

A graphic element consisting of a central orange circle with several yellow circles of varying sizes attached to it by thin lines, resembling a sun or a molecular structure.

# sunrise

The starting point for Developers at Zalando

# ABOUT ME

Levi Ferreira

Head of ML Platform & Developer Productivity @ Zalando

- Former Engineering Manager for Sunrise @ Zalando
- Ex Shopify, Ex Rocket Internet

Linkedin: [linkedin.com/in/leviferreira/](https://linkedin.com/in/leviferreira/)

A photograph of a woman with dark hair, smiling and dancing joyfully. She is wearing a tan double-breasted jacket over a white dress. A small teal handbag hangs from her neck. The background shows a stone building with a decorative wrought-iron gate, and bright sunlight creates a rainbow-like lens flare effect.

zalando

Zalando.  
The Starting Point  
for Fashion. 



We take the lead  
in European fashion.

14.7 bn  
Euro GMV

>50m  
Active Customers

>5,800  
Brands





# The power of platform

 Partner Program

 Fashion Store

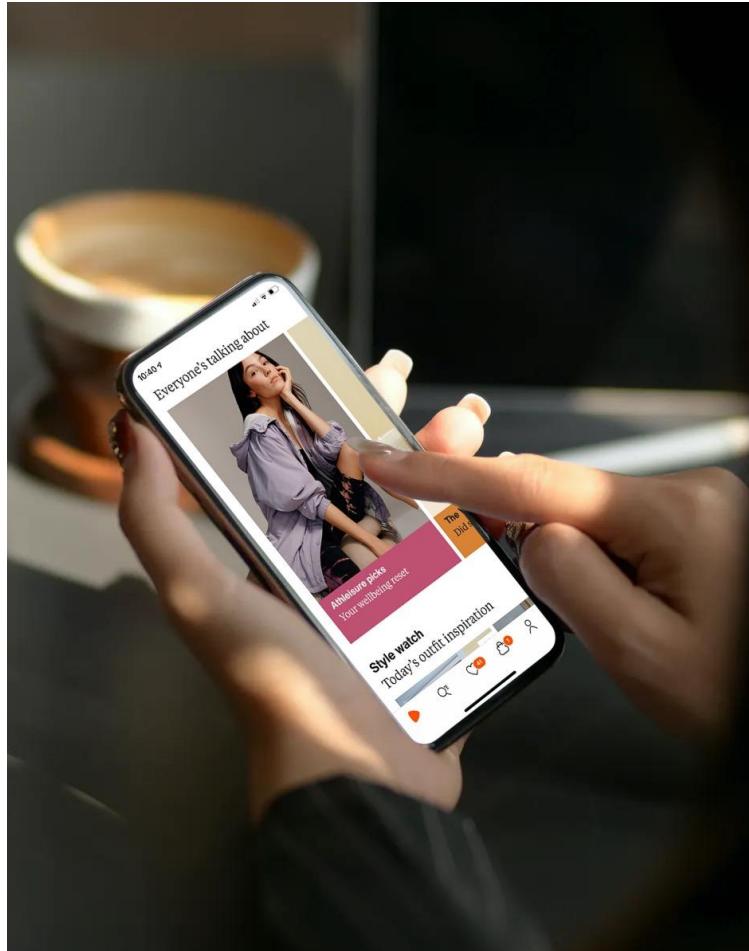
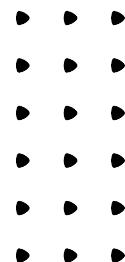
 Marketing Services

