Liftago

Operations at Liftago

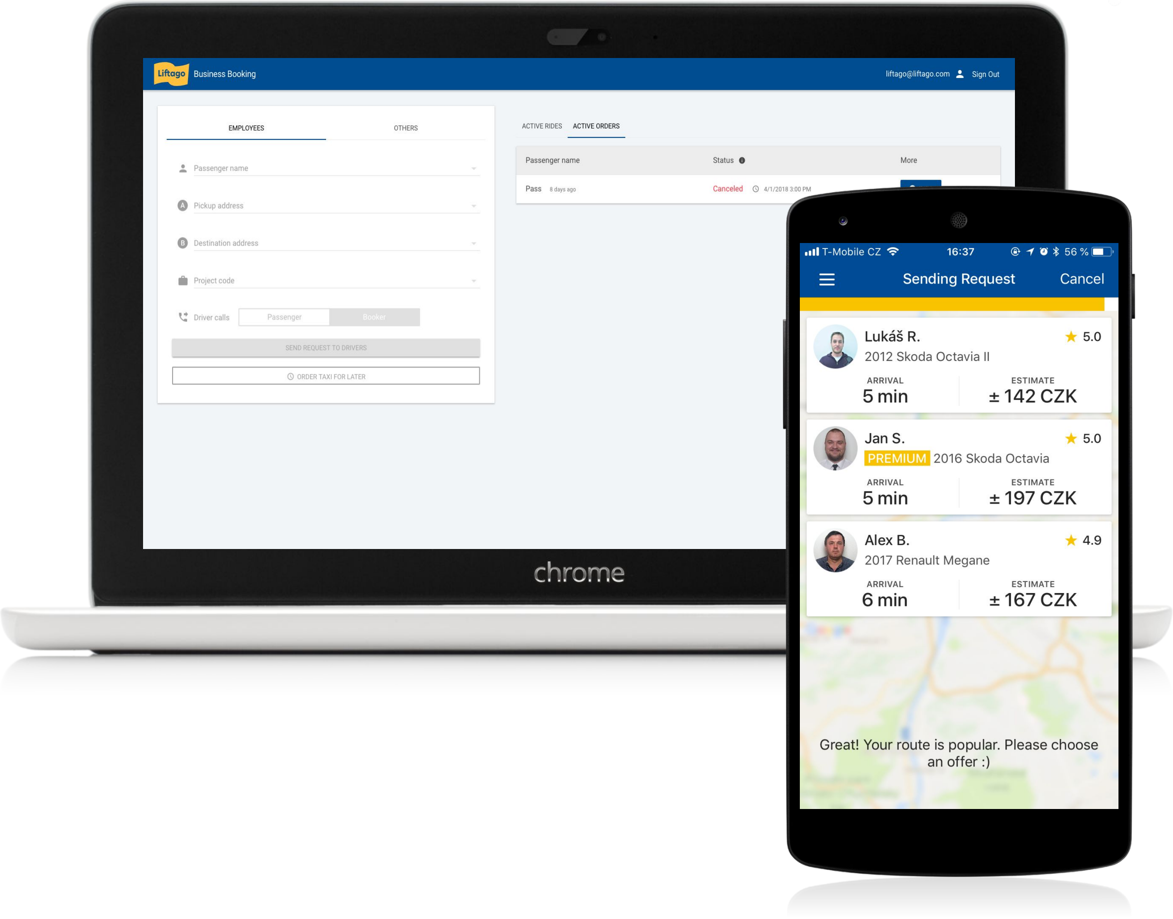
kubernetes

Radek Los

Our Engineering

- iOS/Android/Web/APIs
- Web for booking rides
- Web for managing business
- Internal Admin
- Fleet management
- Accounting
- Taxi management

- AWS
- K8s (docker/java/js)
- Multi-AZ/HA/self healing cluster
- CI/CD to dev/test
- Daily deployments to PROD



