



Why we don't use the term DevOps

DevOpsCon

2019-06-13

HENNING JACOBS

@try_except_

MOSTAFA NAGEEB

@MostafaNageeb



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

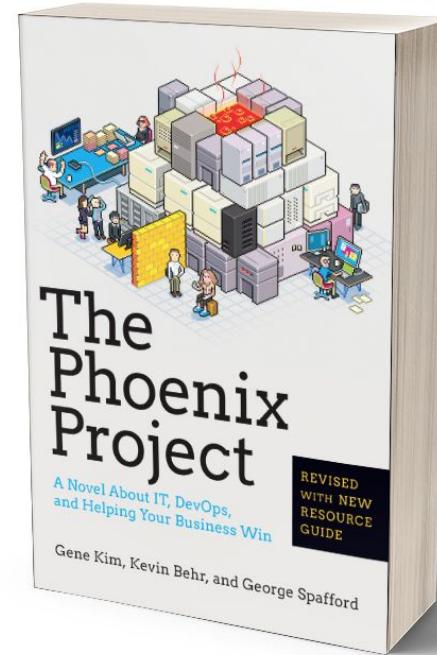
1. Automated infrastructure
2. Shared version control
3. One step build and deploy
4. Feature flags
5. Shared metrics
6. IRC and IM robots

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

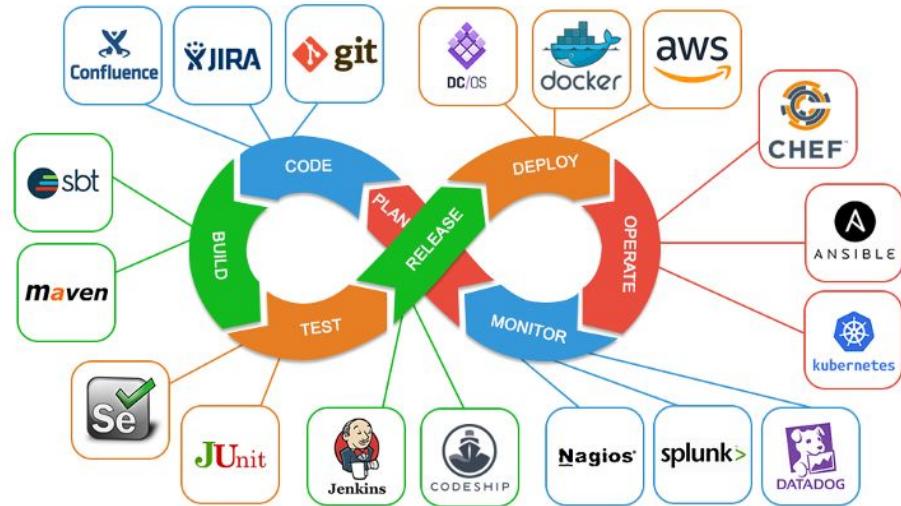
Our DevOps team does all that Ops stuff now.

