

DevOps in Action with OpenShift at Airbus, Swiss Railways & Produban / Santander

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DevOps in Action with OpenShift - Airbus

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Airbus is a global aircraft manufacturer



55,000
Employees

€40billion
Annual revenue*

9yrs
Backlog

400
Operators

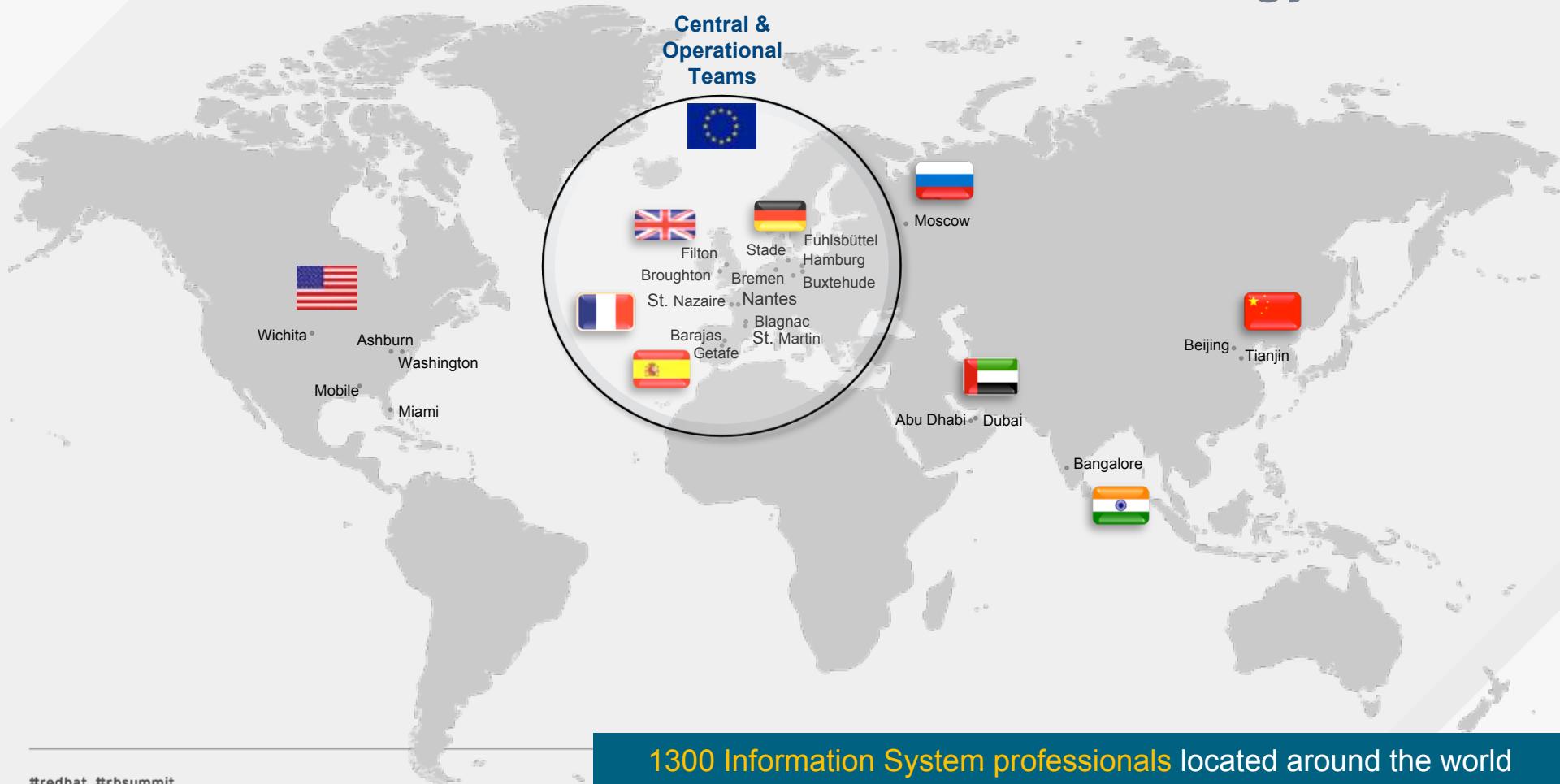
Passion

Our global workforce is united by a passion for aviation and restless desire to create better ways to fly