Passenger name	Status	More
Pass 8 days ago	Canceled 4/1/2018 3:00 PM	

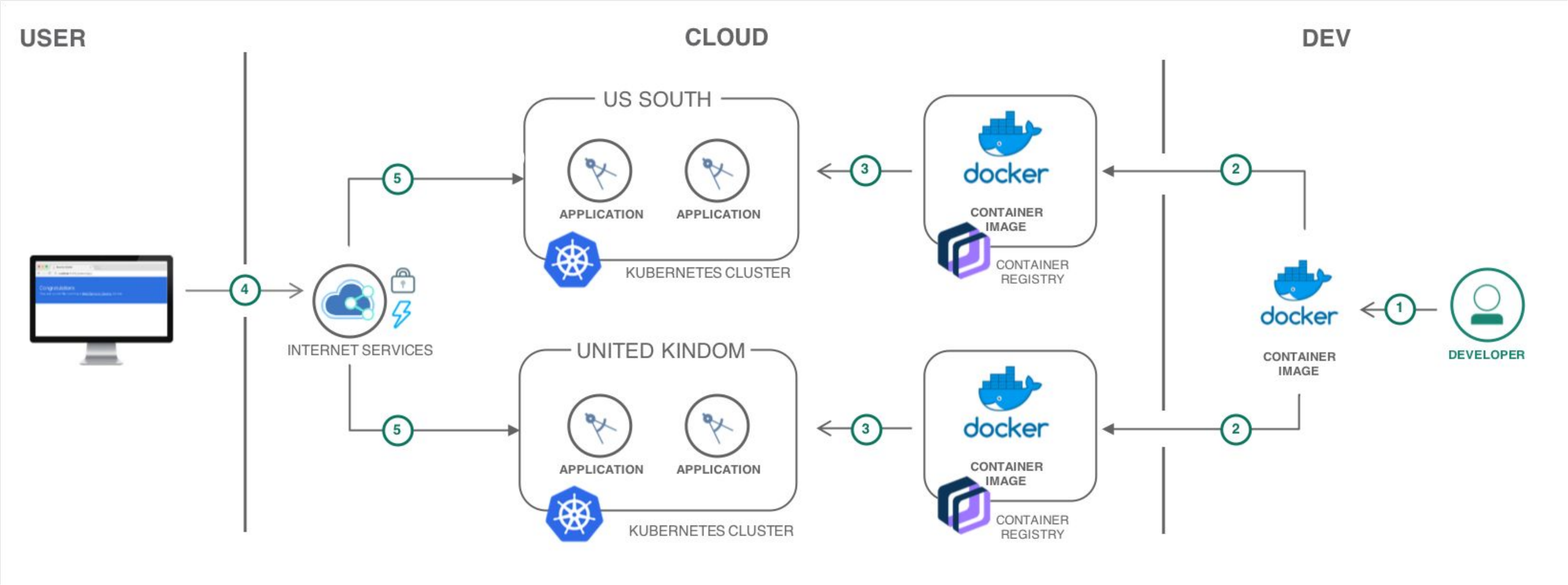
Lukáš R. ★ 5.0
2012 Skoda Octavia II
ARRIVAL 5 min
ESTIMATE ± 142 CZK

Jan S. ★ 5.0
PREMIUM 2016 Skoda Octavia
ARRIVAL 5 min
ESTIMATE ± 197 CZK

Alex B. ★ 4.9
2017 Renault Megane
ARRIVAL 6 min
ESTIMATE ± 167 CZK

Great! Your route is popular. Please choose an offer :)

Kubernetes



https://www.ibm.com/blogs/bluemix/2018/06/multi-region-kubernetes-applications-ibm-cloud-internet-services/architecture-19/

Devs	Ops
4	0

KOPS

What is Kops?

- Fully automated installation
- Uses DNS to identify clusters
- Self-healing: everything runs in Auto-Scaling Groups
- Limited OS support (Debian preferred, Ubuntu 16.04 supported, early support for CentOS & RHEL)
- High-Availability support (Drain and Validate Rolling Update)
- Can directly provision, or generate terraform manifests

Pre-requirements

- Install kops + awscli
- Create a route53 domain for your cluster
- Create an S3 bucket to store your clusters state

Create cluster

```
kops --v 3 create cluster \
   --cloud aws \
   --name $CLUSTER_NAME \
   --zones eu-central-1a,eu-central-1b,eu-central-1c \
   --node-size t2.medium \
   --node-count 5 \
   --master-zones eu-central-1a \
   --master-size m3.medium \
   --network-cidr 172.10.0.0/16 \
   --topology private \
   --networking kopeio-vxlan \
   --bastion \
   --ssh-public-key ssh/devtest.pub
```

Create cluster

```
kops update cluster $CLUSTER_NAME --yes
```

Two years with Kops

- Several upgrades on devtest cluster on runtime without downtime
- Patch upgrade on production
- AWS credits (CPU utilization) run out on PROD
- Network splits or zones issues
- Easy management when your cluster grows
- No further configurations
- Keeps aws clean

?