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

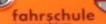


DevOps is normal



L Fahrsschule
Zaunschirm

salzburg - st. johann - b. hofen - tamsweg - mürzzuschlag



fahrschule
zaunschirm

www.zaunschirm.at
JO E 953 FC

ANTO
PILOTTI
SPENGLER - DÄCHER - FENSTER
ZALANDA

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

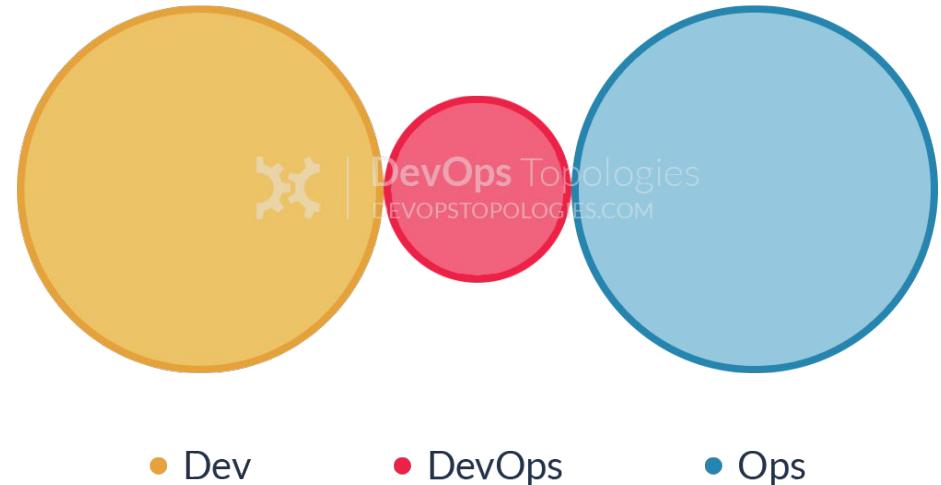
DevOps Team Silo

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 is a terminal window displaying 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
```

To the right is the application interface with the following sections:

- Overview**: Shows navigation tabs for Overview, Projects, Instances, Databases, Jobs, Teams, and Web Services. A search bar is present.
- Deployctl**: Section header.
- Current Deploy Locks (1 / 7 slots used)**: Table showing one lock entry.

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

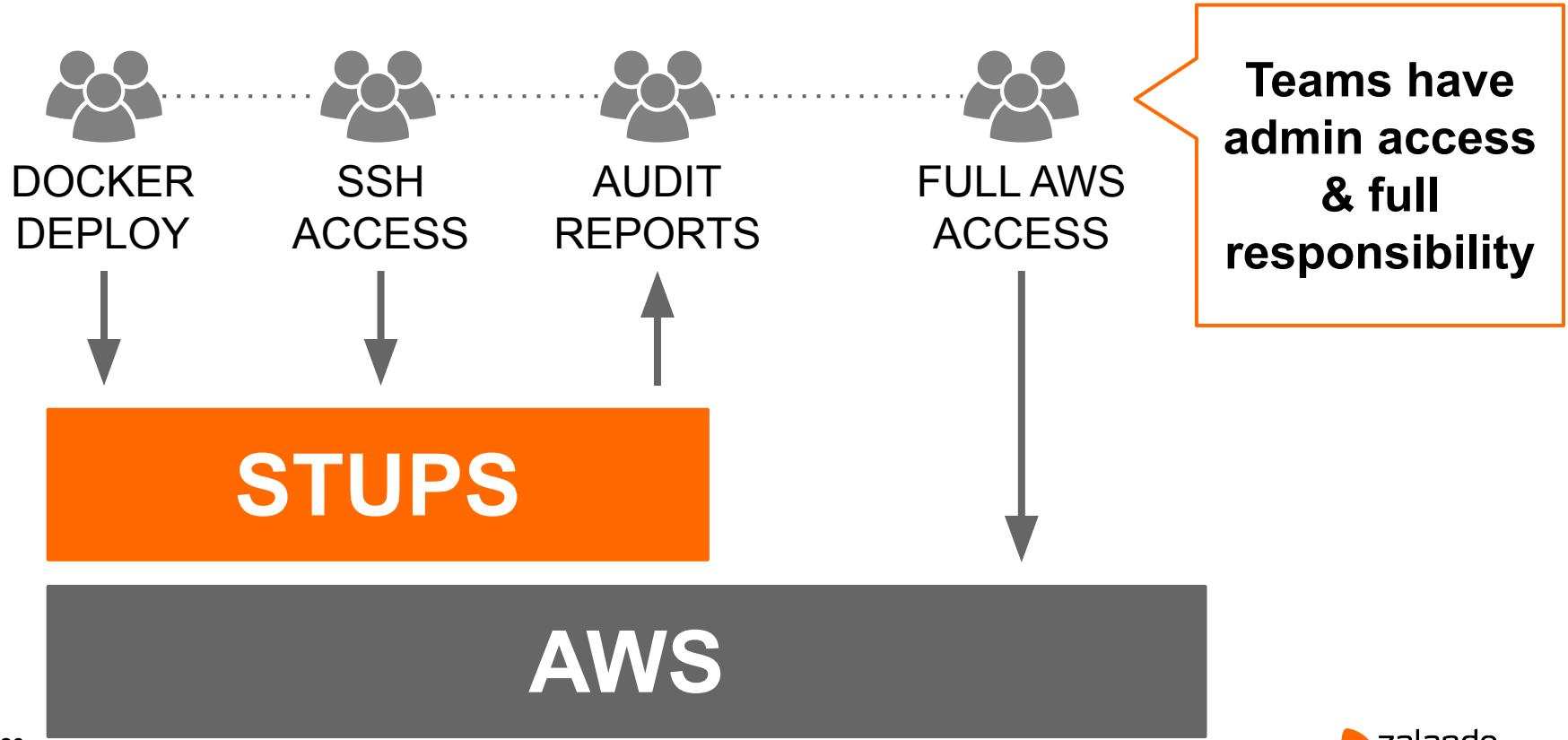
- Recent Deployments**: Table showing four deployment entries.

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

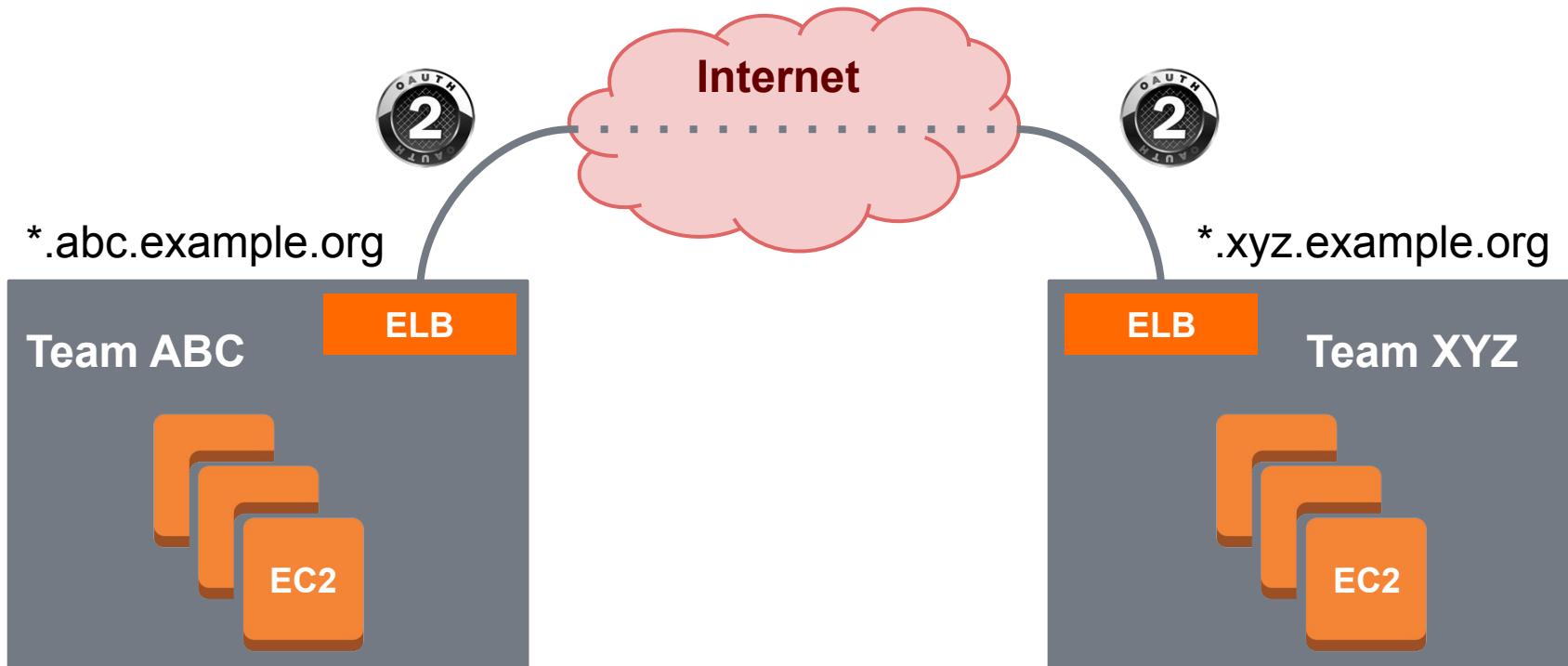
At the bottom, a DEBUG log message is shown:

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

2015: RADICAL AGILITY



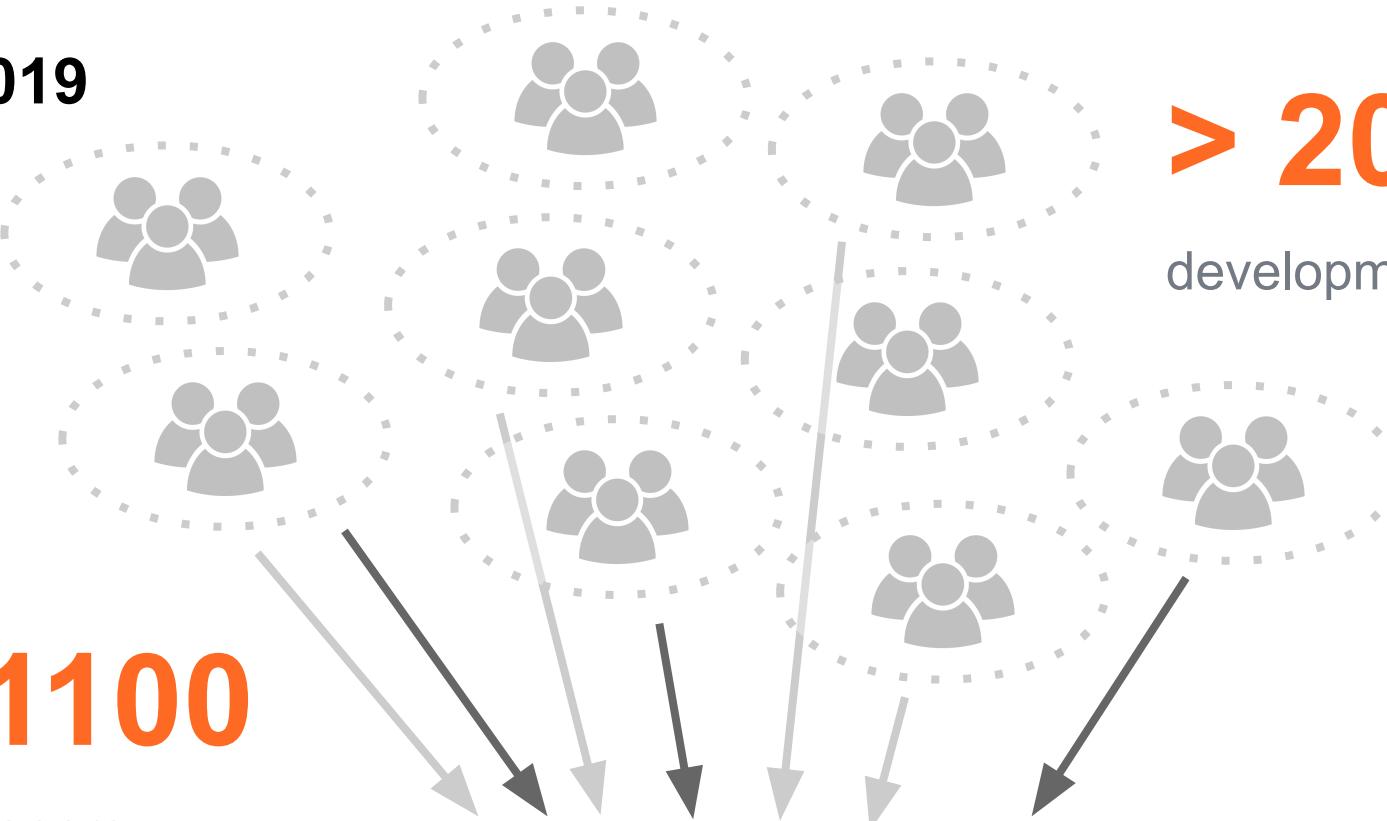
2015: ISOLATED AWS ACCOUNTS



2019

> 1100

developers



> 200

development teams

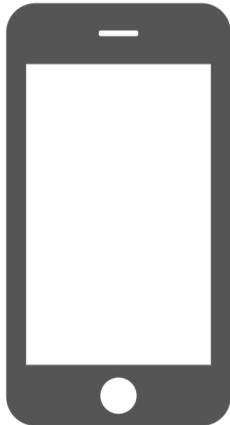
YOU BUILD IT, YOU RUN IT

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

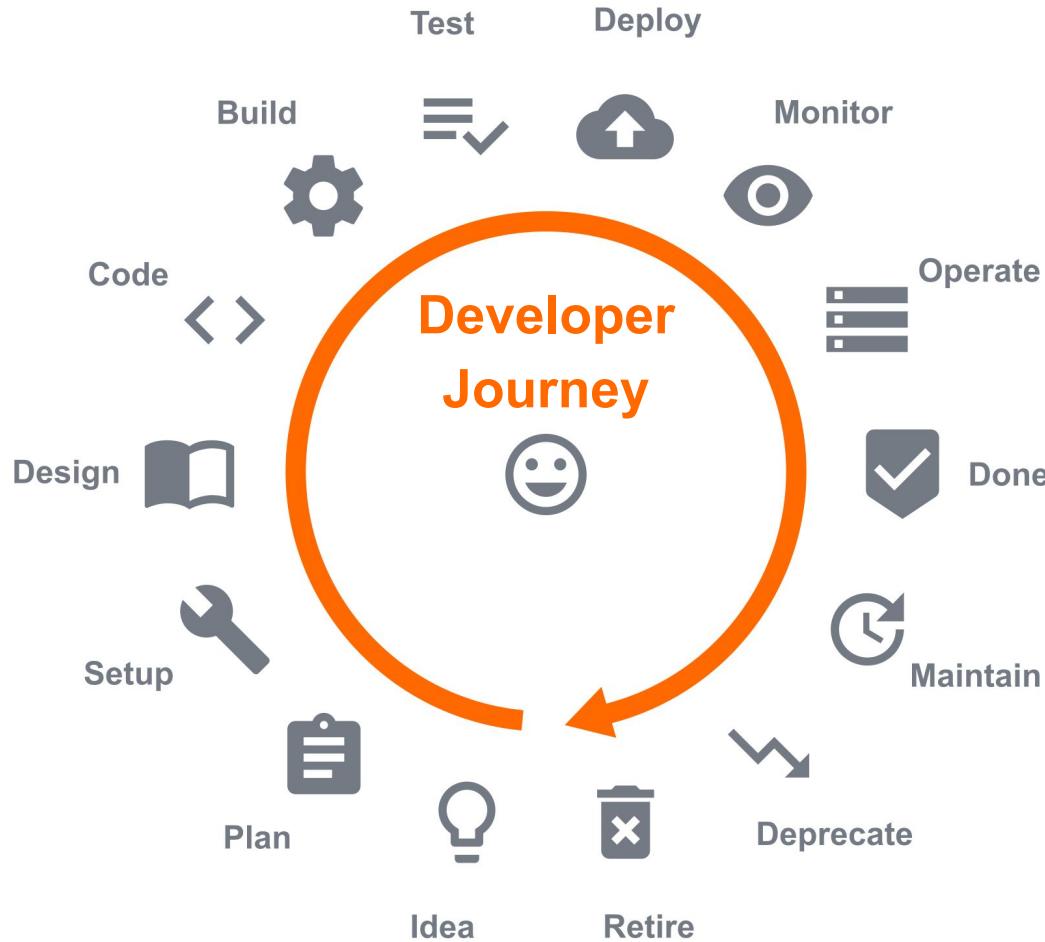
342





DEVELOPER JOURNEY

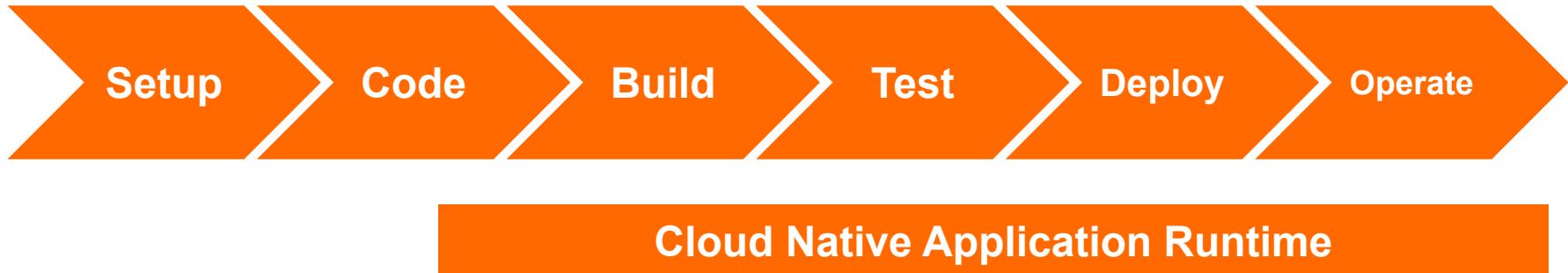
**Consistent story
that models
all aspects of SW dev**



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



DEVELOPER PRODUCTIVITY



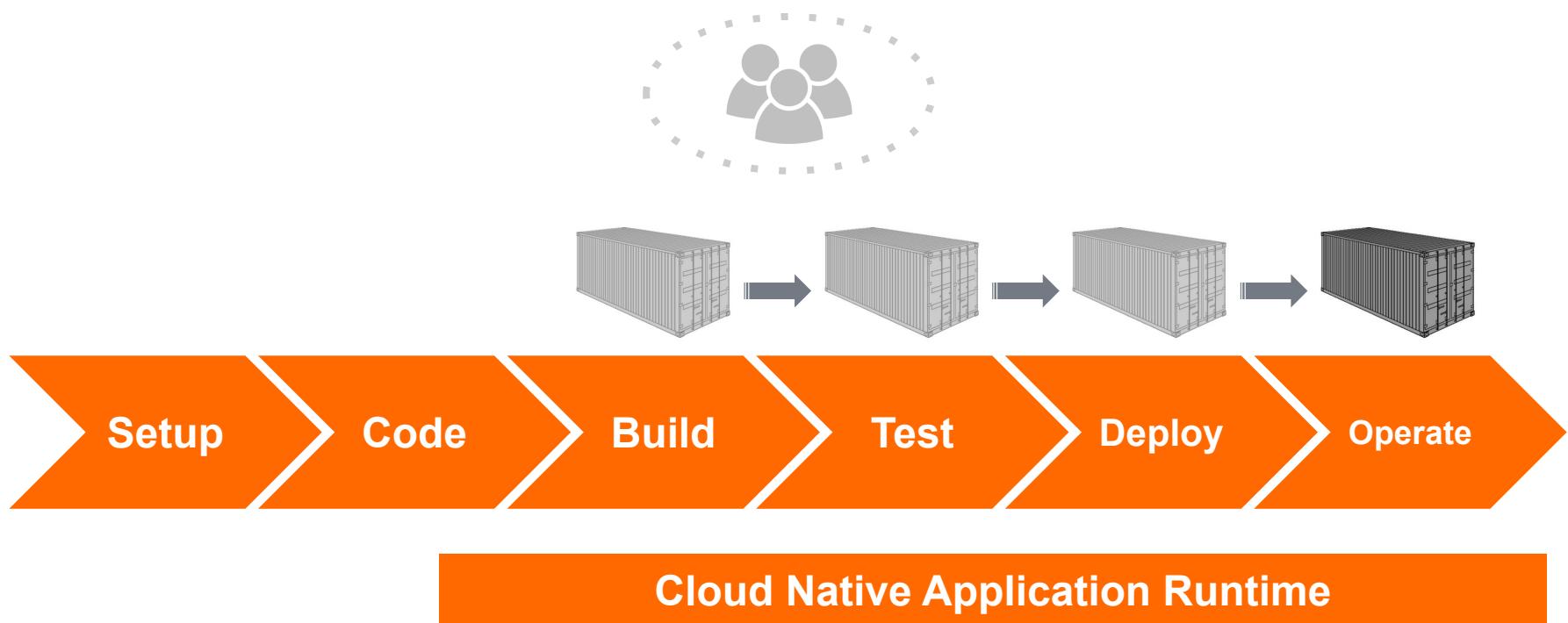
CLOUD NATIVE

*.. 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.*

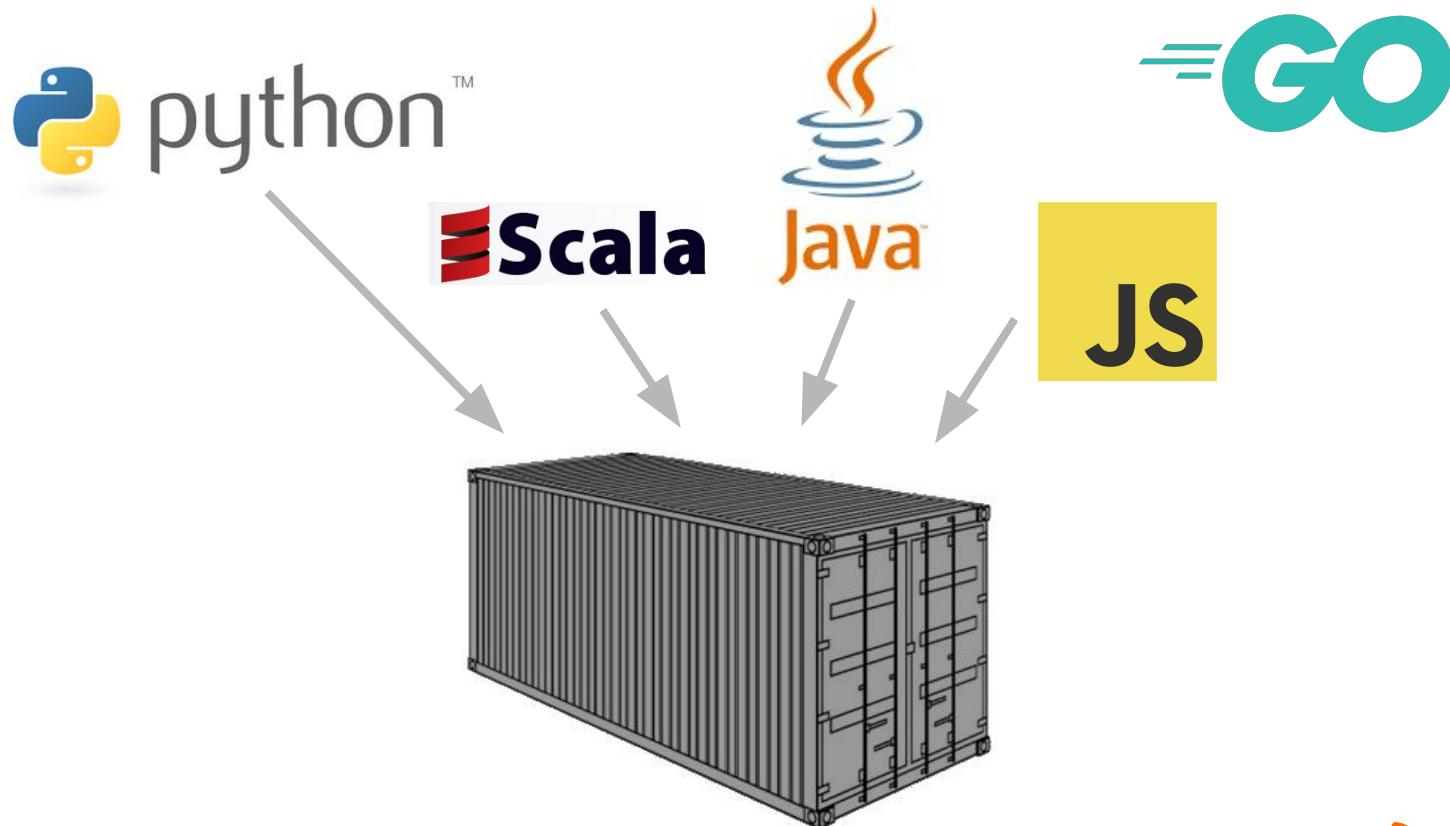
*Cloud native technologies enable software developers to **build great products faster**.*

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

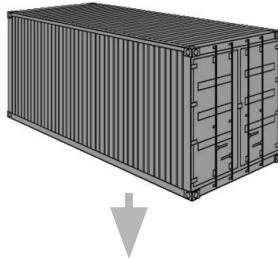
CONTAINERS END-TO-END



CONTAINERS



CONTAINERS



kubernetes



Google Cloud Platform



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.

Welcome to the Developer Console

TOOLS

Deployment

Deployment

Deployment



Test



Deploy



Monitor



Operate



Build



Code



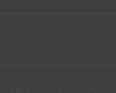
Design



Setup