Data to end 2014

*Annual Revenue 2013

Information & Communication Technology



Airbus IT Infrastructure

FRONT OFFICE



130 000 users



70 000 PCs



160 000 mailboxes



6 500 printers



90 000 fixed phones



40 000 mobile phones

CONNECTIVITY SERVICES



400 000 network ports

99,996%
reliability

BACK OFFICE



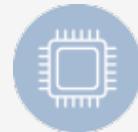
12 500 servers



15 petabytes on Storage



15 000 millions transactions per year on SAP

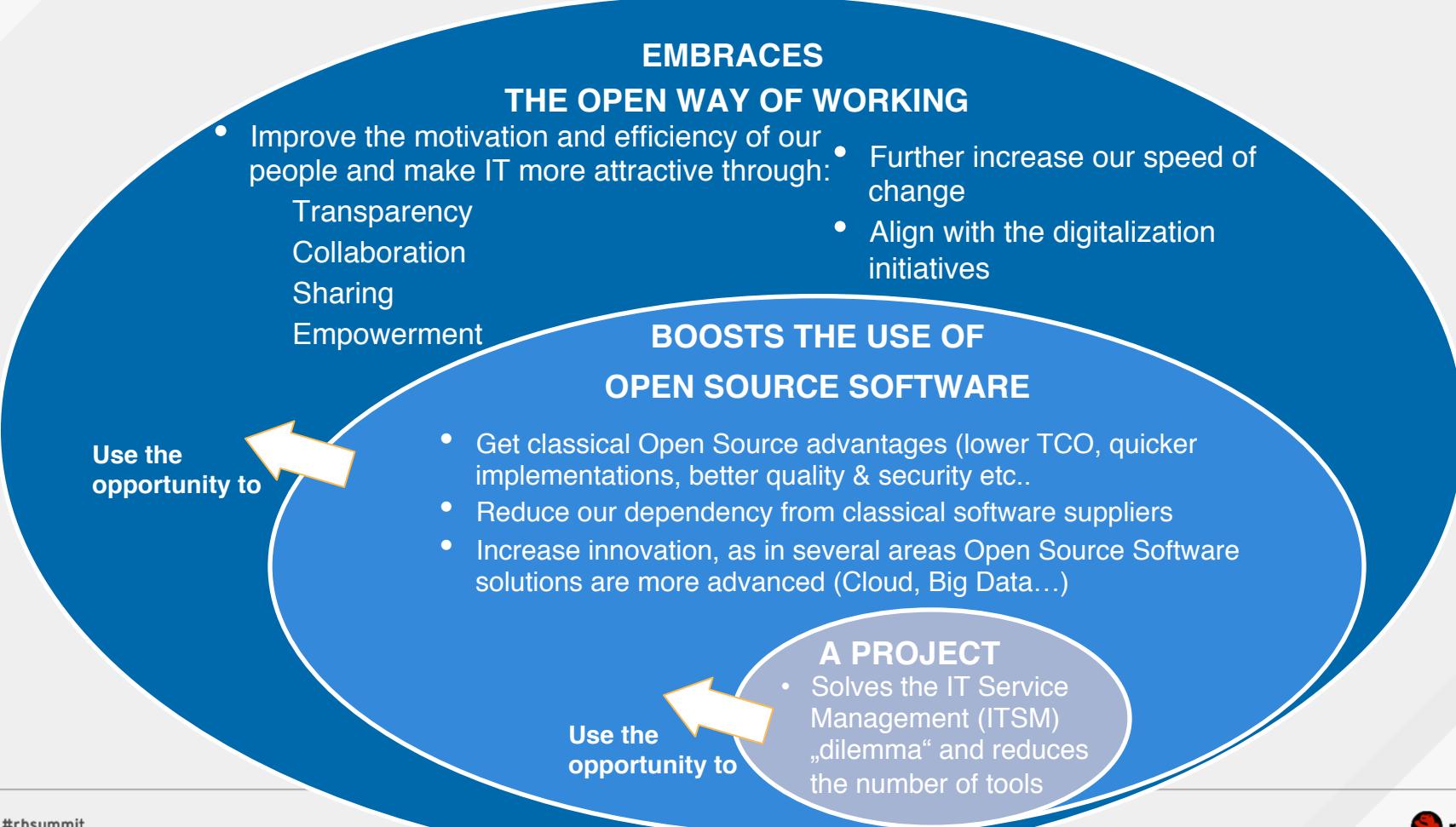


3 800 MIPS on Mainframe



1,2 petaFLOPS on High performance computing

Our expectations from the open (source) approach



Open Source Projects

ITOp, an ERP for Infrastructure

EXPECTATIONS

- Support the Infrastructure Asset Management
- Retire tools by consolidating them in a **single** one
- Enforce usage of **new innovative technologies**

SOLUTION

- Based on the ITSM Open Source Software iTop, it is composed by **multiple plugins** based on the **out of the box API**
- **Fully Open Source** from the IDE (Eclipse), application (iTop), application Server (HTTP) and finally the OS Linux (RHEL)

Key Figures

2000 users



800 000 assets



Every week delivery

09/2015
Kick Off

12/2015
CMDB

02/2016
Applications &
Interfaces Referential

04/2016
Stock Mgt

05/2016
Leasing Mgt

06/2016
Project Referential



Continuous tuning & weekly release

IT Services, a user centric solution

EXPECTATIONS

- Provide a **user centric & user experience** based portal
- Increase **user autonomy** & enable process follow-up
- Federate the different services in **one single place**

SOLUTION

- Composed by a Front-end and a Back End considered as a broker to **standardize the interfaces** of multiple non interoperable system
- **Fully Open Source** from the IDE (Eclipse), application (LifeRay), application Server (Tomcat) and finally the OS Linux (RHEL)

Key Figures

100 000 users

1 single place

Every 2 weeks delivery

100 000 users

4 000 users

01/2016
Kick Off

02/2016
First Release

03/2016
Open to Users

400 users

06/2016
Open to all users

Continuous tuning & fortnightly release

DevOps

Why DevOps ?

EXPECTATIONS

- Move to **Continuous delivery** to answer faster to business needs
- Reduce **issues** and time to fix them means more time for **new features**
- Enforce the “**Open Way of Working**” by increasing the **communication, collaboration & integration** between the Dev & Ops

Key Figures

>12 Integrated Applications

SOLUTION

- Based only on **Open Source Software** used to mainly support PHP & Java...



PaaS, the solution ?

EXPECTATIONS

- Rapid applications development & deployment in the Cloud
- Optimized resources usage with better application scaling
- Simplify the retirement of non Cloud based solution

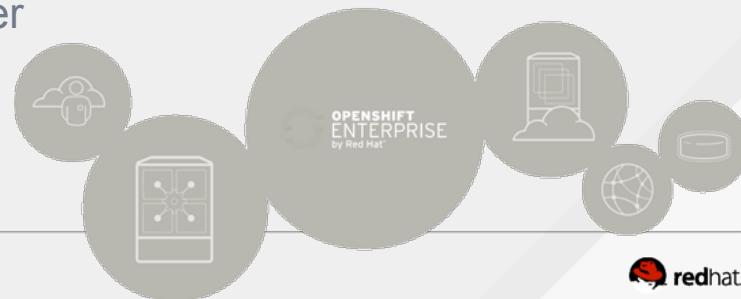
SOLUTION

- Based on the **container** technology to fully support multiple **languages, databases...**
- Setup on **OpenShift 3** from **RedHat** composed by **Docker** containers & **Kubernetes** as container cluster manager

Key Figures

>150 PHP Applications

>40 Ready to use containers



Finally, with DevOps & Open Source

- We deliver **quicker** with a **high users satisfactions**
- **Reduce** recurring and none recurring **costs**
- Find the **rights solution** and **suppliers** is critical for the success of the projects

- Open Source & DevOps are **accelerators** to increase **collaboration**
- Finance aspect can't be the only criteria to select **Open Source**
- Solution selection assessment must take in account **Open Source vs Proprietary**