 Lounge

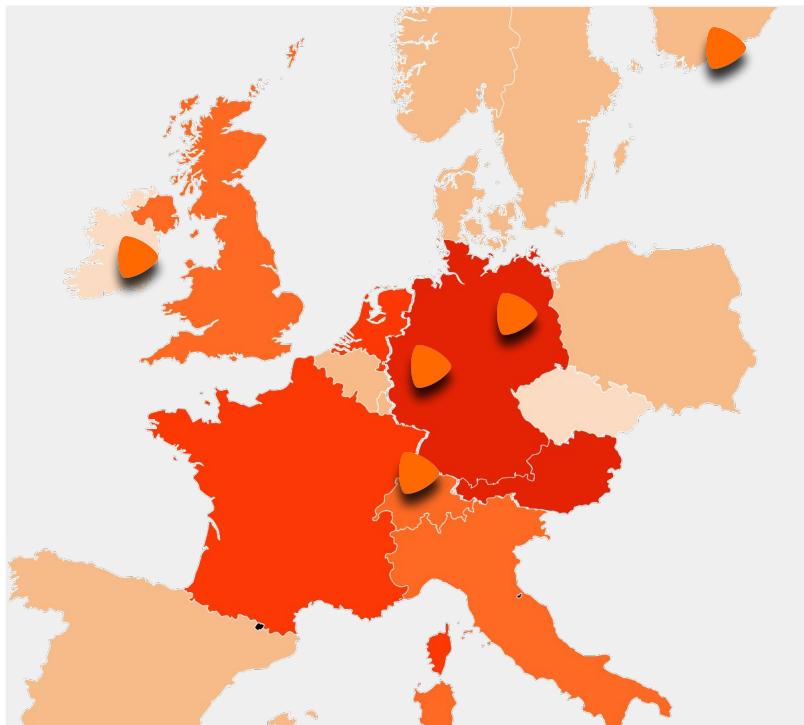
 Fulfillment Solutions

 Outlets

 Connected Retail



# SOFTWARE PRODUCT DEVELOPMENT AT ZALANDO



**5 tech  
hubs**

**> 2,000  
employees**

In Tech

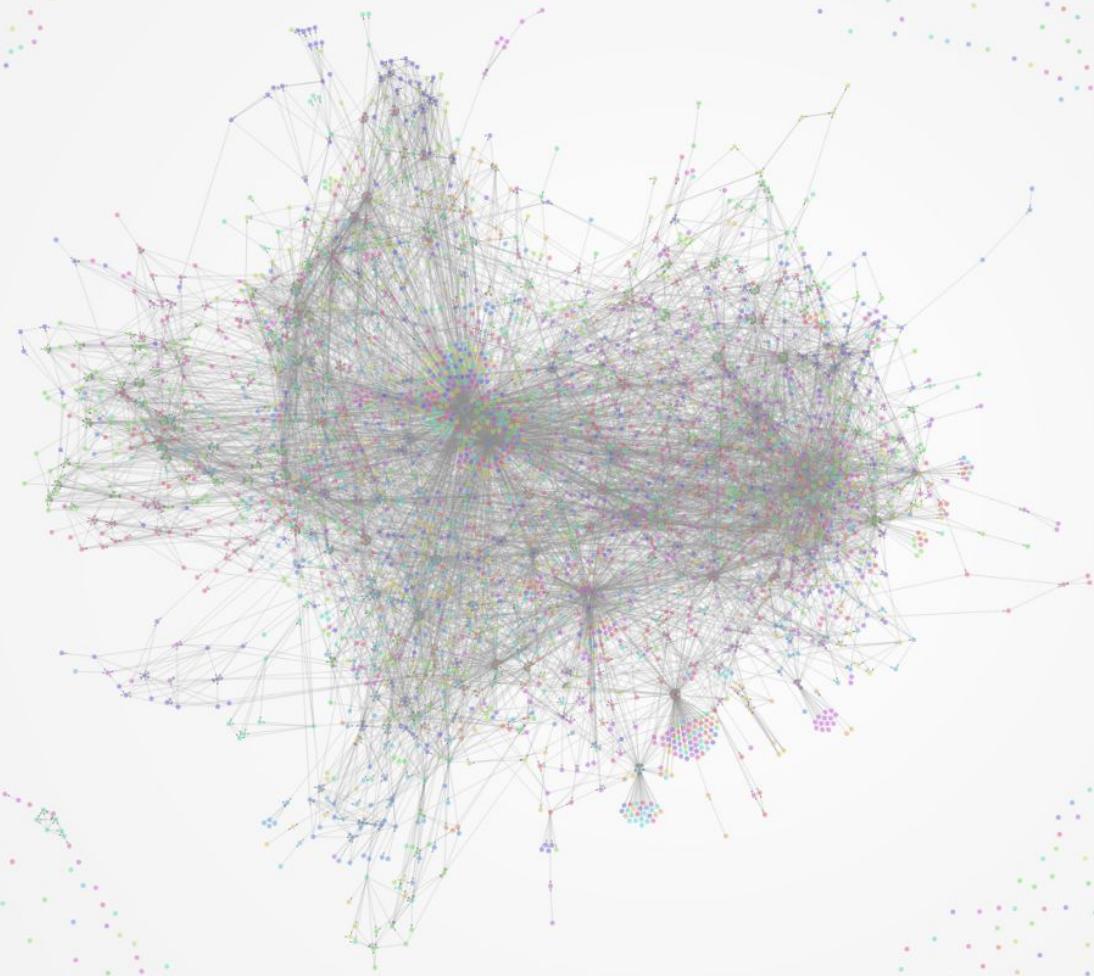
From **> 100**  
Nations

Across  
Europe

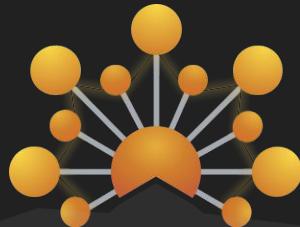
**> 220**

Cross-functional,  
Agile Delivery  
Teams

> 4000 Services



# So what exactly is *Sunrise*?



# History: Developer Console

Developer Console

Search

Welcome to the Developer Console

SOFTWARE DEVELOPMENT | DATA SCIENCE

Idea

- How to write a Narrative
- Template for Narratives

Plan

- Jira
- GitHub Enterprise
- Rules of Play
- Choose tech stack - Tech Radar
- Find experts and people
- Find teams

Setup

- ZACK Role Management
- GitHub Enterprise
- Create Git Repository
- Setup Git Approvals - Zappr
- Create Applications - YOUR TURN
- Application Reviews
- Create database cluster
- AWS Account Chooser

Design

- API Portal
- API Guidelines
- API Linter
- API Review
- Service Guidelines
- Designing for Resilience

Code

- Document Knowledge - Confluence
- Host documentation - zdocs
- Nexus
- Database as a Service
- Data Processing Platform (Databricks)

Test

- How to test with CDP

Build

- Continuous Delivery Platform (CDP)
- CloudLobster Jenkins

Deploy

TV Link

# Technology built in-house at Zalando

Mosaic: <https://www.mosaic9.org/>

# Why move away from existing Developer Console ?

- Onboarding experience was difficult:  
Learning Curve was too high for other  
teams to contribute
  - Not easily composable
  - Not possible to share components
  - Generated a fragment internal  
developer tooling product landscape
- 
- + Easy to onboard new teams to  
provide Plugins
  - + Easily composable
  - + Shareable components
  - + Standardization of Software patterns,  
Architecture + Design

# *Sunrise is the daily starting point for Builders*

Software & Data Engineers & Managers  
Applied & Data Scientists  
Project, Program, & Product Managers & designers

😊 **Builder Happiness**



🚀 **Builder Productivity**

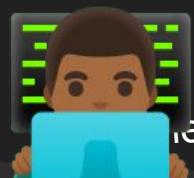


🔍 Discoverability 🔎

🙌 Collaboration 🙌



💼 Usability 💼



Innervated  
Experience

# ***Sunrise*** is the daily starting point for ***Builders***

***Sunrise*** centralizes all

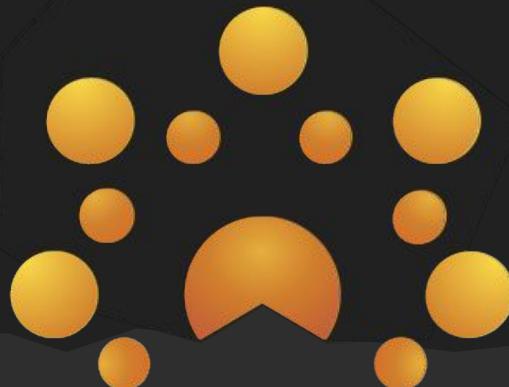
- Tooling
- Information
- & access to Resources

which are necessary for building & operating digital products.

Presenting this content in a

- Consistent
- Accessible
- and Beautiful way

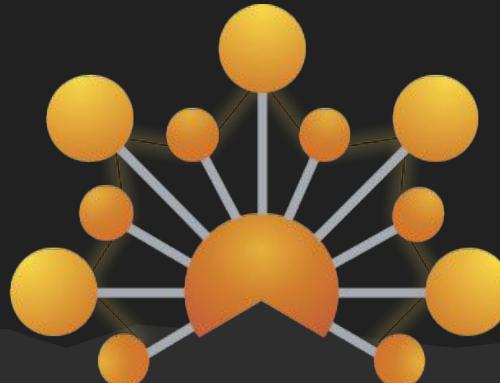
so that it is both  
*discoverable and easy to use.*



# Sunrise is a *Platform*

Sunrise is a Multi-sided, expandable platform, collaboratively built through various methods in Zalando's premise contribution model.

- Easy integration
- Improves delivery speed
- Interoperability
- Effortless connection to customers
- Behavioral insights



As a user, your engagement incentivises **Providers** of Software Development & Data tooling to integrate.

Mission to integrate the entire *Builder* experience by the end of 2023.

