ELB load balancer

Kubernetes Best Practices - Cloud Native Application Runtime</concepts/kubernetes-best-practices/>

this is just a redeployment with a different target namespace, but for stateful applications, like a postgresql

NEWSLETTER

"You can now.."

- You can now benefit from the most recent Kubernetes 1.12 features, e.g. ..
- You can now analyse your Kotlin project with SonarQube and upload your Scala code coverage report to SonarQube

SIGNAL: ISSUE UPVOTES

Uploading things to S3 from CDP builds #63

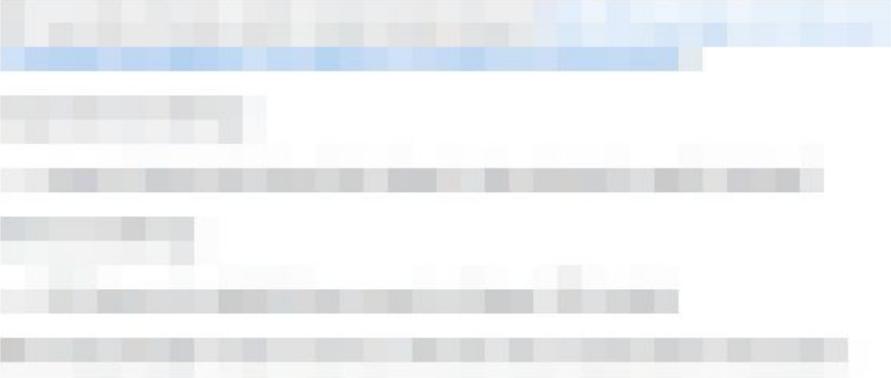
 Closed

[REDACTED] opened this issue on Feb 15, 2018 · 34 comments

commented on Feb 15, 2018 · edited

Member + ...

Users regularly ask to upload build artifacts to S3 from CDP builds (to their teams' S3 buckets).



38 1

TESTIMONIALS

“Useful information, good level of details and pleasant to read. It's one of the few newsletters that I took time to read entirely :)"

- a reader, July 2018

TESTIMONIALS

*“So, thank you, Team Automata, for listening to our community, taking our upvotes in consideration when developing new solutions and building every day
'the first CI that doesn't suck'.”*

- a user, October 2018

DEVOPS IS

- ... if every person uses the same tool for the same job
- ... codified knowledge - everybody contributing their part to common automation
- ... if all people have the same privileges in their tooling
- ... if human error is equally possible for Dev and Ops
- ... replacing people interfaces by automated decisions and processes

... a result

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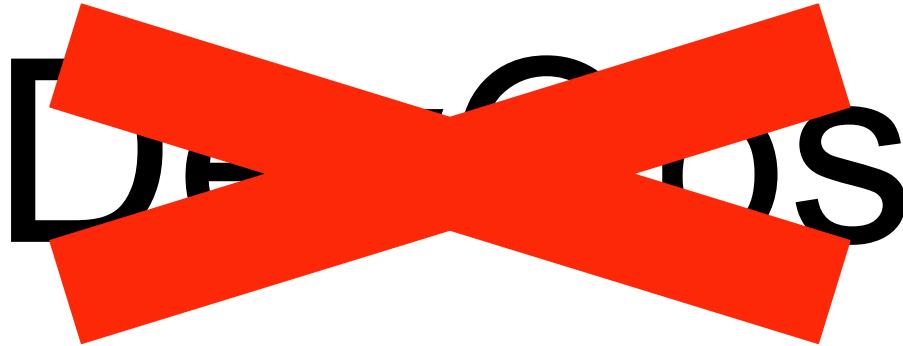
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- ... replacing people interfaces by automated decisions and processes 

... a result



DevOps is normal



iS normal

*You build it,
you run it
is normal*

WAIT A SECOND..