Plan



Test

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

[Learn more...](#)



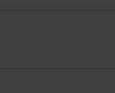
Done



Maintain



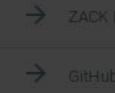
Deprecate



Retire



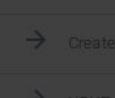
Setup



[→ ZACK Role Management](#)



[→ GitHub Enterprise](#)



[→ Create Git Repository](#)



[→ YOUR TURN](#)



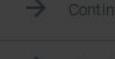
[→ Zappr](#)



[→ Create database cluster](#)



[→ AWS Account Chooser](#)



[→ Continuous Delivery Platform \(CDP\)](#)

Design

[→ RESTful API Guidelines](#)

[→ API Portal](#)

[→ Zally API Linter](#)

[→ Fashion Content Platform \(AI & Data APIs\)](#)

Test

[don't show me again](#) [close](#)

Nexus

[→ Database as a Service](#)

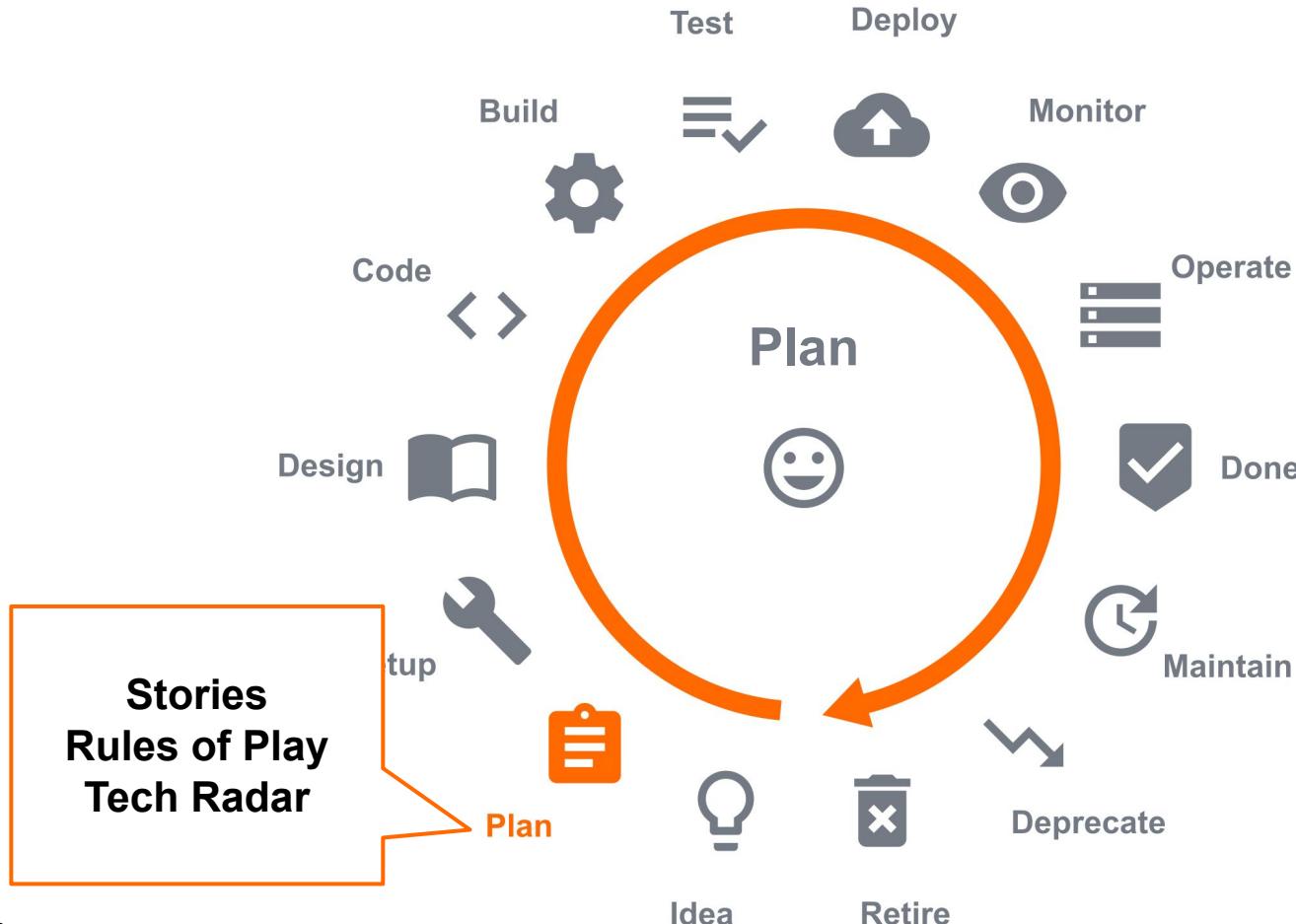
[→ Open Source One-Stop-Shop](#)



Build



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

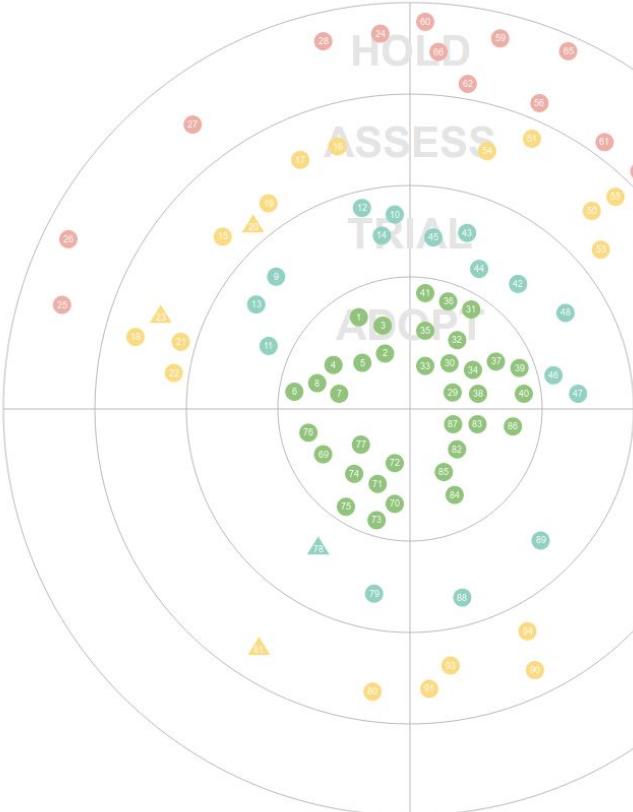
ADOPT	ASSESS
69. Docker	80. AWS Lambda
70. HAProxy	81. OpenTracing
71. Hystrix	
72. Jetty	
73. Kubernetes	
74. Nginx	
75. S3 UPS	
76. Tomcat	
77. ZMON	

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.

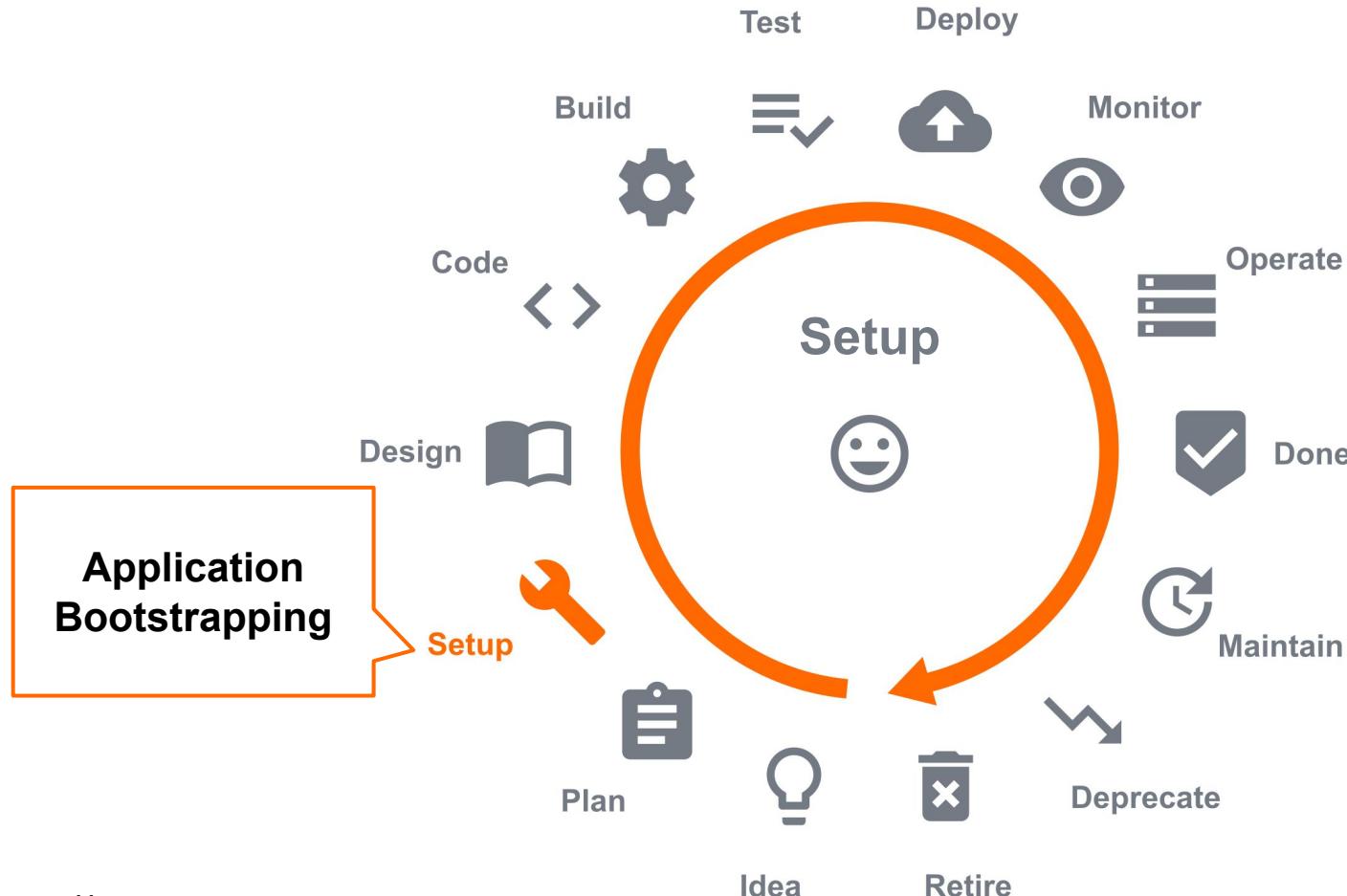
Notable language features:

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

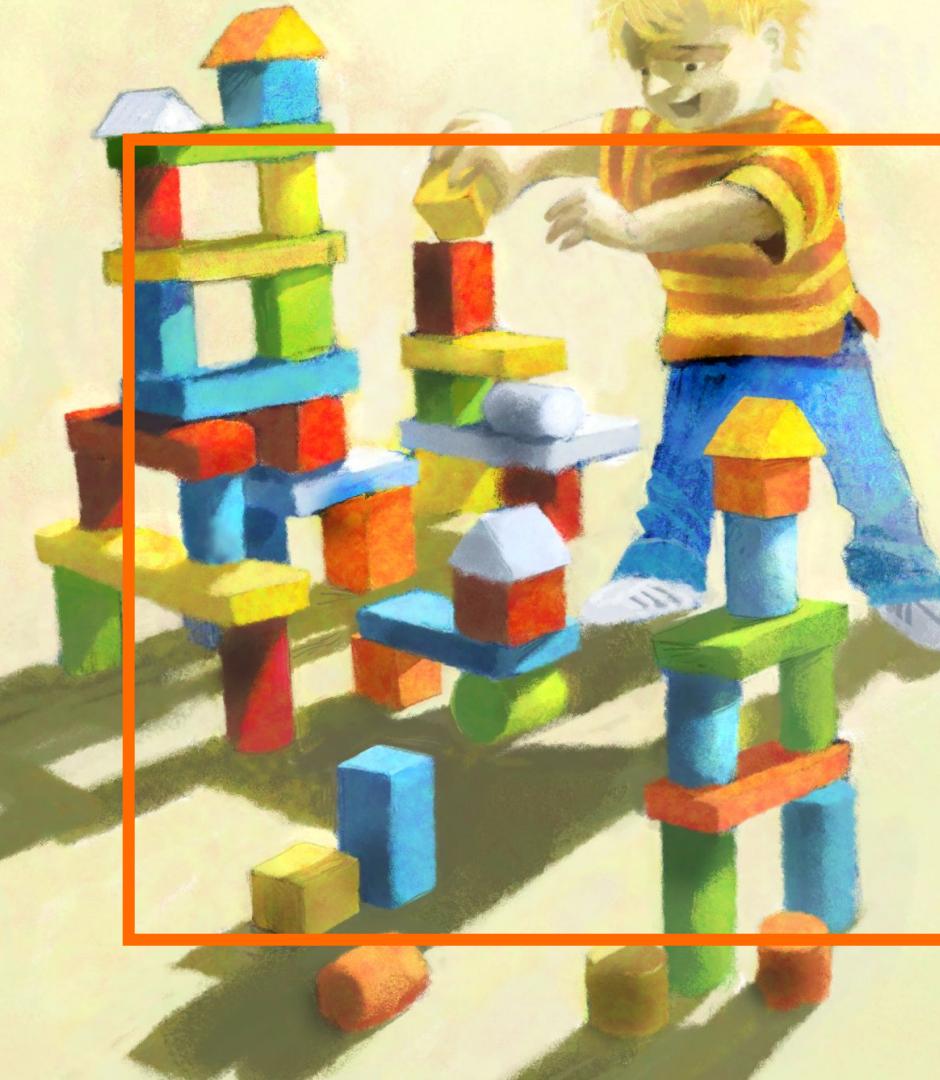
Find file

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		

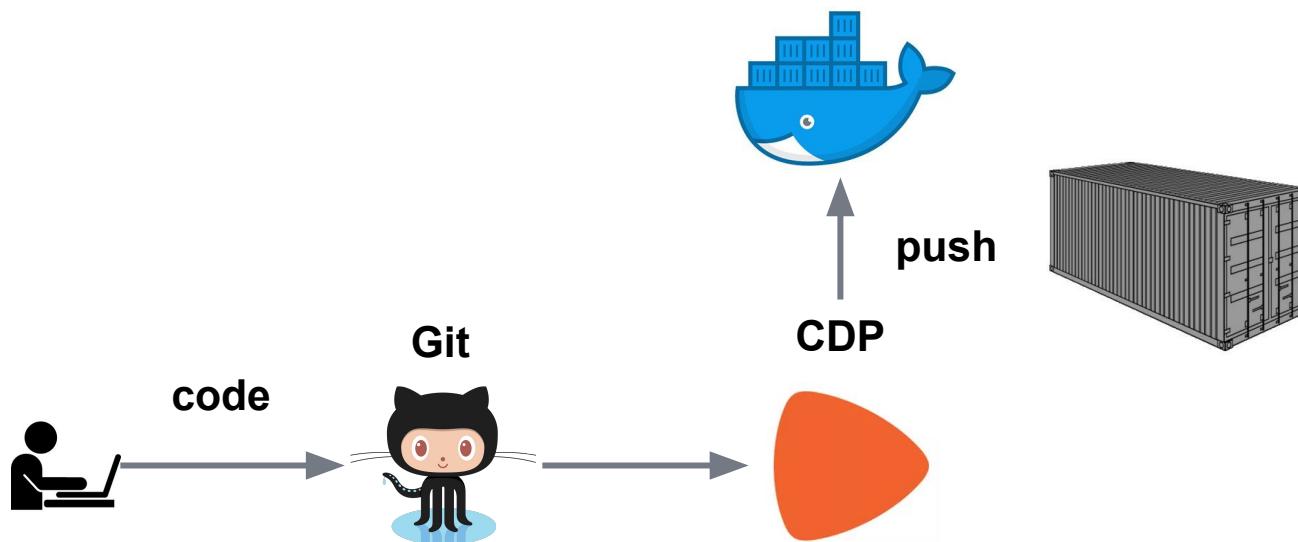
Java - Spring Boot - REST

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

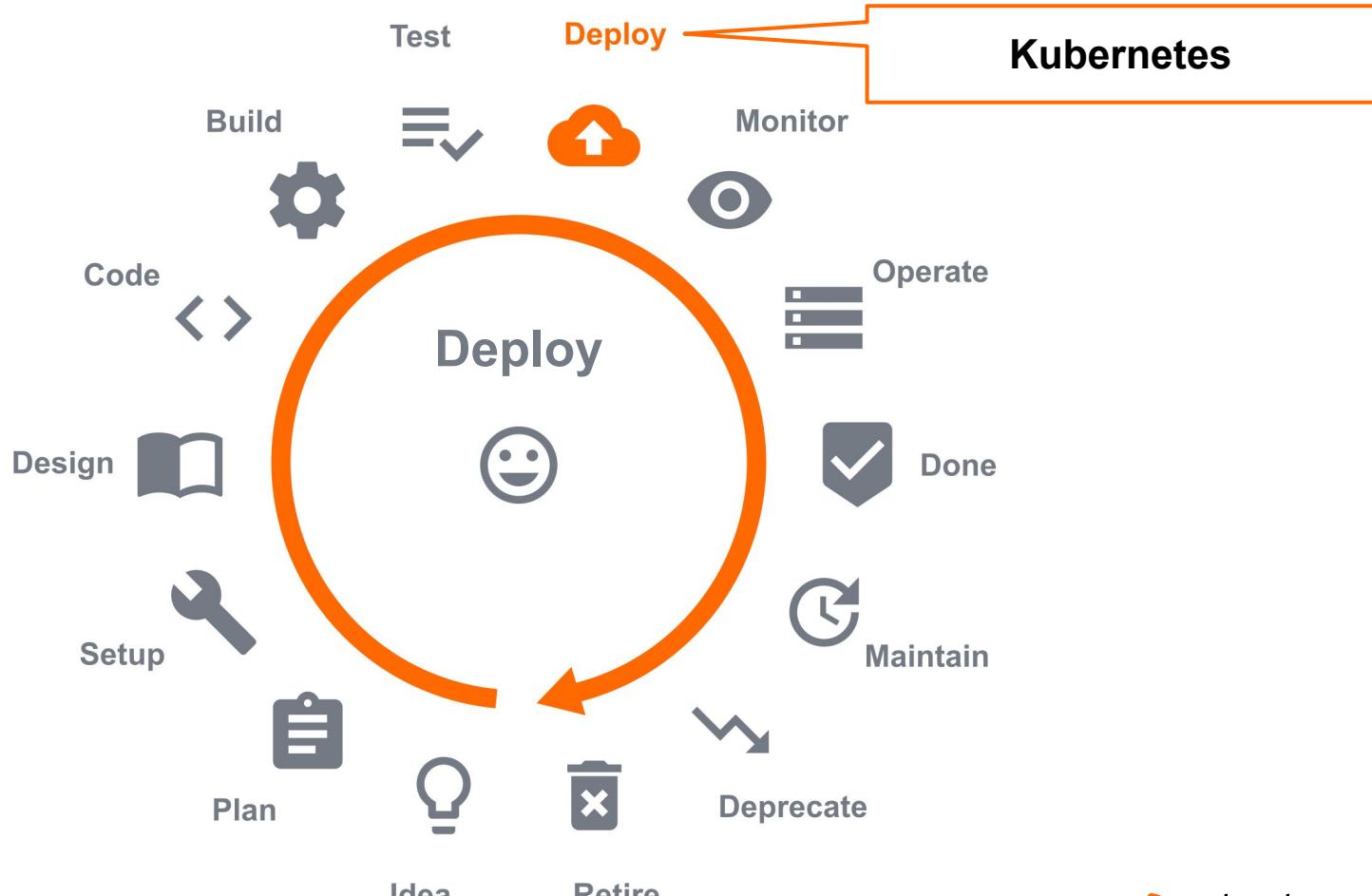
Required

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 interface with the following navigation bar:

- DEPLOYMENT UNITS
- TRACKING-DEPLOY
- MASTER-91

The main area displays deployment units under the TRACKING-DEPLOY tab, with tabs for TEST, STAGING, and PROD environments.

TEST Environment:

- Deployment **merchant-parcels**:
 - ReplicaSet **merchant-parcels-bd76cbc9b**:
 - 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**

STAGING Environment:

- (empty)

PROD Environment:

- (empty)

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

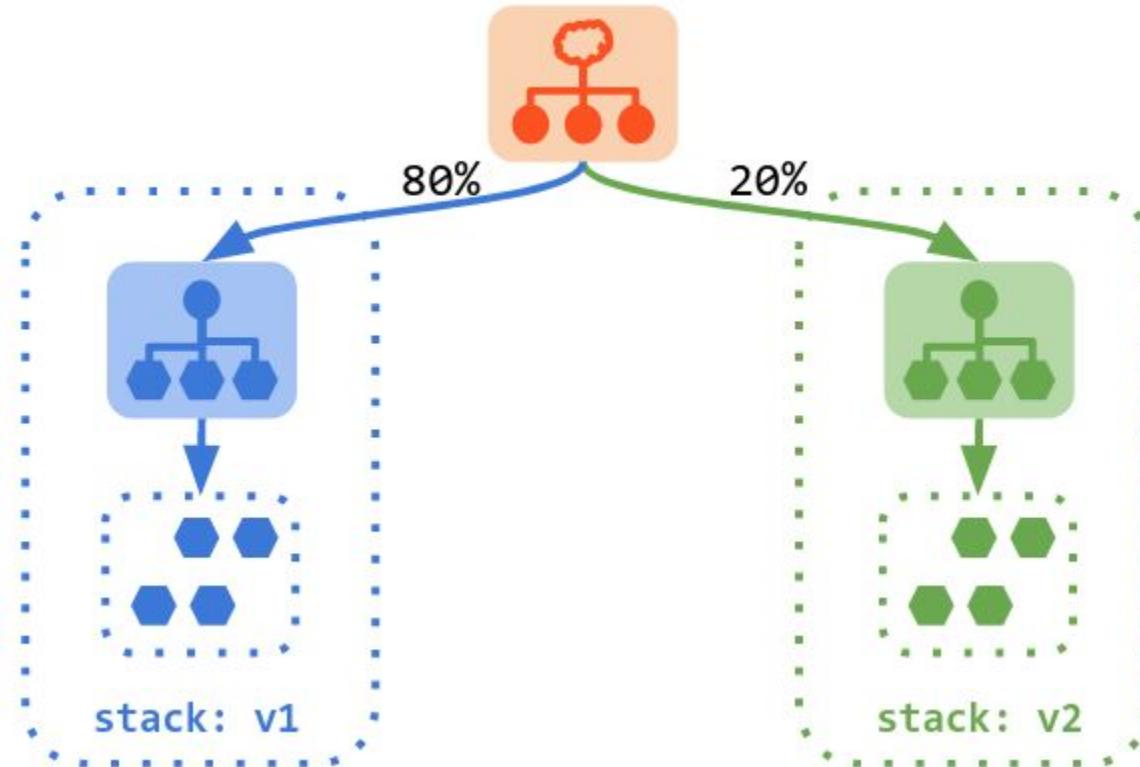
The screenshot shows the Zalando Developer Console interface. At the top, there's a navigation bar with 'Developer Console' on the left, a search bar in the center, and 'Feedback' and 'Support' links on the right. Below the navigation bar, there are tabs for 'DEPLOYMENT UNITS', 'FEED-SERVICE', and 'MASTER-16'. 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 the main content area.