# How are we doing so far

**49%**

Engineers Daily Active

**78.4%**

Engineers Weekly Active

**100%**

Engineers Monthly Active  
+ 300 non-engineers

**65%**

Share of Landscape Integrated

**99**

Contributors across Zalando

**36**

Self-built plugins

# Homepage

## Welcome to Sunrise!

Your daily starting point

### Take Action

#### Pipeline Activity

- ✓ Merge pull request #422 from engineering-community. succeeded VIEW
- ✓ New endpoint for Application Info (#187) succeeded VIEW
- ✓ Merge pull request #41 from developer-productivity. succeeded VIEW

[See all pipelines →](#)

#### Open Pull Requests

- [WIP] review requested VIEW
- Helper script to authored developer-productivity 15 days ago by hjacobs VIEW
- Remove authored by hjacobs VIEW

[See all pull requests →](#)

#### Open GHE Issues

### Health & Performance Indicators ⓘ

#### Software Delivery (last week)

STUPS-BUILD	STUPS	PLATFORM
Deployment Frequency <span> ⓘ</span>	2 deploy days	5 deploy days
Lead Time <span> ⓘ</span>	Coming Soon!	
<a href="#">Learn More →</a>		

### What's new

#### Updates about the Platform

- Check out the recording of the Welcome Demo for an overview of the current features and vision for Sunrise. VIEW
- See what problems and improvements the team building Sunrise is planning to tackle next on the Sunrise Product Roadmap. VIEW
- Interested in contributing to and collaborating on extending Sunrise? The Sunrise docs are a great place to start. VIEW
- Collaborating to build a plugin on Sunrise? Join the Building Sunrise chat to share ideas, get feedback, and share your pull requests for review. VIEW

# SIDEBAR

The screenshot shows the Sunrise application interface with a sidebar on the left and a main content area on the right.

**Left Sidebar:**

- sunrise** icon
- Search** input field
- EXPLORE** section
  - Applications**
  - APIs**
  - Documentation**
  - Teams**
  - Product Portfolio**
  - Tech Radar**
  - CyberWeek**
- MANAGE** section
  - ML Platform**
  - CI/CD Pipelines**
  - Create**
  - Get Support**
  - Settings**
  - Add Shortcuts**

**Main Content Area:**

- Welcome to Sunrise!**
- Recent Activity**
  - Pull request #422 from engineering-community. [VIEW](#)
  - point for Application Info (#187) [VIEW](#)
  - Pull request #41 from developer-productivity. [VIEW](#)
- Pending Requests**
  - Pending [VIEW](#)
  - Script to developer-productivity 15 days ago by hjacobs [VIEW](#)
  - by hjacobs [VIEW](#)
- Issues**

**Health & Performance Indicators**

**Software Delivery (last week)**

Metrics	This Team	Target
Deployment Frequency ⓘ	2 deploy days	5 deploy days
Lead Time ⓘ	Coming Soon!	

[Learn More →](#)

**What's new**

**Updates about the Platform**

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# SEARCH



Search

ctrl+K

NL Interface

Create

Domains



Applications

APIs

Libraries



Documentation

Teams

Tooling

Tech Radar

CyberWeek

Reliability

Compliance & Security

ML Platform

CI/CD Pipelines

## Search

Search terms

Documentation 0

People 0

Teams 0

Applications 0

APIs 0

Resource Types 0

Tooling & Services 0

Github 0

ML Entities 0

Google Drive 0

Other 0

### Your recent searches

cdp

k8s

Sunrise

nakadi

postgres

### Top searches

nakadi



zmon



podman



octopus



superset



### Hot Pages

Operational Excellence

Who's on call? ☰

Productivity

CI/CD Platform

Teams

Engineering Docs ☰

Compass ☰

Recent Incidents

ML Platform

Reporting Lines

Tooling Catalog

zLife ☰

Applications to Review

All APIs

TOER Orgs

Documentation

My Workplace ☰

API Linter

My Applications

Support links

Training Platform ☰

Unified Search ☰

# TALK TO SUNRISE

 sunrise

Search ctrl+K

NL Interface

Create

Domains

Applications

APIs

Libraries

Documentation

Teams

Tooling

Tech Radar

CyberWeek

Reliability

Compliance & Security

ML Platform

CI/CD Pipelines

Infrastructure

Cost Insights

## Natural Language Interface

Ask questions & get support from our AI with knowledge on Zalando Tech Documentation.

ABOUT 

FEEDBACK 

 Disclaimer

Question

 Ask a question in natural language

SUBMIT

CLEAR



How do I...

How do I build Compliant Docker Images?

How do I retire Applications?

How do I get access to Github Copilot?



What is...

What is a Production Readiness Review (PRR)?

What is APEC?

What is Compass?



Who is in charge of...

Who is in charge of Sunrise?

Who is in charge of the Zalando Tech Radar?

Who is in charge of Cloud Infrastructure?



Miscellaneous

Do we have an internal URL shortener?

Which technologies are recommended to use in Zalando?

Where do I find a list of all teams at Zalando?

# TALK TO SUNRISE



## Natural Language Interface

Ask questions & get support from our AI with knowledge on Zalando Tech Documentation.

ABOUT

FEEDBACK

Search ctrl+K

NL Interface

Create

Domains

Applications

APIs

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Documentation

Teams

Tooling

Tech Radar

CyberWeek

Reliability

Compliance & Security

ML Platform

CI/CD Pipelines

Infrastructure

Cost Insights

Question

How to deploy an application to Kubernetes

SUBMIT

CLEAR

To deploy an application to Kubernetes, you need to follow these steps:

1. Create the deployment configuration files. This includes defining a Kubernetes deployment manifest which allows configuring details such as Docker image(s) to run, application runtime settings, internal health check, resource requirements, and the number of replicas to run.
2. Trigger a deployment with CDIF. Once the deployment configuration files are ready, you can trigger the deployment using CDIF.
3. Verify your application is running correctly. After the deployment, you should verify that your application is running correctly by checking the status of the pods in Kubernetes.

Here is an example of deploying a demo application to a Kubernetes cluster:

1. Login to the Kubernetes cluster:

2. `kubectl login shape-test`

3. Deploy the demo Kubernetes resources by applying the `kube-opentracing-demo.yaml` file:

```
kubectl apply -f kube-opentracing-demo-[java,pax]
```

3. Wait until one pod has the state Running

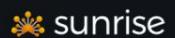
4. Access the deployed demo application in your browser at <https://opentracing-demo.java.shape-test.zalen.doorstack/> and refresh the page to generate sample traces.

5. You can also send requests to the demo application using shell commands.

By following these steps, you can successfully deploy an application to Kubernetes.

REGENERATE

# SEARCH APPLICATIONS



## Search

Search ctrl+K

NL Interface

Create

Domains

Applications

APIs

Libraries

Documentation

Teams

Tooling

Tech Radar

CyberWeek

Reliability

Compliance & Security

ML Platform

CI/CD Pipelines

Infrastructure

Cost Insights

Support

Search terms

cart

Documentation



Documentation

500

People



People

10+

Teams



Teams

1

Applications



Applications

29

APIs



APIs

20

Resource Types



Resource Types

14

Tooling & Services



Tooling & Services

0

Github



Github

522

ML Entities



ML Entities

1

Google Drive



Google Drive

10+

Other



Other

1072

Search filters

Status

Active

phoenix-cart-live

Status: Active green dot

Owner:

Application Name: phoenix-cart-live. Handle: cart. Last updated: 2023-09-01T14:55:00Z. Actions: Handle or cart.

DOCUMENTATION

GITHUB REPOSITORY

ISSUES / TICKETS

SUPPORT

cart-service

Status: Active green dot

Owner:

Application Name: cart-service. Handle: cart. Last updated: 2023-09-01T14:55:00Z. Description: The service is enabling customers to add items to their cart.