**What about
my job title?**

"DEVOPS ENGINEER" AS A JOB TITLE



DevOps Engineer (m/w/d) (209)

DevOps Engineer (57)

DevOps Engineer (m/f/d) (27)

★ Principal DevOps Engineer

Backbase - Amsterdam, Netherlands

Visa sponsor Paid relocation

java python ansible docker kubernetes

★ DevOps System Administrator

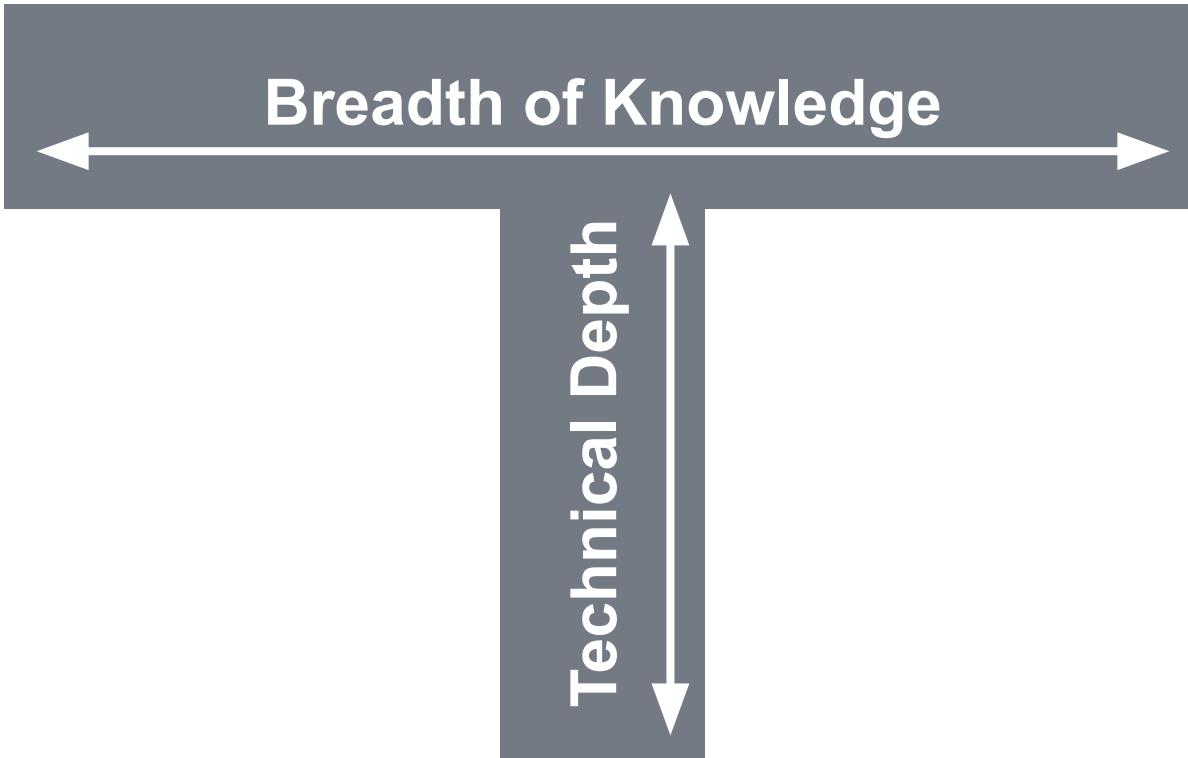
Melexis - Sofia, Bulgaria



python java vmware devops bash sysadmin

T-SHAPED ENGINEER

"Generalizing specialist"



DevOps Engineer



**Software Engineer /
Software Developer
(T-Shaped)**



Matthew Skelton
@matthewpskelton

Work out what the Thinnest Viable Platform (TVP) would be to accelerate and simplify software delivery by teams within business units (BUs). Build and run that TVP as a "product", with teams in BUs as customers. Assess the UX of these teams and help them succeed.

Tweet übersetzen

17:37 - 2. Juni 2019

3 Retweets 8 „Gefällt mir“-Angaben



2



3



8



OPEN SOURCE & MORE

Kubernetes on AWS

github.com/zalando-incubator/kubernetes-on-aws

Skipper HTTP Router & Ingress controller

github.com/zalando/skipper

External DNS

github.com/kubernetes-incubator/external-dns

Postgres Operator

github.com/zalando-incubator/postgres-operator

More Zalando Tech Talks

github.com/zalando/public-presentations





QUESTIONS?

HENNING JACOBS
HEAD OF
DEVELOPER PRODUCTIVITY

henning@zalando.de

[@try_except](https://github.com/try_except)

Illustrations by [@01k](#)