Adopt DevOps & PaaS,
the only way to match the
constraints of companies



RED HAT
SUMMIT

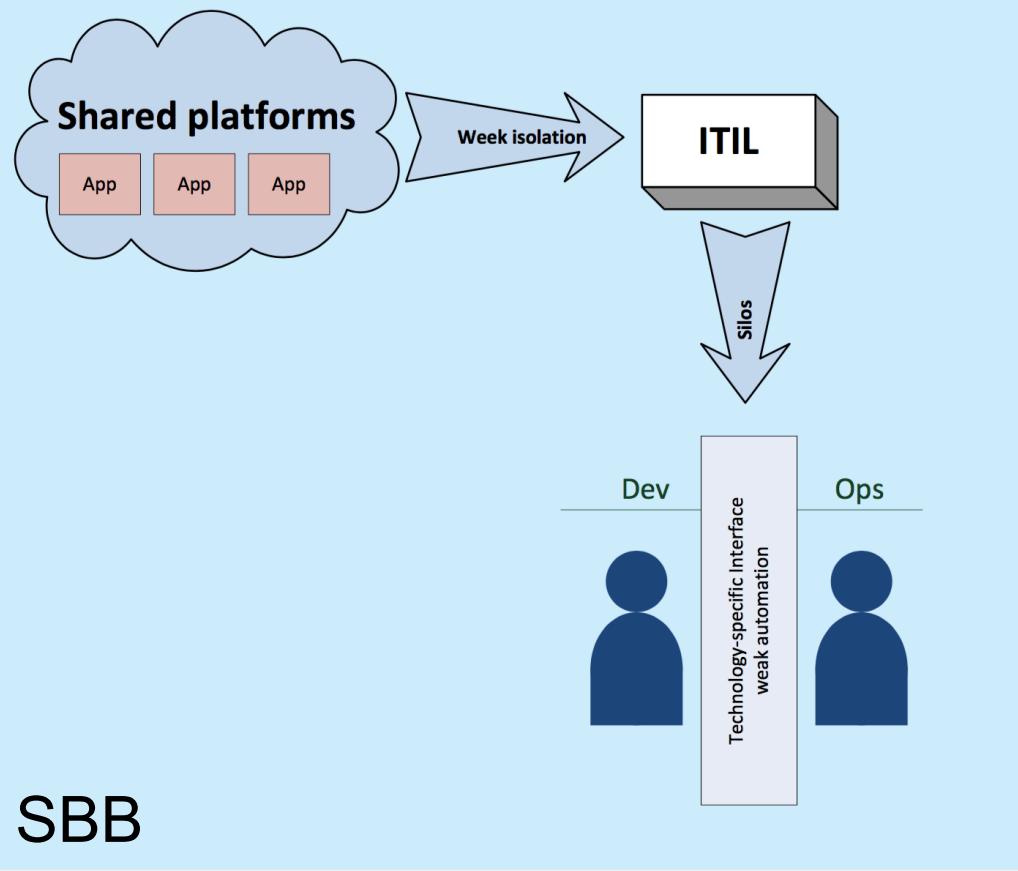
LEARN. NETWORK.
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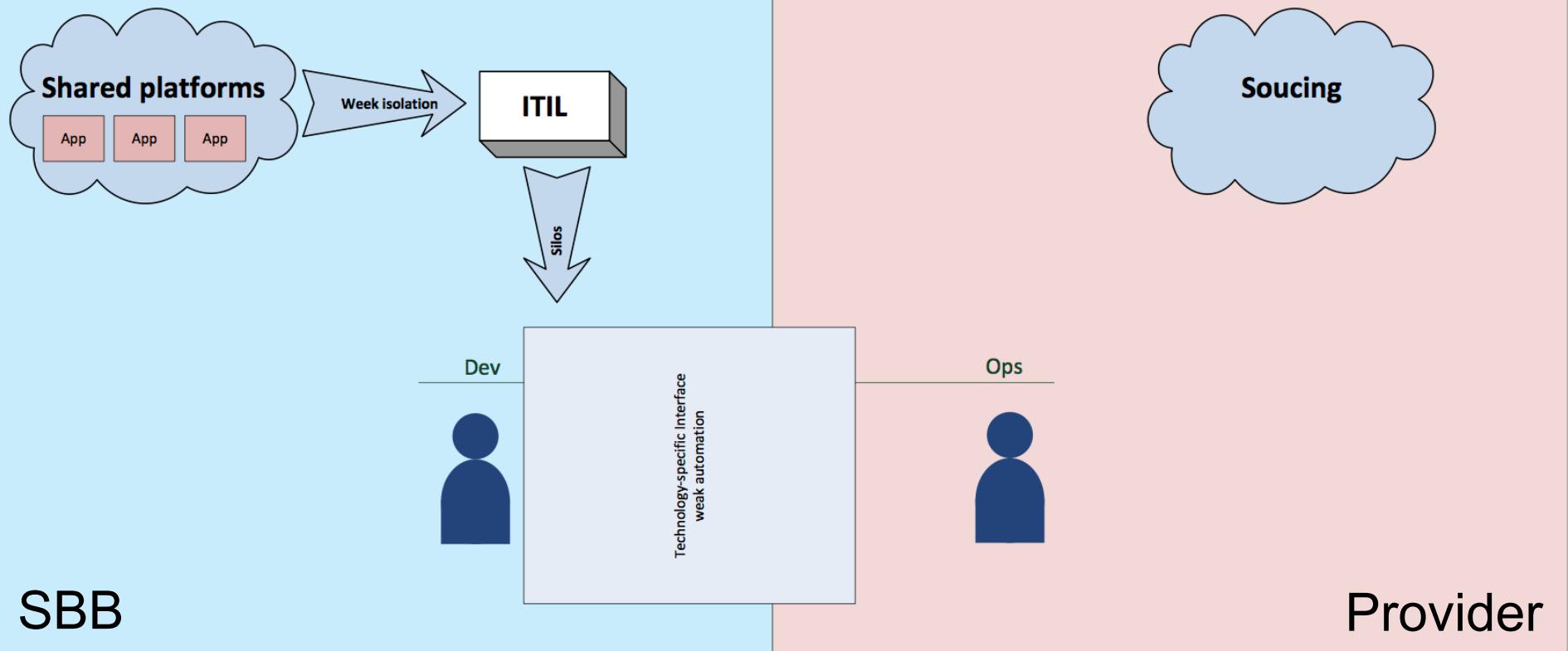
DevOps @ Swiss Railways SBB

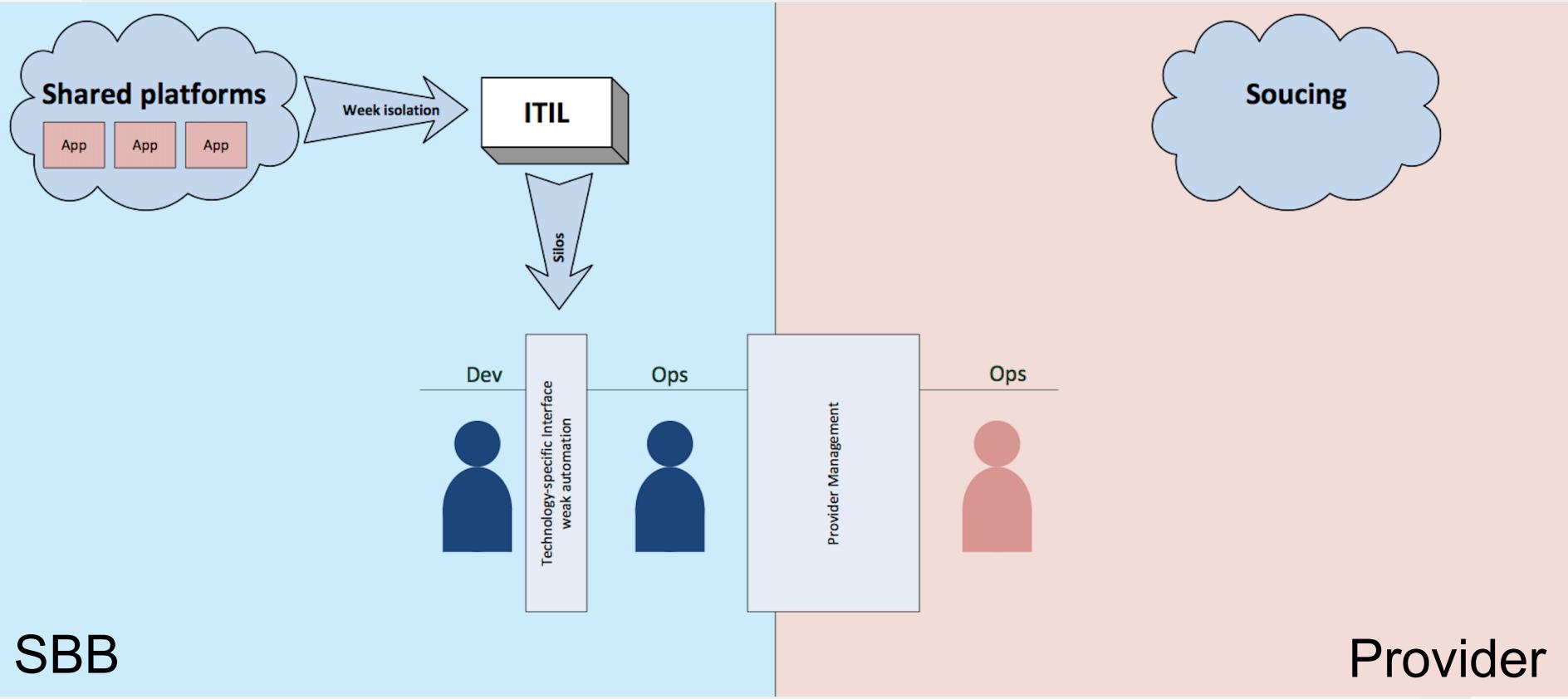
Baltasar Oswald
Project Manager Cloud, SBB