DOCUMENTATION

GITHUB REPOSITORY

ISSUES / TICKETS

SUPPORT

cart-aggregation

Status: Active green dot

Owner:

Application Name: cart-aggregation. Handle: cart. Last updated: 2023-09-01T14:55:00Z. Description: Aggregates data from multiple carts and provides a central API endpoint for managing them.

DOCUMENTATION

GITHUB REPOSITORY

ISSUES / TICKETS

SUPPORT

cart-fragment

Status: Active green dot

Owner:

# SEARCH APIs



## Search



Search terms



Documentation	500
People	6
Teams	3
Applications	571
APIs	1484
Resource Types	284
Tooling & Services	5
Github	869
ML Entities	97
Google Drive	10+
Other	2832

**API Repository API (external)**  
Owner: Infra Management (Machine)  
Application: API Repository  
**API** **api** **api** **External Version 0.2.7 Revision 2021-08-10**

**psp-apis-gateway API product-compliance**  
Owner: Product Compliance and ESR Accounting  
Application: psp-apis-gateway  
**API** **api** **api** **product-compliance-quarantine**

**Mask (Mobile API) - Catalog/POD**  
Owner: Mobile Store API (Mask)  
Application: Mask  
**API** **mask-node** **api** **mask-store-service** **apis**

**DEPRECATED - Customer ID Segmentation API**  
Owner: Customer Platform (Machine)  
Application: Customer Context  
**API** **customer-id-segmentation** **api**

API – OPENAPI

### cluster-registry-34-0.0.1 ☆

OVERVIEW DEFINITION

#### cluster-registry-34-0.0.1

OpenAPI Raw

**Cluster Registry** 0.0.1

[Base URL: ]

Registry to store information about infrastructure accounts and Kubernetes clusters.

Website  
Send email to: [REDACTED]

Schemes **HTTPS** **Authorize**

**InfrastructureAccounts**

**Clusters**

**GET** /kubernetes-clusters List all Kubernetes clusters

**POST** /kubernetes-clusters Create cluster

**Container API Scanner API**  
Owner: Infra Management (Machine)

[opensource.zalando.com/restful-api-guidelines/](https://opensource.zalando.com/restful-api-guidelines/)

# APPLICATIONS

## Applications

Catalog of software components at Zalando

 REGISTER  SUPPORT

Starred (7)									Filter	
	Name	Owner	Criticality	Description	Tags	Review status	APEC ⓘ	PRR ⓘ		
ZALANDO	application-discovery		Tier 4	Scripts and tools...	Python	needs review	not relevant	never		
All	application-review		Tier 3	Web tool to...	Python	reviewed	green	never		
					event					
			Tier 1 / 24/7	cyberweek		reviewed	red	2021-11-01		
					JRE/11.0.14.1	Java				
	engineering-blog		Tier 4	The public...	Python	reviewed	not relevant	never		
	kube-resource-report		Tier 3	Script to...	Dockerfile	needs review	red	never		
	kube-web-view		Tier 3 / 24/7	Kubernetes Web...	Python	needs review	red	never		
			Tier 3		Python	needs review	red	never		

# APPLICATION DETAILS

COMPONENT – SERVICE

**customer-action-service-api** ☆

Status Active Owner Lifecycle Tier 2

OVERVIEW CI/CD APIS NAKADI EVENTS DATABASES EDIT REVIEW

**About**

[VIEW SOURCE](#) [VIEW DOCUMENTATION](#) [VIEW API](#) [CONTACT SUPPORT](#) [KUBE RESOURCE REPORT](#) [COST DASHBOARD](#)

DESCRIPTION [REDACTED]

OWNER [REDACTED]

LAST SYNCED 4/29/2022, 4:29:26 AM

INCIDENT CONTACT Customer Data Platform

Criticality Tier 2

TYPE service

TAGS JRE/11.0.14.1 Scala

**Application review**

REVIEW STATUS reviewed

LAST REVIEW ON 2022-03-03

LAST REVIEWED BY [REDACTED]

APEC STATUS green

APEC PASSED CHECKS ✓ slo ✓ alerts ✓ tracing ✓ playbooks ✓ loadTest ✓ prf

APEC MISSED CHECKS -

CYBER WEEK RELEVANT Yes

CYBER WEEK SCOPE event

PRR DATE 2019-08-19

**Telemetry & On-call Resources**

TRACES LOGS API Monitoring Kubernetes Monitoring INCIDENT PLAYBOOK

CUSTOM GRAFANA DASHBOARDS Customer Action Service - API

**Anomalies**

- customer-action [REDACTED] Created 3 months ago
- [PRODUCTION] [REDACTED] Created 3 months ago
- customer-action [REDACTED] Created 3 months ago

# APPLICATION DETAILS

COMPONENT – SERVICE

cdp ☆

Status Active Owner automata Lifecycle Tier 3

OVERVIEW CI/CD APIS NAKADI EVENTS DATABASES EDIT REVIEW SECURITY

Latest pipeline run Time Status Action

CDP	Create git-gh-cleanup-comments pr-2207-6 ↗ patch-1 ↗ fhalkivaha ↗ 12207 ↗ 713704	1h ago 10m, 26s	<span>Build</span> <span>Build</span> <span>Pre</span> <span>Post</span> <span>Log</span> <span>Cloud</span> <span>Cloud</span> <span>Build</span> <span>Cloud</span> <span>Production</span> <span>Environment</span> <span>Cloud</span> <span>Cloud</span> <span>Cloud</span> <span>Cloud</span> <span>Cloud</span>	<span>  </span> <span>⚙️</span>
CDP-VM-MASTER	Merge pull request #121 from automate/ami-update-1652064028 Update AMI ID master-100 ↗ master ↗ otrigu ↗ f959a3	5h ago 10m, 12s	<span>Build</span> <span>Build-E2E</span> <span>Cloud</span> <span>PR-Deploy</span> <span>Cloud</span> <span>Wait-for-E2E</span> <span>Cloud</span> <span>Run-E2E</span> <span>Cloud</span> <span>Prod-Deploy</span>	<span>  </span> <span>⚙️</span>
CDP-DEPLOYMENT-AUTH	<span>dependency</span> Merge pull request #52 from automata/make-cluster-param-required-in-ml-endp... master-134 ↗ master ↗ rcrisostomo ↗ bfe751	7h ago 7m, 16s	<span>Build</span> <span>Cloud</span> <span>PR-Deploy</span> <span>Cloud</span> <span>Production-Deploy</span>	<span>  </span> <span>⚙️</span>
ECR-POLICY-MANAGER	<span>dependency</span> Apply policies to ml-exp images (#18) For zoopport/issues#1925 master-120 ↗ master ↗ jsantos ↗ f75181	7h ago 4m, 5s	<span>Test</span> <span>Build</span> <span>Cloud</span> <span>Deploy-Test</span> <span>Cloud</span> <span>Deploy-Prod</span>	<span>  </span> <span>⚙️</span>
DEPLOYMENT-SERVICE	Merge pull request #113 from teapot/jdk-cpu-check JDK CPU limit/requests check master-93 ↗ master ↗ zlawrence ↗ 963b94	5d ago 11m, 29s	<span>Build</span> <span>Cloud</span> <span>PR-D...</span> <span>Cloud</span> <span>PR-E2E</span> <span>Cloud</span> <span>PR-E...</span> <span>Cloud</span> <span>CRD-...</span> <span>Cloud</span> <span>TEST-...</span> <span>Cloud</span> <span>TEST-...</span> <span>Cloud</span> <span>PROD...</span> <span>Cloud</span> <span>PROD...</span>	<span>  </span> <span>⚙️</span>