- ACTIONS** section contains two buttons: 'APPROVE' (with a green thumbs-up icon) and 'REJECT' (with a red thumbs-down icon).
- DETAILS** table provides information about the deployment:

Id	n/a
Type	process
Status	PENDING_APPROVAL
Deployment	deploy-prod
Cluster	[redacted]
Started at	n/a
Finished at	n/a
- ERRORS & WARNINGS** section shows 'Error' and 'Warning' counts: 'No Error' and 'No Warnings'.

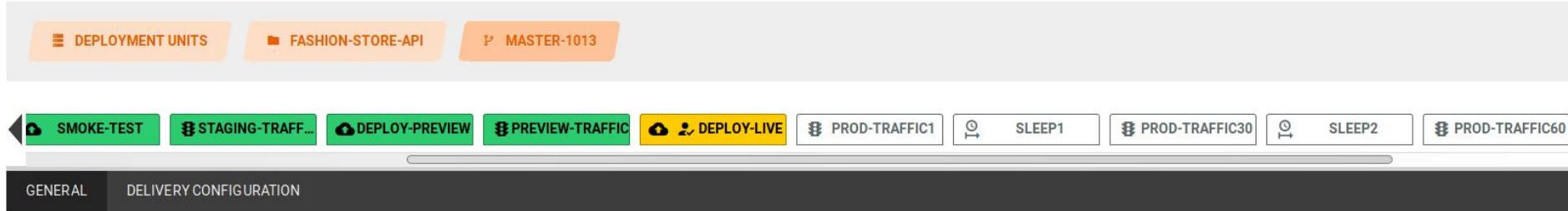
STACKSET: TRAFFIC SWITCHING



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

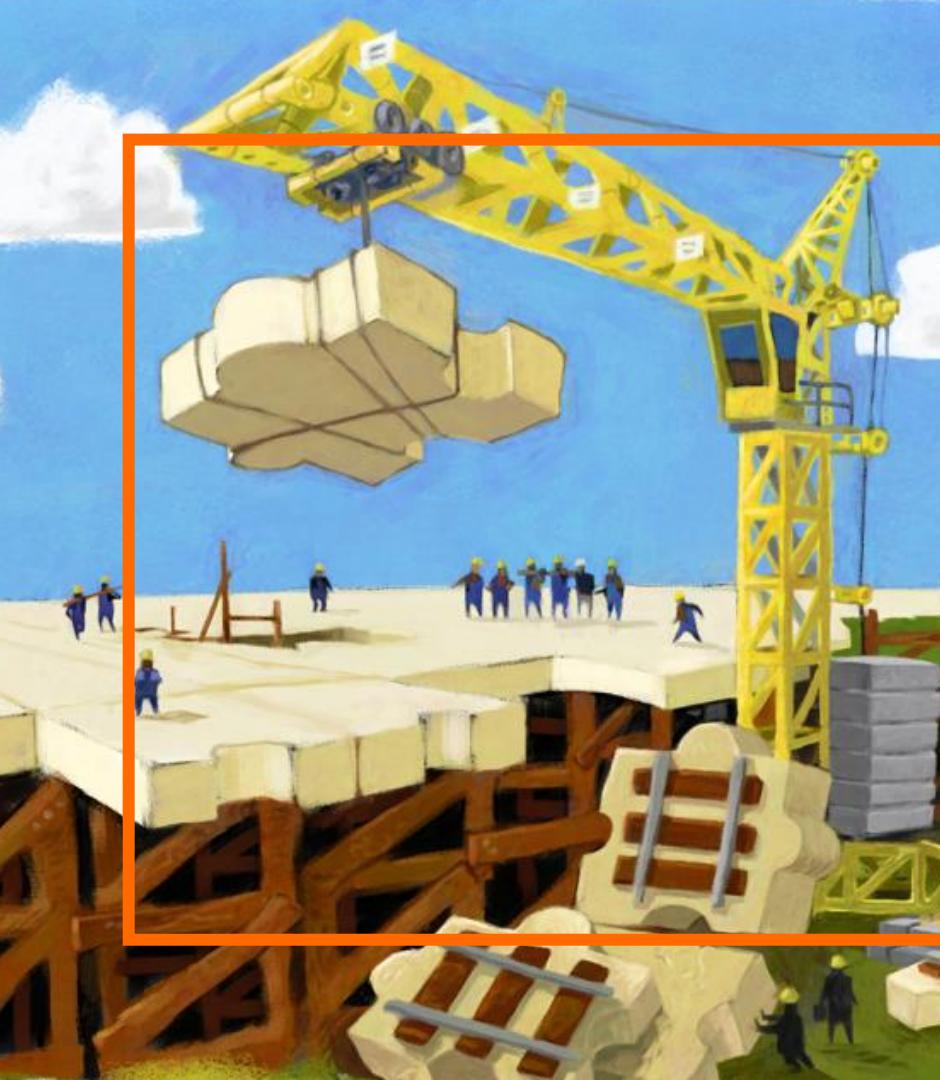
```
zkubectl cluster-access request \
    --emergency -i INC REASON
```



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"

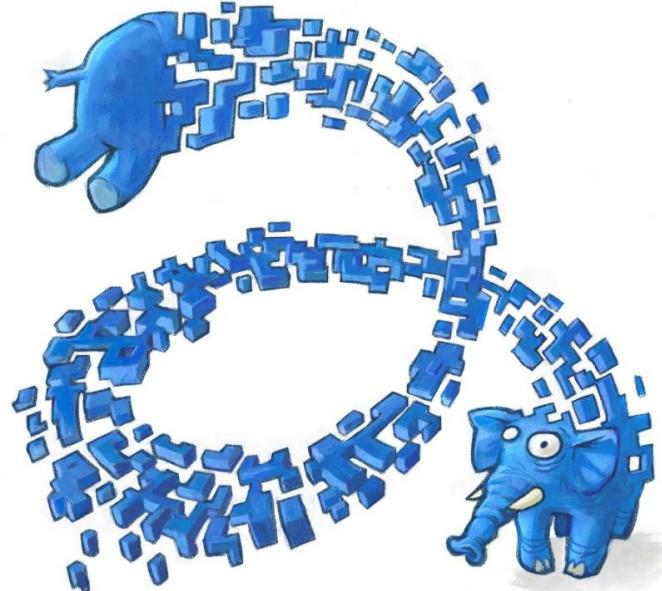
```
└── deploy/apply
    ├── deployment.yaml          # Kubernetes
    ├── cf-iam-role.yaml        # AWS IAM Role
    ├── cf-rds.yaml             # AWS RDS Database
    ├── kube-ingress.yaml
    ├── kube-secret.yaml
    └── kube-service.yaml
└── delivery.yaml            # CI/CD config
```

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



Platform as a Product

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:
nsure
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.

KNOW YOUR AUDIENCE



TALK TO USERS

- Be Prepared.
- Talk to both users and NON users.
- Ask about problems, not solutions.
- Open ended questions.

Script

Introduction

- Thanks for joining, the purpose of this interview is to understand how you are using our current CDP/Kubernetes offering and understand your pain points in order for us to build our product roadmap going forward.
- Do you mind using this voice recorder? It will help us get back in case we missed something through the notes.

Person, team info

- First tell me about yourself, your team, and what you are working on.

Migration History

- What's your current tech stack?
- What are you using CDP/Kubernetes for?
- What did you migrate from?
- What was the process like? From idea to production.

Current Experience, and the Future

- How would you describe your current experience?
- Do you have any past experience with great developer experience (e.g. using GKE/OpenShift in a previous company) and how did it look like?
- What other services do you want to move to CDP/Kubernetes?
- What are the blockers to doing so?
- How do you sort those blockers by importance?