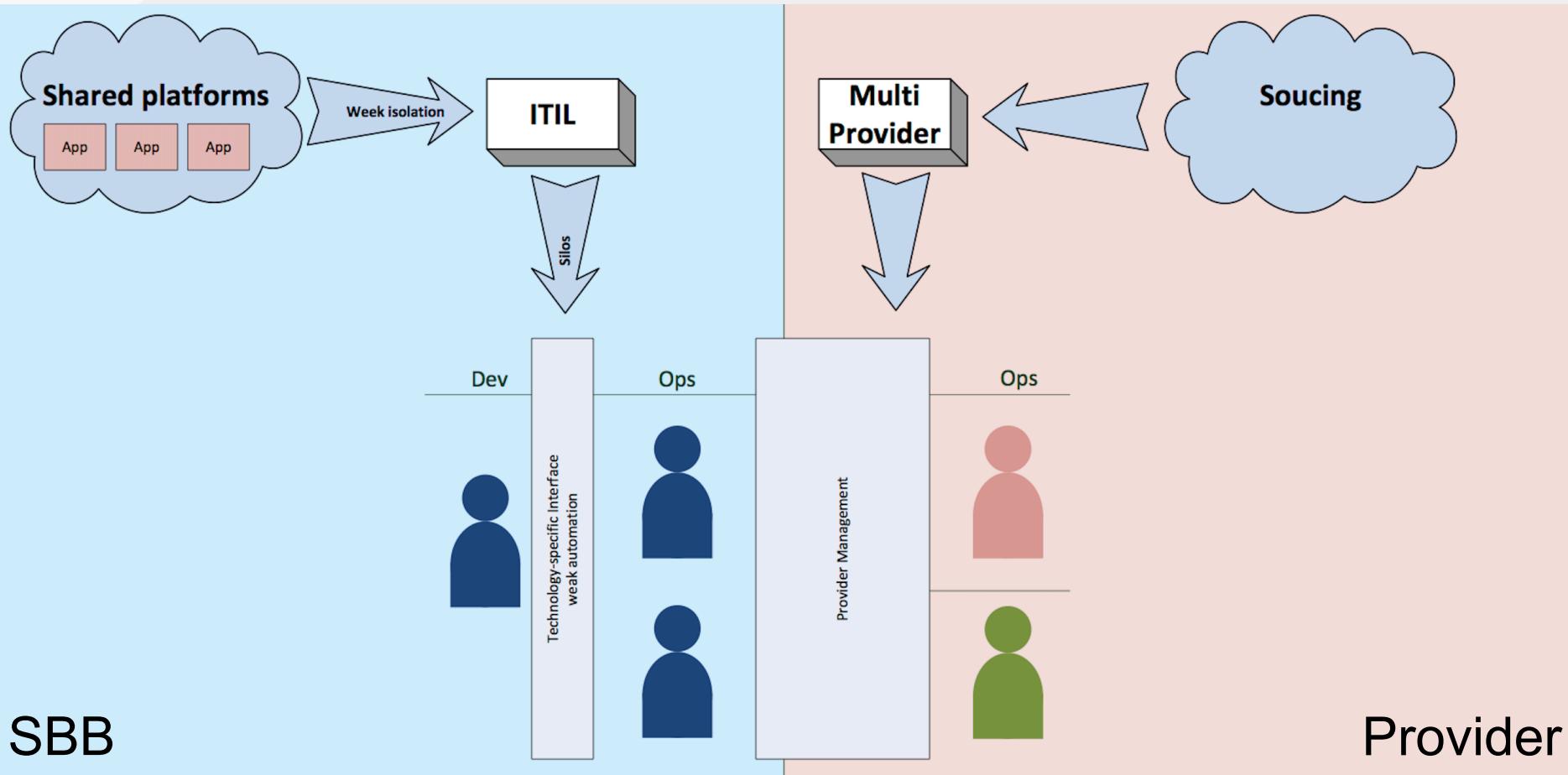
Who is Swiss Railways (SBB)?