# CONTINUOUS DELIVERY PLATFORM

Continuous Delivery Platform

Explore pipelines

SUPPORT ⓘ

Filters: Organizations (5/532) ▾ Repositories ▾ Event type (All) ▾

Latest pipeline run

	Time	Status	Action
master-85 ↵ master ↗ 02119c	7m ago 3m, 51s	BUILD DEPLOY-TEST-STAGING DEPLOY-STAGING DEPLOY-LIVE	↻
pr-132-3 ↵ 132 ↗ db9ddf	8m ago 3m, 40s	BUILD STAGING-DEP... STAGING-DEP... STAGING-DEP... STAGING-DEP... LIVE-DEPLOY... LIVE-DEPLOY...	↻
SIZING /	19m ago	BUILD VISUAL-TEST DEPLOY-PR S-100 DEPLOY-LIVE L-100	👍
master-129 ↵ master ↗ 182e29			
CEP,	19m ago	BUILD DEPLOY-STAG... TRAFFIC-100... DEPLOY-PROD... TRAFFIC-10-P... TRAFFIC-50-P... TRAFFIC-100...	↻
CEP/GH#268 moved			
pr-270-1 ↵ 270 ↗ 9f39e5	2m, 33s		
SIZING /	19m ago	TEST BUILD-PR BUILD-PR DEPLOY... TRAFFIC-... DEPLOY... PROD-TR... PROD-TR... PROD-TR...	👍
Adjust			
pr-113-2 ↵ 113 ↗ ef86fd	19m ago		
SIZING /	22m ago	Q... Q... D... D... D... D... IN... S... P... S... P... S... P... P... P... P...	❗
#269: Clean up			
pr-358-10 ↵ clean-readme ↗ 358 ↗ c0ded	16m, 51s		
	27m ago	BUILD DEPLOY-STAG... TRAFFIC-100... DEPLOY-PROD... TRAFFIC-10-P... TRAFFIC-50-P... TRAFFIC-100...	👍

# DEPLOYMENT

Continuous Delivery Platform

Explore pipelines / / main-217 / Deploy

SUPPORT ⓘ

main-217

subscription 1 process

Deploy updaterv2 staging subscription 2 process

Deploy updaterv2 staging subscription 3 process

Deploy l updater-apiv2 staging process

Deploy l apiv2 staging process

Traffic-switch api staging traffic

Refeed staging process

Deploy updaterv2 live subscription 1 process

Deploy updaterv2 live subscription 2 process

Deploy updaterv2 live subscription 3 process

routegroup · main

succeeded Deploy apiv2 staging

Started: 4h ago Ran for: 3m, 8s

RETRY FROM HERE

Details Deployment status

- HorizontalPodAutoscaler v2/ -updater-apiv2
- ConfigMap v2/
- PlatformCredentialsSet v2/ -credentials
- Deployment v2/ -updater-apiv2
  - ReplicaSet v2/ -updater-apiv2-759c94584
    - Pod v2/ -updater-apiv2-759c94584-9dj24 kube-web-view scalyr logs
    - Pod v2/ -updater-apiv2-759c94584-b8r9q kube-web-view scalyr logs
- CloudFormation staging -api-staging-dynamodb-article console
- CloudFormation staging -role console
- Ingress v2/ -updater-apiv2
  - Hostname open
- CloudFormation staging -api-staging-redis-cache-cluster console
- Secret v2/
- ServiceAccount v2/ -svc-account
- Service v2/ -updater-apiv2
- ConfigMap v2/ configmapv2

# CI/CD INSIGHTS



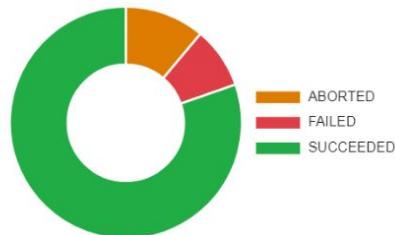
## Continuous Delivery Platform

Explore pipelines / DSI / zilm-litellm-proxy

COMMUNITY SU

Event type All From 11/05/2024 To 10/06/2024 Step All

### Pipeline statuses



### Pipeline execution time ⓘ

0 sec

Minimum

5.03 min

Average

42.62 min

Maximum

### Pipeline failure rate

8.55%

(10 out of 117 jobs)

### Steps fail ranking

STEP NAME	# FAILED ↑	SUCCESS RATIO
deploy-test	9	89.9%
build-litellm-proxy	2	98.1%

|< < 1-2 of 5 > >|

### Average pipeline execution time by week ⓘ



# DOCUMENTATION (MKDOCS)

Docs / engineering  
engineering

Component engineering Owner 00000108 Lifecycle production

Engineering About Communication Developer Journey Guidelines Practices

Search engineering docs

Practices

- Practices
- API First 📈
- Capacity Planning 📈
- Continuous Delivery**
- Continuous Integration
- Dependency Discovery
- Experimentation
- Feature Flags 📈
- Libraries
- Migrations
- Observability
- Playbooks
- Postmortems

Contribution models

- Inner Source and Contribution Models
- Open Source

Reviews

- API Reviews
- Architecture Reviews

Production Planning →

## Continuous Delivery

**Continuous Delivery** (CD) is a software engineering approach in which teams produce software in short cycles, ensuring that the software can be **reliably released at any time** and, when releasing the software, without doing so manually. It aims at building, testing, and releasing software with greater speed and frequency. The approach helps **reduce the cost, time, and risk** of delivering changes by allowing for more **incremental updates to applications in production**.<sup>1</sup>

### Continuous Delivery vs Continuous Integration

While Continuous Delivery is about releasing software, **Continuous Integration** is the necessary practice to frequently integrate changes from different contributors. Both practices are often just abbreviated as "CI/CD".

Zalando's **Continuous Delivery Platform (CDP)** provides the capabilities to implement Continuous Delivery:

- code is authored, committed, and pushed to a short-lived branch on GitHub Enterprise
- a Pull Request (PR) is opened to merge the short-lived branch to the main branch
- CDP runs automated tests and deploys the PR changes to a test/preview environment
- the PR is merged after verifying that changes are correct
- CDP automatically deploys the updated main branch to production

The above workflow should ensure that the main branch always reflects the latest state of what is deployed in production. Therefore, any new merged change is an incremental automated update to the application in production. This reduces risks and is the essence of Continuous Delivery.