Documentation, Training, and Support

- Documentation
 - What are the things you couldn't find in documentation?
 - What do you wish to see in the documentation?
- Training
 - What CDP/Kubernetes topics do you want to be trained on?
 - What are the reasons?

IDENTIFY COMMON PROBLEMS

"Documentation is hard to find"

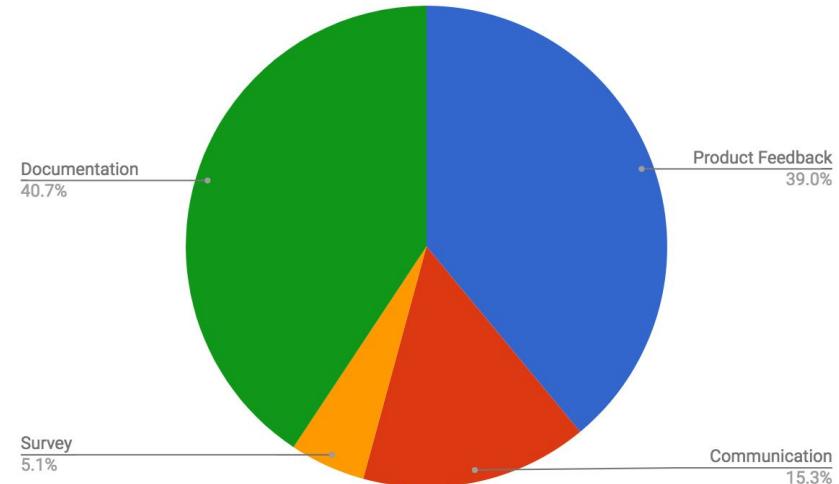
"Documentation is not comprehensive enough"

"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."*



TRANSPARENTLY COMMUNICATE WHAT YOU ARE SOLVING

 me (Mostafa Nageeb [change](#)) 23/04/2018

Other recipients: [REDACTED]

Hello Zalandos,

In order to bring more transparency to what we are doing, we will start sharing our products roadmaps in Developer Productivity. Please note this is the first time we are doing this, so your feedback is important.

Few guidelines

- Most of those are based on insights from the user research interviews we did earlier.
- They are not sorted in order of priorities.
- **If certain topic interests you, please upvote it on GitHub by adding a thumbs up  reaction to give us a signal of its importance.**

Cloud Native Application Runtime

Kubernetes

- [Cluster Update Strategy](#)
- [Kubernetes 1.10](#)
- [Required manual-access for deleting resources in Kubernetes clusters](#)
- [Kubernetes node pools](#)
- [Allow Custom metrics for Kubernetes Horizontal Pod Autoscaling](#)
- [Enable Infrastructure Teams to Deploy to Kubernetes Clusters](#)
- [Provide out of the box monitoring for applications](#)
- [Make Manual/Emergency access experience seamless](#)
- [Prevent write access to mint buckets in test accounts \(Kubernetes test clusters\)](#)

LET THEM INFLUENCE YOUR PLANS

Uploading things to S3 from CDP builds #63

 Closed

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

[redacted] commented on Feb 15, 2018 · edited

Member + ...

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

[redacted]

 38  1

ENGAGE CUSTOMERS EARLY ON

We are working on speeding up builds by providing basic overlays for the most used languages/frameworks so you don't have to download the internet every time you are building your app.

This is the [approach and the documentation](#) (not live yet), please add your comments to guide us in the right direction.

SUPPORT IS A FEATURE



Welcome to the Developer Console

You can now find consolidated documentation covering the whole [The Developer's Manual](#)

Idea

- How to write a Narrative