DevOps & Provider Management



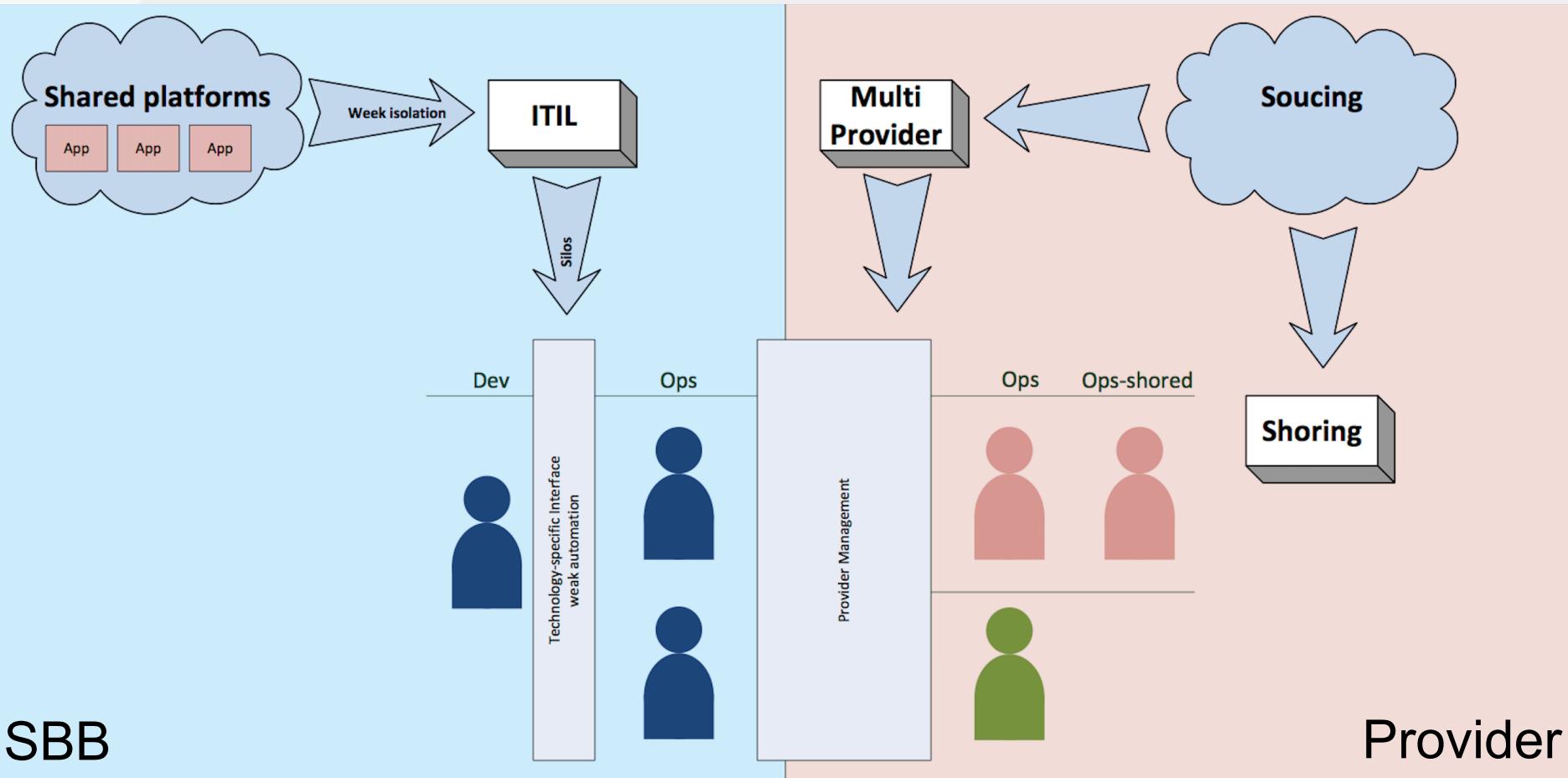


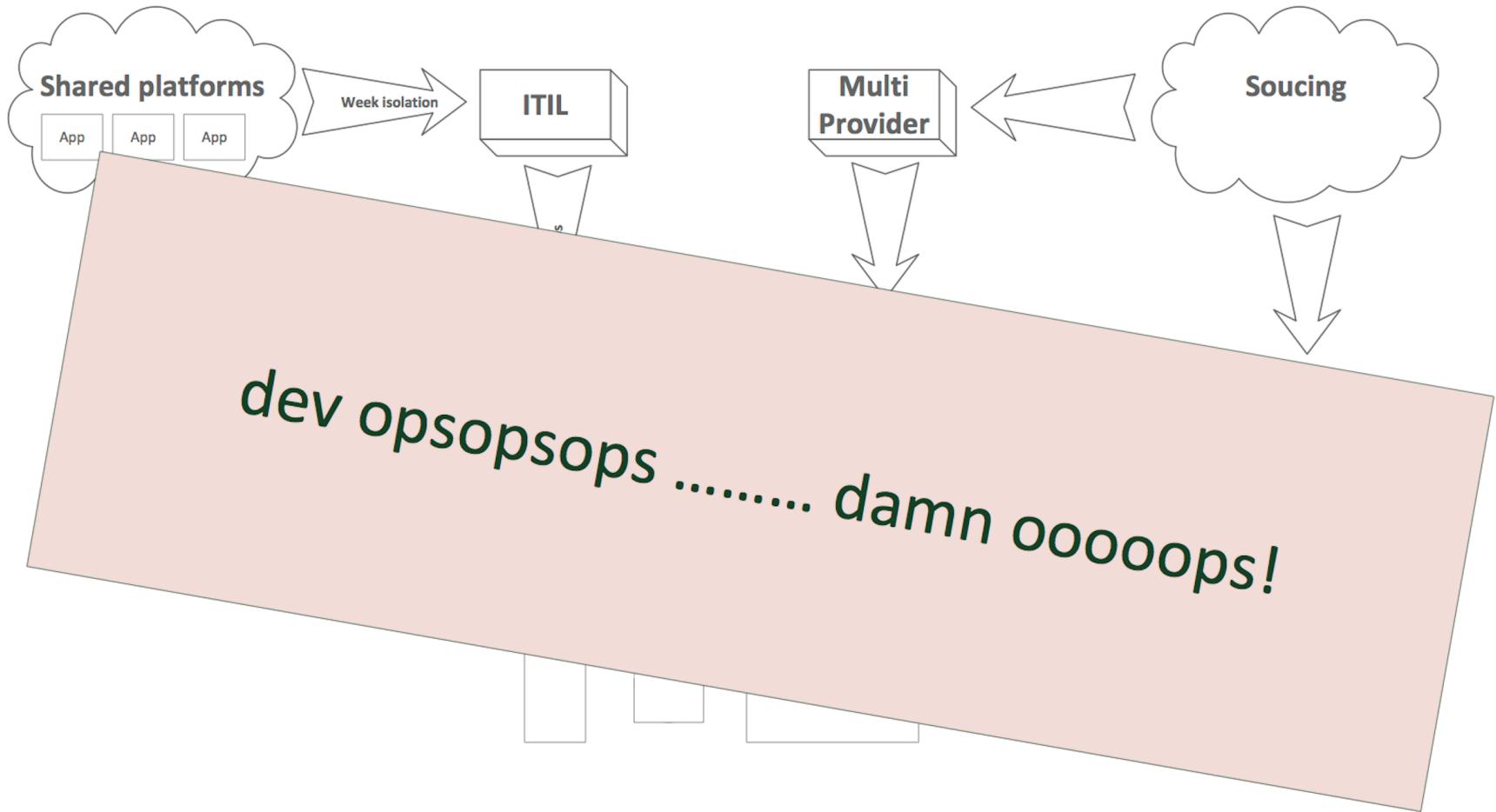


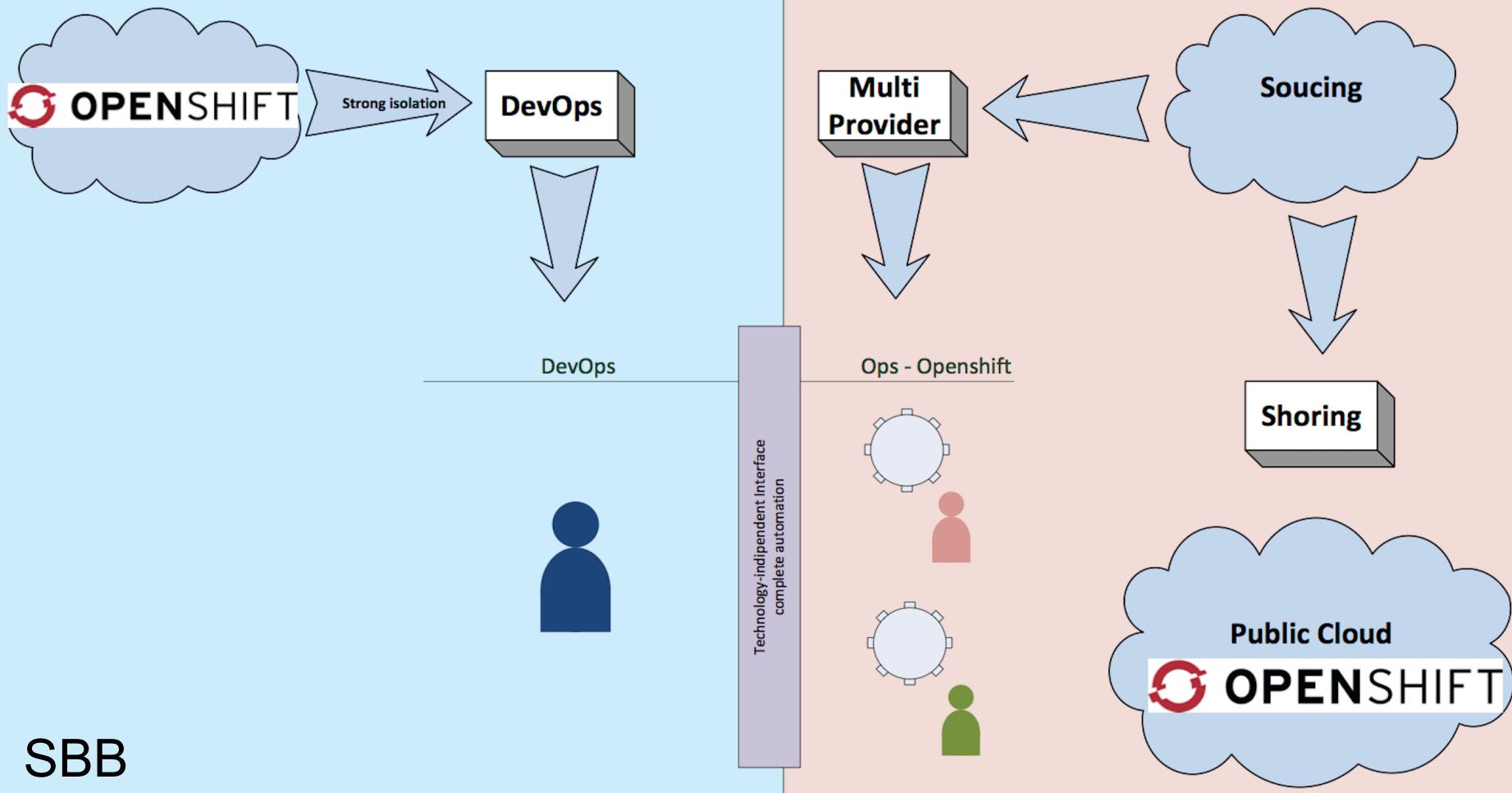


SBB

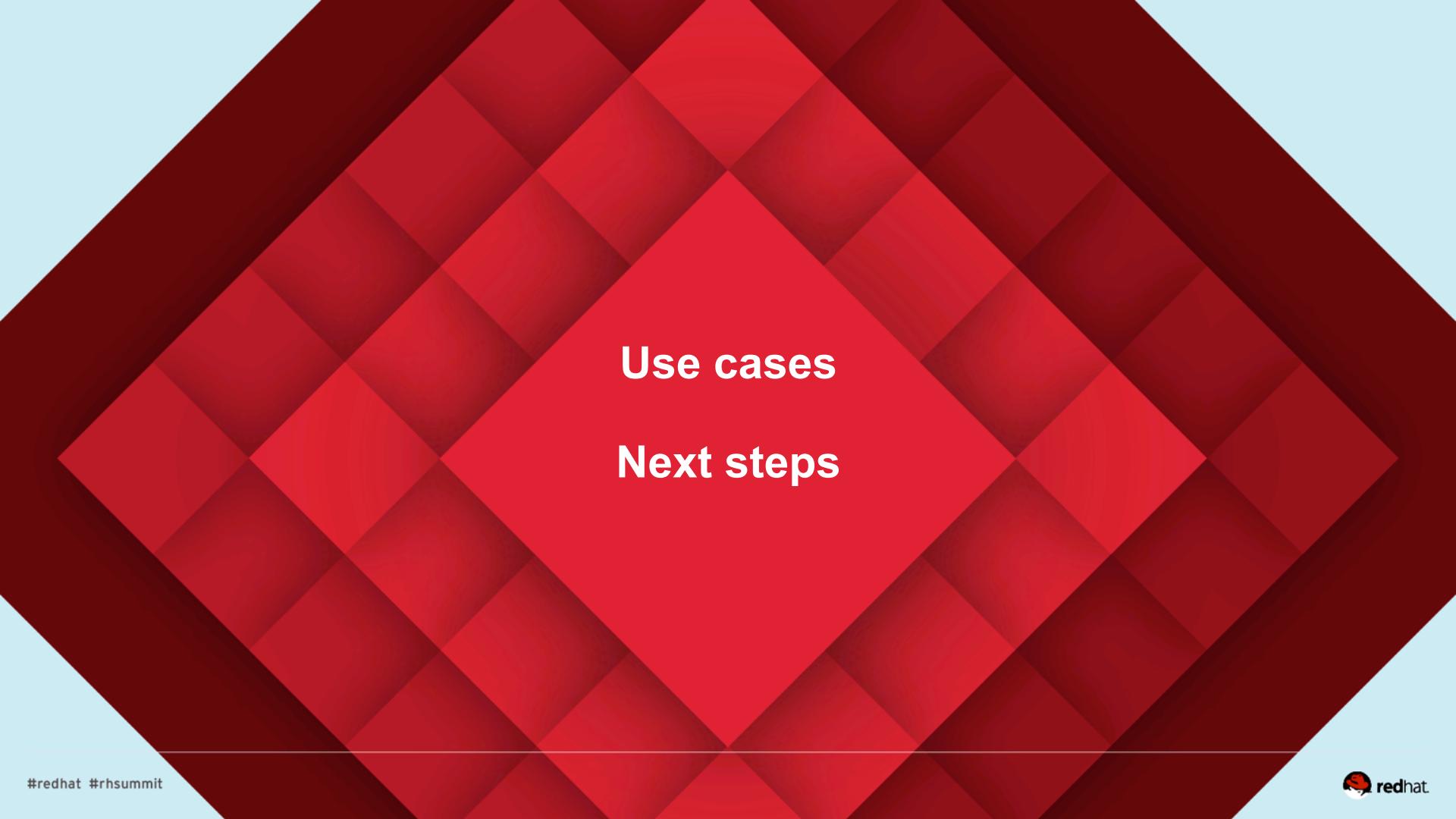
Provider







SBB



Use cases

Next steps



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DevOps in Action with OpenShift – Produban / Santander

Cristian Roldan
Produban PaaS Lead Engineer

ceroldan@produban.com

twitter.com/roldancer
github.com/roldancer

Date

PRODUBAN