### Continuous Delivery vs Continuous Deployment

With Continuous Delivery, you can release changes at any time, but the trigger ("deploy to production") can be manual. With **Continuous Deployment**, you automate the entire process from code commit to production. Code changes are pushed live once they receive validation and pass all tests. This means customers receive

Table of contents

- Good Practices
- If it hurts, do it more often
- Limit work-in-progress (WIP)
- Measure Software Delivery Performance
- Community Forums
- Further Reading

← Previous Capacity Planning 📈 Continuous Integrati... →

Made with Material for MkDocs

# API DEPENDENCIES

COMPONENT – SERVICE

cdp ★

Status Active Owner automata Lifecycle Tier 3

OVERVIEW CI/CD APIS NAKADI EVENTS DATABASES EDIT REVIEW SECURITY

Provided APIs

NAME	SYSTEM	OWNER	TYPE	LIFECYCLE	DESCRIPTION
bowerbird-api-333-1.0		automata	OpenAPI	production	
cdp-aws-cloudformation-guard-wrapper-9-1.0.0		automata	OpenAPI	production	
cdp-controller-56-1.0		automata	OpenAPI	production	
cdp-deployment-validator-12-1.0.0		automata	OpenAPI	production	
cdp-git-service-1-1.0.0		automata	OpenAPI	production	
cdp-manifest-processor-2-1.0.0		automata	OpenAPI	production	
cdp-pipeline-performance-metrics-api-8-1.0.0		automata	OpenAPI	production	
cdp-toster-8-0.0.2		automata	OpenAPI	production	
cdp-vm-manager-1.1.0		automata	OpenAPI	production	

Consumed APIs

NAME	SYSTEM	OWNER	TYPE	LIFECYCLE	DESCRIPTION
cdp-controller-56-1.0		automata	OpenAPI	production	
cdp-log-service-12-1.0		automata	OpenAPI	production	
cdp-vm-manager-1-1.0		automata	OpenAPI	production	
cluster-registry-34-0.0.1		teapot	OpenAPI	production	

# APPLICATION EVENT PUB/SUB

COMPONENT – SERVICE

-service ☆

Status Active Owner Lifecycle Tier 1

OVERVIEW CI/CD APIS NAKADI EVENTS DATABASES EDIT REVIEW

## Event Types

All Nakadi events produced by [REDACTED]

Event Type	Number of Events	Avg. Publishing Rate	Est. Cost	More
[REDACTED]	20.4M	8.01 Events/s	3.05 \$/Month	
Publishing Stats	Min	Max	Avg	
Traffic	1.20 KiB/s	424.66 KiB/s	38.69 KiB/s	
Event/s Rate	0.25 Event/s	125.27 Event/s	8.01 Event/s	
Event Size	3.18 KiB	7.75 KiB	4.82 KiB	
Request Count	0.25 Req/s	125.27 Req/s	8.01 Req/s	
	P50	P95	P99	
Batching	1 Events/Batch	1 Events/Batch	1 Events/Batch	
Latency	9ms	28ms	76ms	
[REDACTED]	20.4M	8.01 Events/s	3.05 \$/Month	
[REDACTED]	20.4M	8.01 Events/s	3.05 \$/Month	

## Notes

### Event Types data

Number of Events published for the event type during last 30 days.

- shows detailed publishing stats.
- in front of a traffic stat indicates that your publishing rate is OK. We recommend you to publish no more than 1 MB/s per partition to avoid publishing latencies.
- indicates that you are publishing more than 1MB/s per partition.
- indicates that you are publishing more than 2MB/s per partition.

### Subscription data

**Unconsumed Events** is the currently retained number of events unconsumed across all partitions. If this number is higher than events available in Nakadi, it means that some events are deleted permanently and never consumed.

**Consumer lag** is the maximum lag across all partitions.

# INFRASTRUCTURE ACCOUNTS



## opensource

Discover AWS Accounts details and related centrally provided resources

Status ready   Environment production   Criticality Not Relevant

### About

ACCOUNT NAME	OWNER EMAIL
opensource	<b>Not Available</b> ⓘ
ACCOUNT ID	ENVIRONMENT
082194939997	production
COST CENTER ID	PRODUCT COMMUNITY
0001104715	team/automata
CRITICALITY	STATUS
4 ⓘ	ready

### Applications

Filters (0)

Filter



NAME	CRITICALITY	TEAM
------	-------------	------

No records to display

### Saviynt Roles

Read-Only  
Engineer  
Collaborator  
Manual  
Access-Administrator

[How do I request access?](#)

### ZACK Roles

Administrator  
PowerUser  
ReadOnly  
SecAudit

[Request access via Zack](#) ⓘ

### Tag Compliance



COMPLIANT STACKS   NON-COMPLIANT STACKS  
0   0

### Trusted Advisor Cost Optimization ⓘ

Filter



CHECK NAME	RESOURCES FLAGGED	POTENTIAL SAVINGS (\$)
------------	-------------------	------------------------

S3 Incomplete Multipart Upload Abort Configuration	13	0
Unassociated Elastic IP Addresses	1	0

# RELIABILITY CENTER

## Reliability Center | Beta

KNOWN ISSUES/ALTERNATIVES 

Discover latest deployments, insights, stakeholders, and info about incidents and their outcomes.



DEPLOYMENTS

INCIDENT

ON CALL

ANALYTICS

### PERSONAL

 For my applications 29

### ZALANDO

 For All applications 777

 This Table cover one year worth of incidents, from the current quarter to the same quarter last year.

 Filter



SEVERITY	STATUS	INCIDENT DESCRIPTION	OWNER	RESOURCES	CREATED AT	UPDATED AT
SEV3		Dependency was updated but service still seems to have issues. It's currently affected by multiple errors and downtime.	Product	 	2024-05-29 08:37	2024-05-29 14:54
SEV3		[Not an incident] Inconsistent compatibility issues between CDP and Network.	Automate	 	2024-05-01 10:00	2024-05-10 07:46
SEV3		Internal Software Regression (known issues) unhandled.	Software Management	 	2024-04-05 03:34	2024-04-09 13:05
SEV3		Service is unavailable with Gateway Timeout.	Software Management	 	2024-04-06 03:14	2024-04-29 13:23
SEV3		Service is down.	Software Management	 	2024-03-12 04:15	2024-03-20 14:40
SEV3		CDP pipeline failed with error - Build did not start after 10 minutes, no logs yet.	Automate	 	2024-03-04 08:42	2024-03-05 08:18

# TEAMS

GROUP – TEAM

OVERVIEW APPLICATIONS

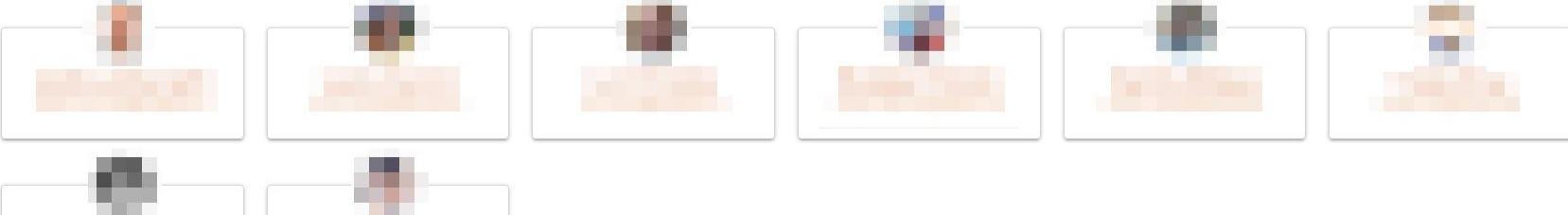
**About**

OFFICIAL NAME: Developer Productivity / Developer Console  
OFFICIAL ID:   
E-MAIL ADDRESS:   
ENGINEERING LEAD:   
PARENT TEAM:   
LAST SYNCED: 4/28/2022, 8:41:20 PM

**Ownership**

Category	Count
Application(s)	21
24/7 Application(s)	18
Cyber Week Application(s)	2
Application(s) need review	18
Documentation	2
APIs	7

**Members (8)**  
of 



# PEOPLE

USER – EMPLOYEE

Iferreira ☆

OVERVIEW



Levi Ferreira

WHAT DO I DO AT ZALANDO?