- Template for Narratives

Setup

- ZACK Role Management
- GitHub Enterprise
- Create Git Repository
- YOUR TURN
- Zappr
- Create database cluster

Plan

- Tech Jira
- GitHub Enterprise
- Rules of Life
- Tech Radar

Design

- API Portfolios
- API Guidelines
- API Lint
- API Reviews

Community Channels

- Continuous Delivery, CD Users on Google Chat
- AWS Users, AWS Users on Google Chat
- Kubernetes Users, Kubernetes Users on Google Chat
- Tracing Users (OpenTracing, LightStep) on Google Chat
- Monitoring Users (ZMON, SLR, Check_MK, Sentry) on Google Chat
- Logging Users (Scalyr) on Google Chat
- API Management, API Guild on Google Chat
- Continuous Delivery, AWS/STUPS, Kubernetes Support
- Visibility Support (ZMON, Scalyr, LightStep, Check_MK, SLR Tool)
Please fill out a [Support Request here](#).
- IAM, OAuth Support
- PostgreSQL, Cassandra #Elephant (PostgreSQL users) on Google Chat
- SQL Server [REDACTED], #MSSQL Databases on Google Chat
- AWS Enterprise Support
Open case in [AWS Console](#) escalate [REDACTED]
- Company Laptop Helpdesk, [REDACTED]
- 24x7 Incidents [REDACTED] 24x7 Incident Google Chat
- Datacenters, OpenVPN, DNS & Certificates [REDACTED] #ServerInfrastructure on Google Chat
- Jira [REDACTED]

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

COMMUNICATION

Communication to Stakeholders of Platform Infrastructure

Communicate well to keep everyone in the loop but not to spam people's inboxes.

Purpose

The purpose of this document is to show how effective communication can help us:

- engage effectively with our stakeholders
- help stakeholders to digest the many notifications and updates being sent
- demonstrate the progress and success of our work
- ensure stakeholders understand what we do
- change behaviour and perceptions where necessary

It also serves as an overview of the recurring announcements and communication channels and as a guide when establishing new formats and announcements.

This document focuses on technical and process aspects, see the [Support Channels Code of Conduct](#) for guidance regarding behavior and tone of voice.

Further on it is meant to request approval to implement and follow the proposals within the Platform Infrastructure pillar of Digital Foundation.

Problem Statement