**A Global Company in 9 countries giving services to
120 Santander Group affiliates**

How is the relationship between Dev and Ops in a traditional IT ?

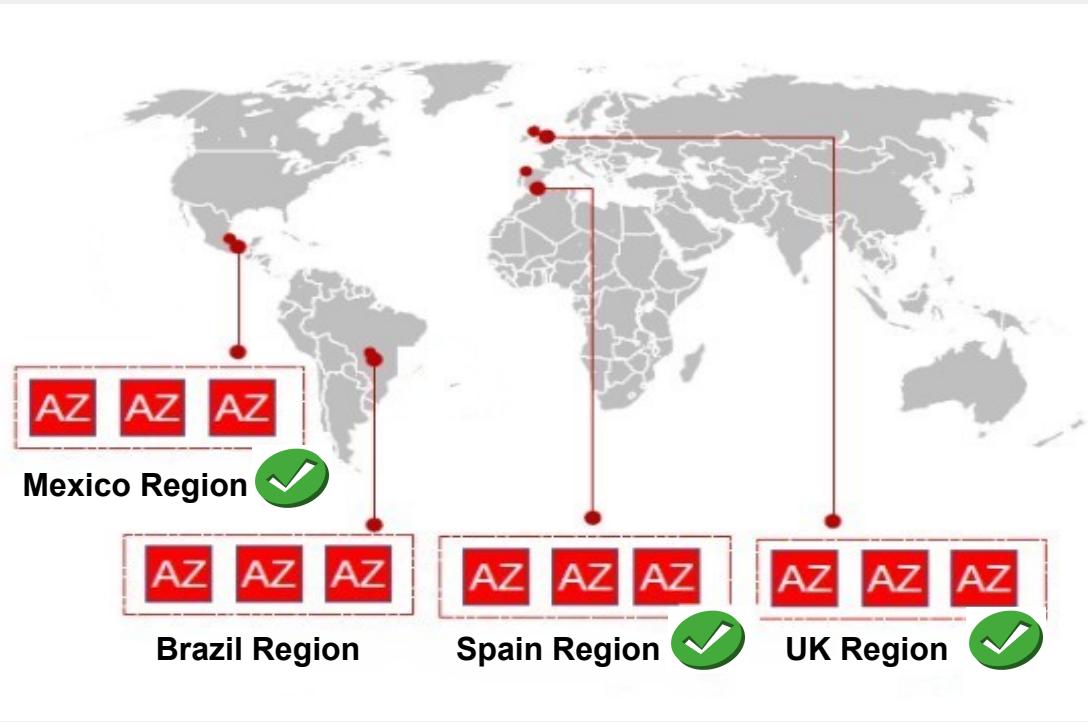
- Dev and Ops could be different companies.
- Dev and Ops working in silos.
- “Dev is the culprit” or “Ops is the culprit”.
- Dev sometimes doesn't know Ops environment.
- Ops sometimes doesn't know Dev complexity, runtimes, configuration.
- A lack of communication between Dev and Ops .
- Dev and Ops have different objectives.

What were the reason to adopt DevOps?