/ Developer Productivity

HOW YOU CAN REACH OUT

WHERE DO I WORK?

Zalando SE - Berlin

MY LEAD

TEAMS I BELONG TO

DELIVERY TEAMS UNDER MY RESPONSIBILITY

- Developer Productivity
- Frontend Devops
- Backend Management

LAST SYNCED

10/05/2022, 04:09:30



# APPLICATION TEMPLATES



## Create a new Repository

These templates set up your git repository and ensure it is compliant, grant access for those who need it, and set CI/CD configurations.

### Choose a template to create and configure a new repository

#### Doc

Contains documentation

Doc  
Blank

Start a blank repository

[GET STARTED](#)

Doc  
docs-mkdocs

MkDocs documentation template integrated with Docs Hosting

[GET STARTED](#)

#### Code

Contains code that will eventually end up in production. Needs 4-eyes-approval

Code  
Blank

Start a blank repository

[GET STARTED](#)

Code

[REDACTED]

[GET STARTED](#)

Code

[REDACTED]

[GET STARTED](#)

Code

[REDACTED]

[GET STARTED](#)

Code

[REDACTED]

Code  
cronjob-template

Code

[REDACTED]

Code

[REDACTED]

# CREATING A NEW SERVICE

## Create a new Repository

These templates set up your git repository and ensure it is compliant, grant access for those who need it, and set CI/CD configurations.

### Code: java11-spring-boot-service



Owner \*  
Engineering

Who is going to own this repository

GitHub Organization name \*

The name of the GitHub organization of the new repository

GitHub Repository Name \*

foo-bar-rest-service

The name of the new repository

GitHub Repository Description

Describe the purpose of this repo to make it easier for people outside of your immediate team to find.

Choose .gitignore template

You can use this only on application template "Blank".

**SUBMIT**

main		1 branch	0 tags	
				Go to file
				Add file
Code	View	File	Commit	Branch
	machinery-cd-robot adding zappr file	605dd30	6 days ago	2 commits
	deploy/apply	Initializing with template	6 days ago	
	docs	Initializing with template	6 days ago	
	gradle/wrapper	Initializing with template	6 days ago	
	src	Initializing with template	6 days ago	
	.editorconfig	Initializing with template	6 days ago	
	.gitignore	Initializing with template	6 days ago	
	.zappr.yaml	adding zappr file	6 days ago	
	Dockerfile	Initializing with template	6 days ago	
	README.md	Initializing with template	6 days ago	
	build.gradle	Initializing with template	6 days ago	
	configure.sh	Initializing with template	6 days ago	
	delivery.yaml	Initializing with template	6 days ago	
	gradlew	Initializing with template	6 days ago	
	gradlew.bat	Initializing with template	6 days ago	
	lombok.config	Initializing with template	6 days ago	
	settings.gradle	Initializing with template	6 days ago	

# Machine Learning Platform



## Machine Learning Platform

Projects / zflow-e2e-tests / Pipelines / e2e-tests-zflow-databricks / Runs

DOCS

USERS CHAT

ZFLOW UI

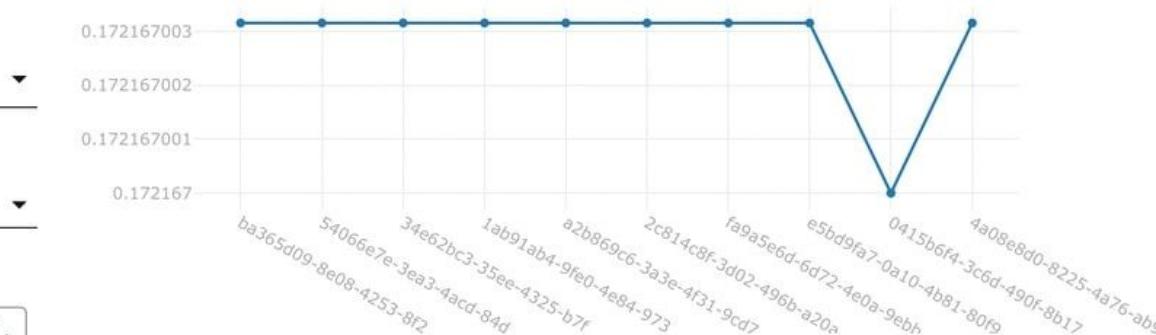
arn:aws:states:eu-central-1:123456:stateMachine:e2e-tests-zflow-databricks

▶ NEW RUN

### Plot Settings

Y-axis

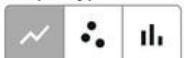
train:rmse



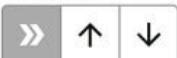
X-axis

run\_id

Graph Type



Sort Order



Run Name

Last modification

Run Status

Metrics

Params

# PRODUCT PORTFOLIO

## Product Portfolio



REFINE RESULTS

Clear

Owner

Journey

Step

Filter

X

PRODUCT/SERVICE	STATUS ↓	JOURNEY	STEPS ⓘ	OWNER	HELPFUL LINKS
API Linter (Zally) Linter which checks APIs for compliance with Open API and...	● ADOPT	Development	05-Code	Developer Console	
API Monitoring Automated monitoring of API's for applications published...	● ADOPT	Development	09-Monitor	Developer Console	
API Portal Internal API catalog for developers to publish, discover and...	● ADOPT	Development	05-Code	Developer Console	
Adaptive paging Pages furthest upstream team based on traces from your...	● ADOPT	Development	03-Setup	SRE Enablement	
Airflow as a Service Enables BI teams and Data/BI Engineers to schedule and...	● ADOPT	Data	08-Orchestrate	Data Platform	
Application Review Tooling Supports application owners & stakeholders to review the...	● ADOPT	Development	10-Operate	Developer Console	
Business Analytics Platform Enables analysts and controllers to create and monitor near...	● ADOPT	Data	04-Analyze/Explore 07-Share/Publish	Business Monitoring	
Cloud Migration Assistant Automates the migration of workloads from on-premises to the...	● ADOPT	Data	01-Discover 02-Migrate	Cloud Migration	