It's not always clear how to best address whom and for which announcements. If we send everything to everyone important announcements often fall through the cracks or get lost in endless lists of mails in our customers' inboxes or in a folder with filtered messages. Furthermore, the existing tech@zalando.de Google Group is less targeted after SpeeDO, i.e. it's unclear who is really behind tech@zalando.de and it includes many different roles (product, engineers, producers, ...), but often we only want to address users of our services (mostly [developers](#)/engineers). In addition to that, reply-all is widely used within the company and leads to in-depth discussions with a too broad audience.

Guidelines

- Target announcements
- Use the right tags
- Timing

NEWSLETTER

"You can now.."

- *You can now upload your Scala code coverage report to SonarQube*

"This enables you to.."

- *This enables you to browse your code quality results and track it over time*

“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

EMPOWER YOUR TEAM

User Interviews Today in BM1



Mostafa Nageeb <mostafa.nageeb...> Tue, 12 Feb, 12:06

to Developer ▾



Hi Team,

Sorry for the short notice. We have two interviews scheduled with developers today about the application centricity topics. The two interviews are back to back from 1-2, and 2-3PM in BM1. We have spots for 2-3 engineers to join (First come first served). If you are interested please let me know.

Here you can find the [interview questions and the candidates](#).

--

- [Mostafa](#)

WITH GREATER POWER COMES GREATER RESPONSIBILITY



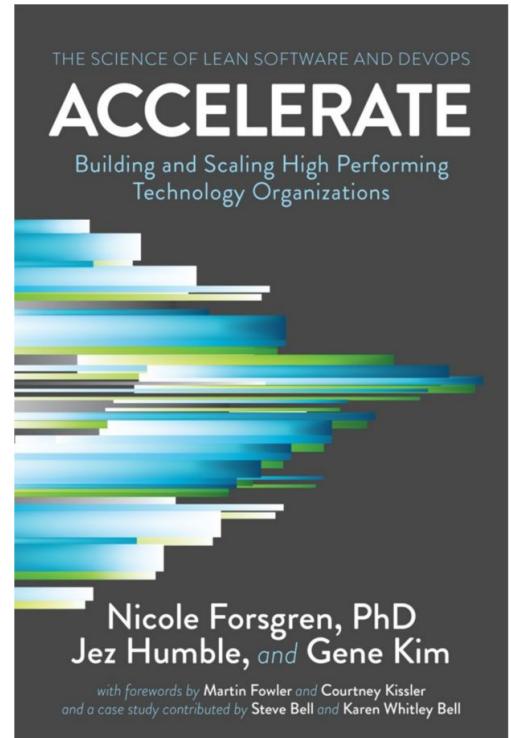
Torsten .. Oma 59

Zooprof Stork Re: [IMPORTANT] Enforcing trusted Docker images on AWS STUPS accounts

We are going to pause on the current approach to make sure we understand your feedback and that we have involved all the right people in finding the best solution with the lowest impact.

DELIVERY PERFORMANCE METRICS

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



DELIVERY PERFORMANCE METRICS

- Lead Time
- Release Frequency
- Time to Restore Service
- Change Fail Rate
- Commit to Prod
- Deploys/week/dev
- MTRS from incidents
- N/A

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

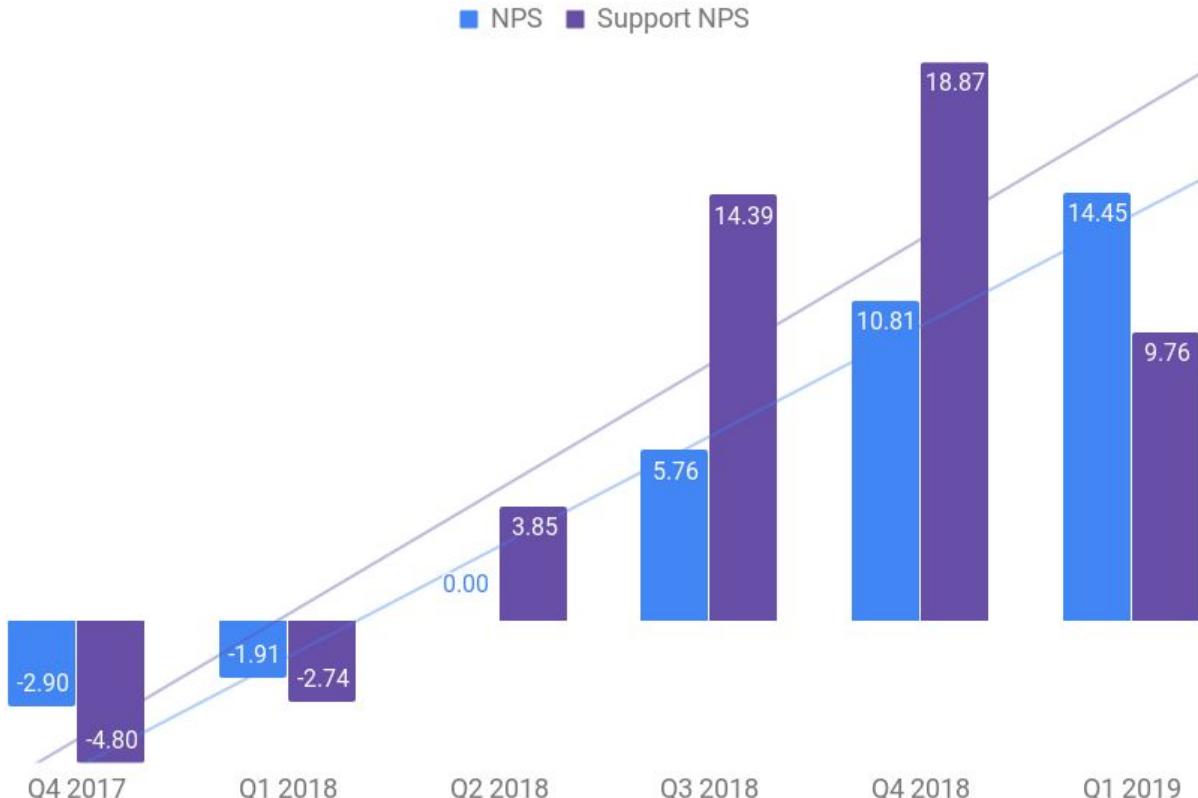


Extremely
Satisfied

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

Your answer

DEVELOPER SATISFACTION



INSIGHTS THAT GUIDE THE PRODUCT

“Kubernetes/CDP deploys are too slow - ours takes over 10 minutes, mainly due to having to download SBT dependencies every time.”

INSIGHTS THAT GUIDE THE PRODUCT