- Share the same tools for Dev and Ops.
- Increase collaboration between dev and ops.
- Reduce deployment time.
- Minimize environment differences.
- Improve Time to market.
- Platform tools.
- Automate deployment tasks, reduce fails during deployments.
- Provide a global service.
- Reduce infrastructure and operation costs.
- Continuous software delivery
- Improve resolution time of problems.
- More time available to add value, continuous improvement.

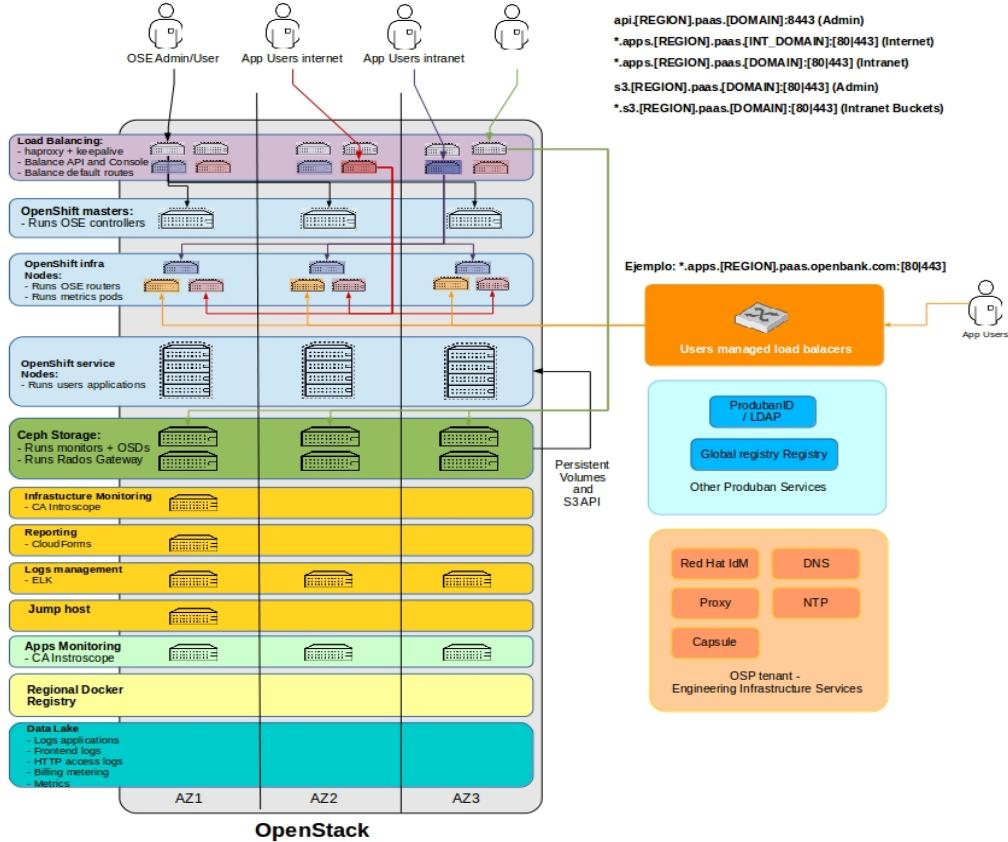
Produban's Global PaaS Service for DevOps teams

Multi-region OpenShift Enterprise on OpenStack



- Currently **Spain**, **Mexico** and **Brazil** region are **ready**.
- At the end of September we should have deployed.
 - ✓ **Brazil**

Global PaaS OpenShift Architecture



Produban's Global PaaS tools for DevOps teams

Global PaaS Status Page

The screenshot shows the BOAE OpenShift Status page in beta. The top navigation bar includes 'Status', 'Issues and Changes', and 'Uptime'. A 'Subscribe to notifications' button is in the top right. The main content area is divided into sections: 'Robots' (Internet Sample App, Intranet Sample App, Production Oc Client, Non-Production Oc Client, all green), 'Components' (Api Server, Load Balancer Internet, Load Balancer Intranet, S3, Registry, Router Intranet, Router Internet, Ceph, Volumes, all green), and 'Nodes' (Production: vmz2nodep16, vmz2nodep01, vmz2nodep11, vmz2nodep02, vmz2nodep14, all green; Non Production: vmz1nodep00, vmz1nodep08, vmz1nodep07, vmz1nodep03, vmz3nodep13, vmz3nodep12, vmz3nodep04, vmz3nodep10, all green).

- This is a public service (Only for Produban's customers).
-
- If there is a problem with an application and the Status Page is in GREEN, the problem is not in the PaaS.
-
- Key tool for DevOps.
-
- Before opening a ticket check the Status Page.

Global PaaS Issues and Changes

BOAW OpenShift Status **beta**

Subscribe to notifications

Status Issues and Changes Uptime

Check date: 2016-06-07 View

Changes on 2016-06-07

There are no changes on the selected date.

Next changes

2016-06-09

Upgrade BOAW to OpenShift 3.2

production and non-production medium upgrade

Programmed from 2016/06/09 18:30 to 2016/06/09 22:00

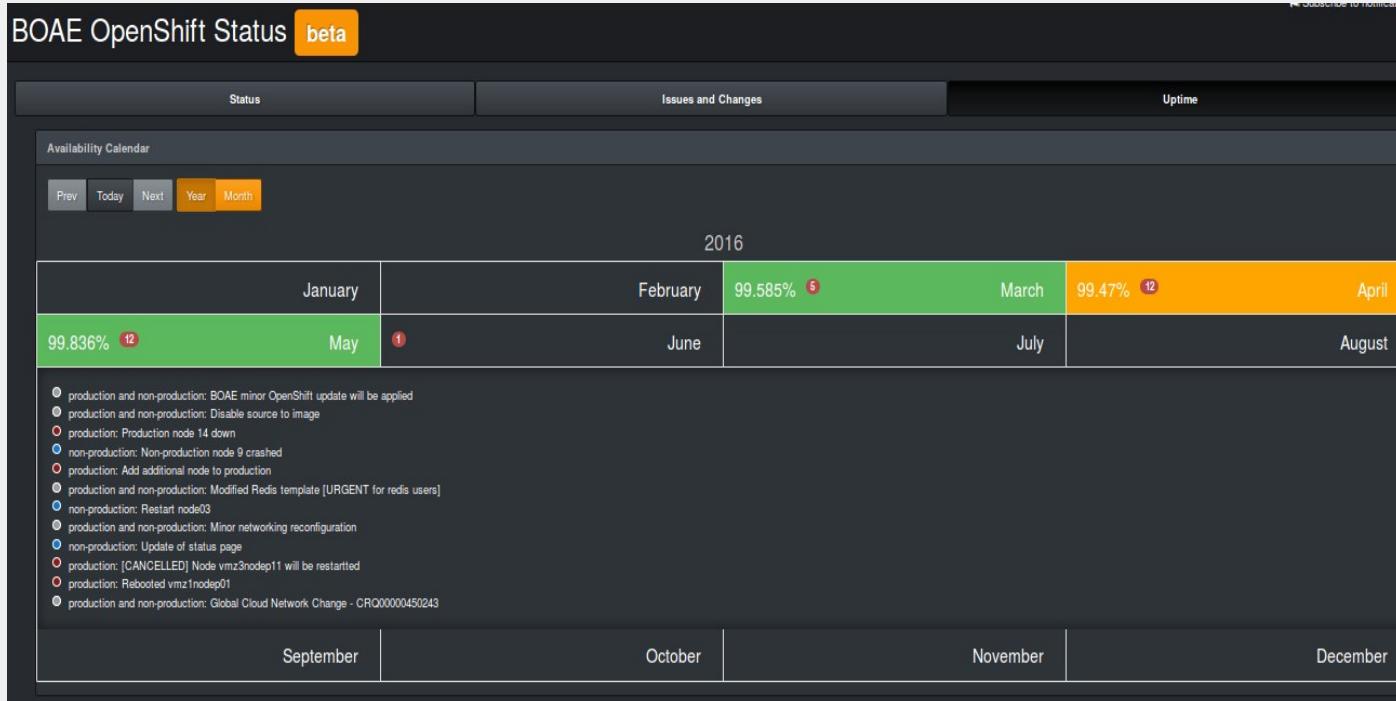
We are going to perform a major version upgrade to OpenShift 3.2.