# SUPPORT

## Get Support

Find the right place to get support

Owner



### Software Development

#### PLAN

Tech Radar   Jira   ZenHub

#### SETUP

IAM / Oauth   Skipper   Cluster Manager   Zappr   Microsoft / Windows   [redacted]   Linux   Zack  
Application Registry / Kio / YourTurn   Create (Repository Manager)   Developer Console   Sunrise

#### DESIGN

API Portal   API Linter   Functional Component   IT Security Consulting

#### CODE

Documentation Hosting   GitHub Enterprise   Nakadi   Dependabot   Nexus   Checkmark   Jetbrains IDEs  
VS Code Live Share Extension   [redacted]

#### BUILD, TEST, DEPLOY

Continuous Delivery (CDP +)   Kubernetes   AWS   Sonar Qube   SauceLabs   Pierone

#### MONITOR

Observability Toolkit (SDKs)   Grafana   LightStep (Tracing)   ZMON (Metrics)   API Monitoring   Sentry  
Scalry (Logging)   Exception Monitor

#### OPERATE

PostgreSQL   Cassandra   Service Level Reporting (SLR) Tool   SLOs   Sloppy   Adaptive Paging   OpsGenie  
DNS & Certificates   Datacenters   Code Insights (Software Performance Indicators)   Cloud Cost Reporting

### Data Engineering, Science and Analysis

#### DISCOVER

[redacted]

#### ACCESS

[redacted]   Starburst (fka Presto)   Exasol   Raw S3 Access

#### TRANSFORM

Databricks

#### ANALYZE / EXPLORE

[redacted]   Exasol   Tableau   MicroStrategy   Superset   Databricks   Datalab

#### MODEL & PREDICT

SageMaker

#### SHARE / PUBLISH

[redacted]   Exasol   MicroStrategy   Superset   Data Lake

#### ORCHESTRATE

Airflow aaS   zflow

#### TRACK

zflow

# TECH RADAR

## Tech Radar



### Infrastructure

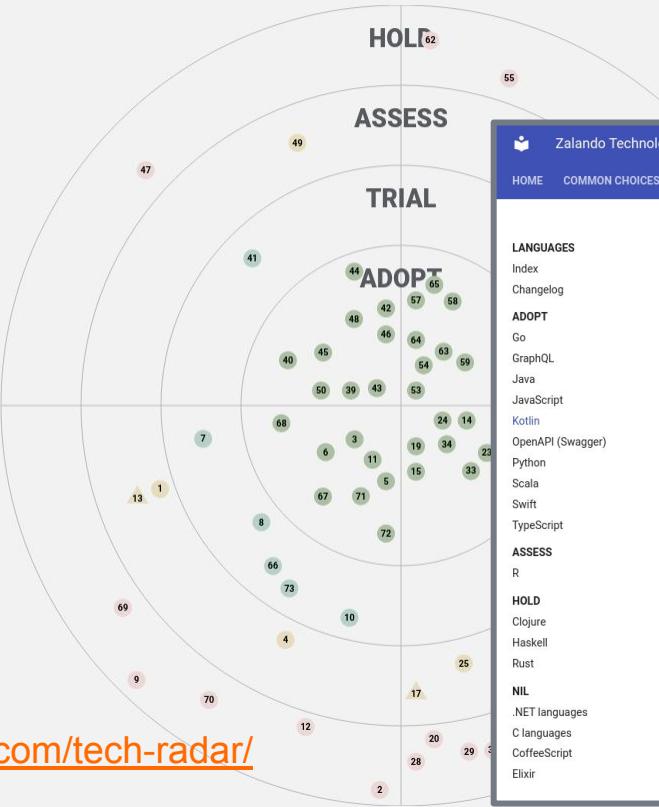
ADOPT	44. Kubernetes	ASSESS
39. AWS CloudFormation	45. Nginx	49. Slurm
40. AWS CloudFront	46. OpenTracing	48. Skipper
42. Amazon SageMaker	50. ZMON	47. STUPS
43. Docker	41. AWS Lambda	

### Data Management

ADOPT	TRIAL	HOLD
3. AWS EMR	7. Flink	2. AWS Data Pipeline
5. Airflow	8. Google BigQuery	9. Hadoop
6. Databricks	10. Presto	12. YARN
11. Spark	66. AWS Kinesis	69. ActiveMQ
67. AWS SNS	73. RabbitMQ	70. HornetQ
68. AWS SQS		
71. Kafka		
72. Nakadi		
ASSESS		
1. AWS Athena		
4. AWS Glue		
13. dbt		

[opensource.zalando.com/tech-radar/](https://opensource.zalando.com/tech-radar/)

▲ moved up ▼ moved down



### Languages

ADOPT	60. Python	ASSESS
53. Go	63. Scala	61. R
54. GraphQL	64. Swift	65. Julia

Zalando Technology Radar

HOME COMMON CHOICES DATA PROCESSING DATASTORES FRAMEWORKS INFRASTRUCTURE LANGUAGES LIBRARIES QUEUES GHE

Kotlin ADOPT Backend Data/ML Mobile

**Languages**

- Index
- Changelog
- ADOPT**
- Go
- GraphQL
- Java
- JavaScript
- Kotlin
- OpenAPI (Swagger)
- Python
- Scala
- Swift
- TypeScript
- ASSESS**
- R
- HOLD**
- Clojure
- Haskell
- Rust
- NIL**
- .NET languages
- C languages
- CoffeeScript
- Elixir

**Kotlin**

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.

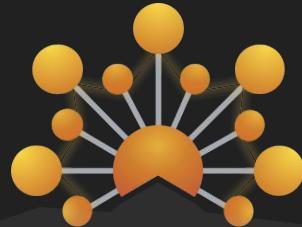
Notable language features:

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

Table of contents

- Existing Experience
- When to Use
- Kotlin Styles
- Java Style
- Async Style
- Pros
- Cons
- Links
- Ring Criteria

# Challenges & Learnings

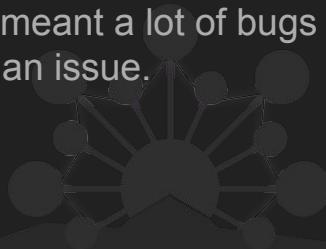


# Challenges

1. Small Team
2. Team was largely unfamiliar with Typescript
3. Backstage under heavy developments - frequent changes involving lot of refactoring and updates
4. Abstractions and improvements were not well-defined.
5. Lots of throwaway code and temporary workarounds
6. Tooling and dependencies - configuring and keeping them to a minimum

# What Helped?

1. The Backstage community was extremely helpful !
2. **Core abstractions** - Entities, plugins, Apis are solid and make it easy to evolve code independently
3. Very **iterative** development - Making even 5-6 deployments per day.
4. **Well-defined** goals and achievables
5. Having a community driven software meant a lot of bugs were detected and fixed by others in the community before we could even file an issue.



# Learnings

1. Small central teams can deliver a lot of value utilising the platform
2. Have well defined outcomes and clear deadlines.
3. Leverage types to keep code size from being a problem.
4. Trust first approach - Assume that other contributing teams have their best interests at heart and build towards a common goal.
5. **Contribution guidelines** on the principles and policies of contribution is very important.
6. Introduce Quality Gates to ensure superb metadata health.

# Q&A