“CDP should somehow cache builds or something like that. The current approach forces everyone to re-invent the cache wheel for their own projects - or face a crazy slow build.”

[Announcement] Caching for CDP builds

Inbox ×



Thu, 7 Feb, 09:17



to Continuous, Kubernetes, developers ▾

Hi everyone,

Have you ever got tired waiting for your build to download the same dependencies over and over again, or to compile the same code every single time?

You don't have to wait anymore, since CDP now [supports caching for builds](#). Caching allows you to reuse dependencies/libraries, and intermediate compilation artifacts, from protected branch build, between pipelines.

To use it you just have to specify a cache: section with the paths you want to cache:

TESTIMONIALS

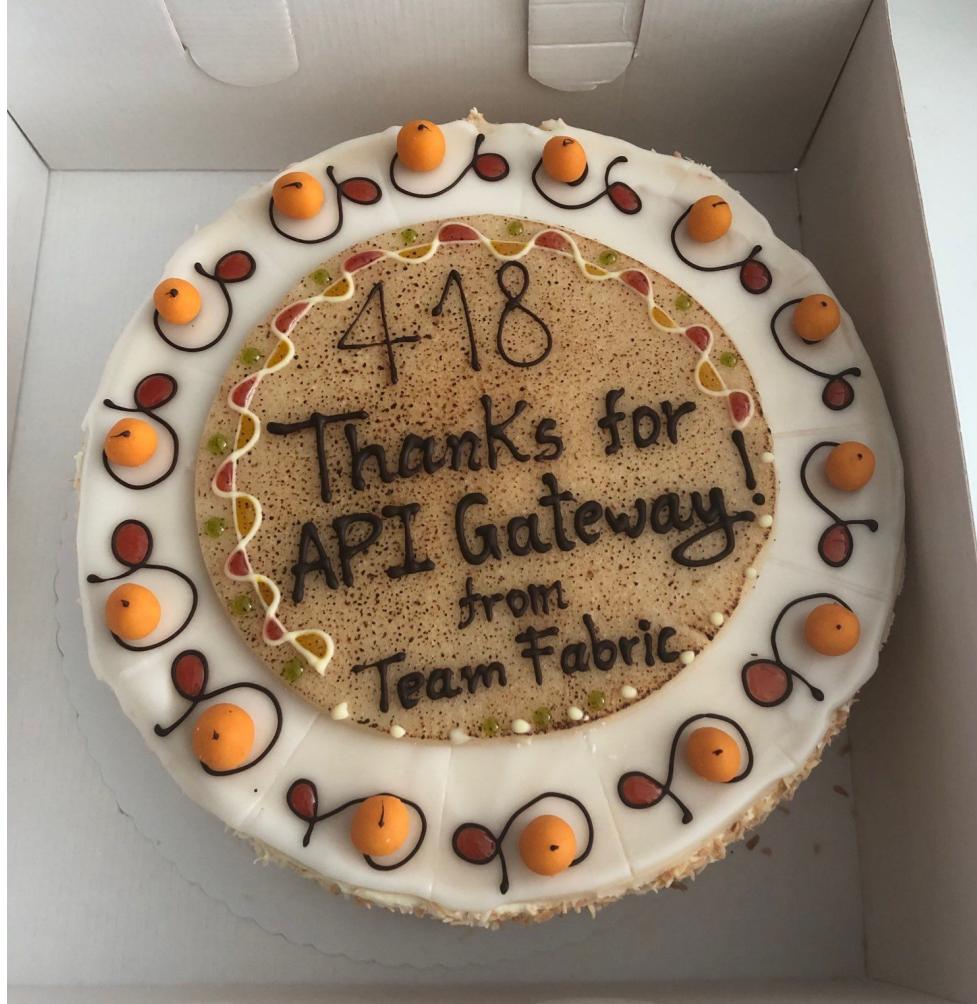
*“So, thank you, Team Automata, for listening to our community, taking our upvotes in consideration when developing new solutions and building every day
'the first CI that doesn't suck'.”*

- a user, October 2018

TESTIMONIALS

*"Thank you very much for improving the color scheme of the UI. **It really helps me with my color blindness.** It used to be hard to distinguish between statuses previously."*

- a user, February 2019



Wrap Up

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

- ... 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

... 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

- ... 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

- ... 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

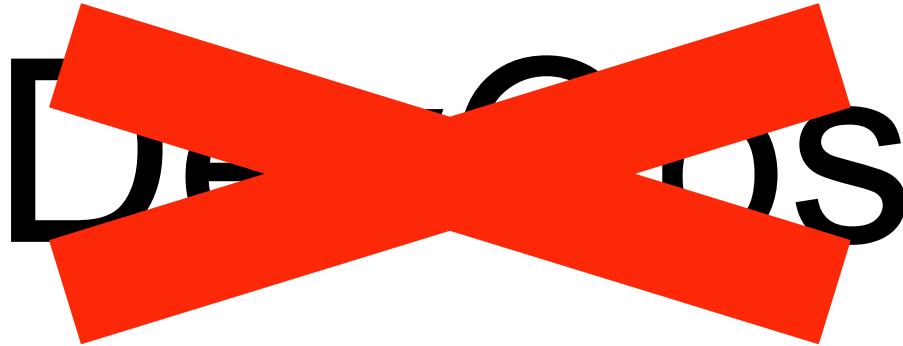
... a result

DEVOPS IS

- ... 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



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

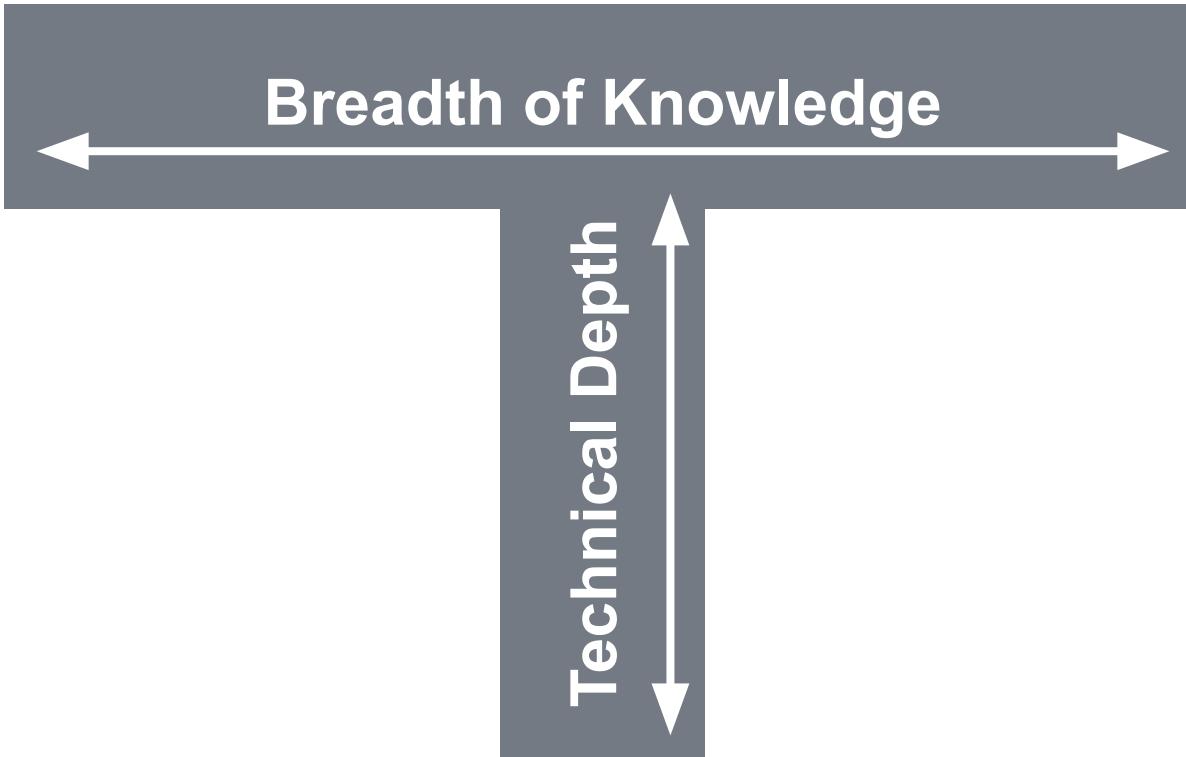
Melexis - Sofia, Bulgaria



python java vmware devops bash sysadmin

T-SHAPED ENGINEER

"Generalizing specialist"



DevOps Engineer

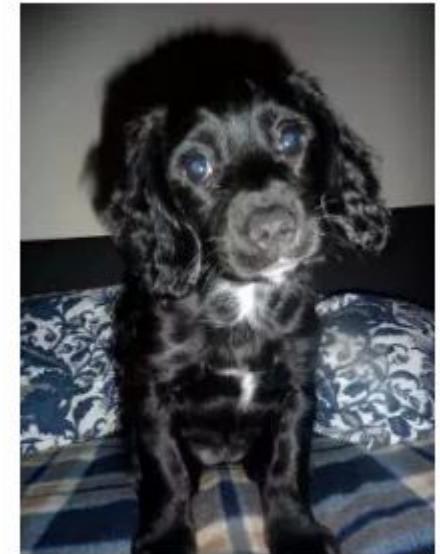


**Software Engineer /
Software Developer
(T-Shaped)**

ON THE DEVOPS JOB TITLE

"Everyone's a devops engineer these days. I'm a devops engineer, my wife's a devops engineer, even my dog's a devops engineer"

- James Betteley, 2014



My dog, the DevOps Engineer



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 os 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

[@try_except_](https://twitter.com/try_except_)

MOSTAFA NAGEEB

[@MostafaNageeb](https://twitter.com/MostafaNageeb)

Illustrations by [@01k](https://twitter.com/01k)