This upgrade includes several performance improvements as well as new features. More details available on the official changelog (https://docs.openshift.com/enterprise/3.2/release_notes/ose_3_2_release_notes.html).

After the upgrade, please be sure to download the 3.2 oc client (available at <https://k8s.gsn.net.corp/content/openshift-v3-clients>).

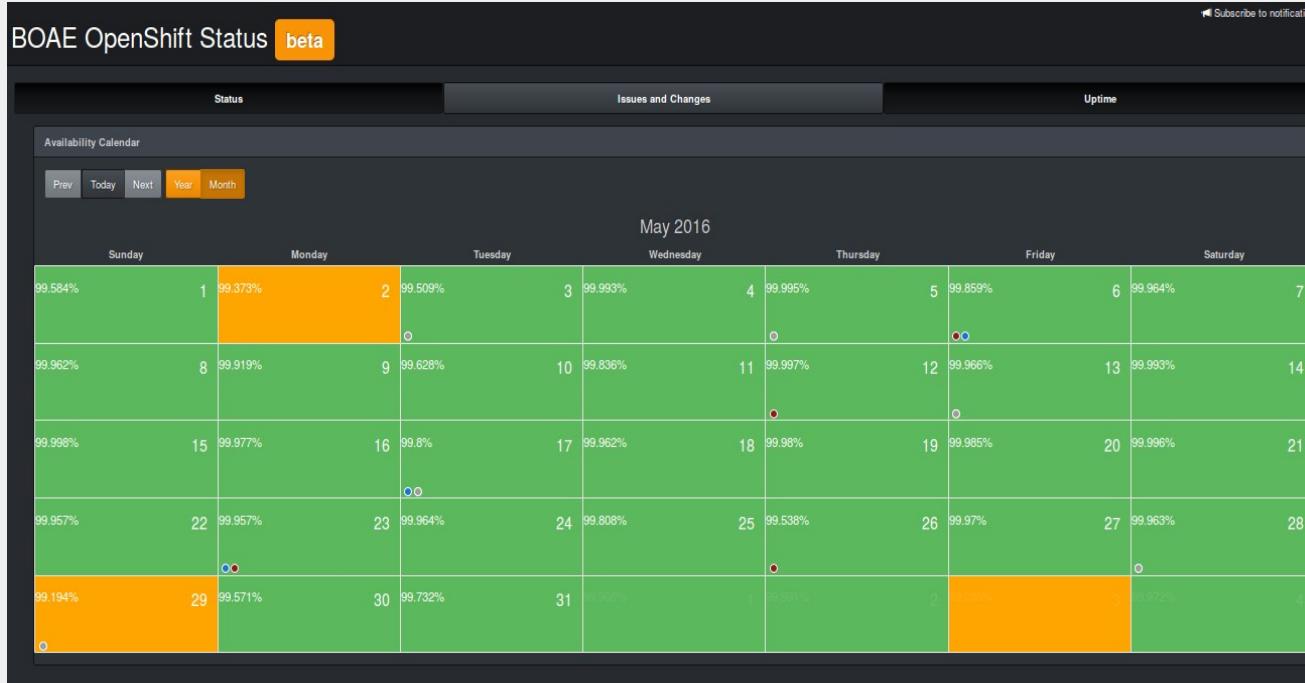
- This is a public service **(Only for Produban's customers)**.
- We publish all the issues and changes.
- If the issue or change is critical we send an e-mail to all the customer.

Global PaaS Uptime (monthly)



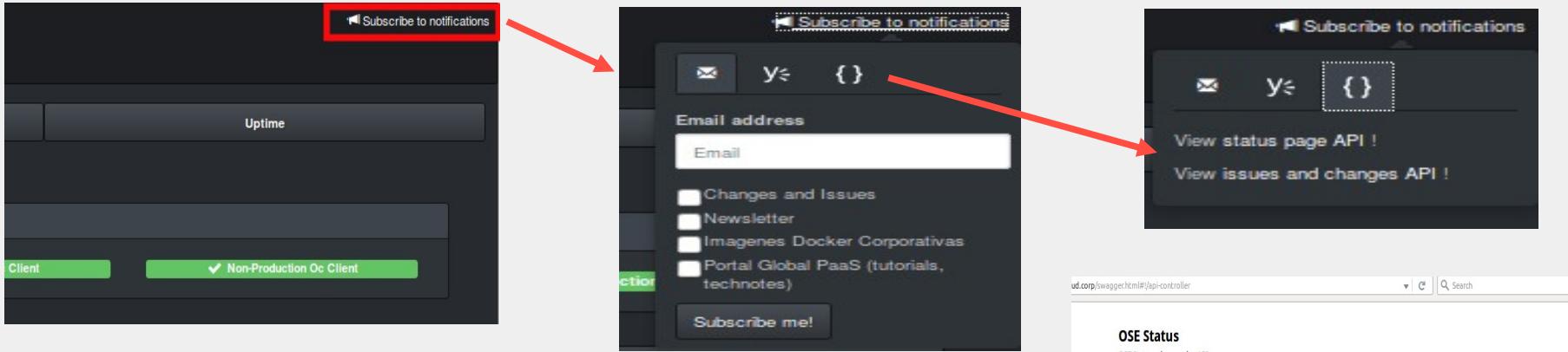
- This is a public service **(Only for Produban's customers)**.
- For every month Uptime and Issues/Changes are shown.
- Measure and monitoring are key services for Global PaaS team

Global PaaS Uptime (daily)



- Measure/Monitoring that's the Global PaaS Spirit
- For continuous improvements, monitoring and measure are key services.
- Uptime is used to calculate SLA for customers.

Global PaaS Subscribe to notification Service



ud.corp/swagger.html#/api-controller

OSE Status

OSE Status microservice API

api-controller: Api Controller

GET /api/metrics

GET /api/metrics/raw/(date)/(time) Get metrics (raw format) by date. Date format [yyyy-MM-dd] Time format [HH:mm]

GET /api/metrics/(date)/(time) Get metrics by date. Date format [yyyy-MM-dd] Time format [HH:mm]

uptime-controller : Uptime Controller

Show/Hide | List Operations | Expand Operations | Raw

Get metrics (raw format) by date. Date format [yyyy-MM-dd] Time format [HH:mm]

Get metrics by date. Date format [yyyy-MM-dd] Time format [HH:mm]

- Communication is key in a DevOps environment.
-
- This is a public service (**Only for Produban's customers**).
-
- The customer subscribes to different channels.
-
- Public REST API is available for gathering of metrics and uptime data.

Customers opinion about OpenShift Global PaaS Service

DevOps Global PaaS Dream Team



Cristian Roldan

Product Owner



Daniel Cortés

IT Architect



Roberto Gómez

DevOps



Silvia Nievas

Produbar



Cristabel Talavera

IT Architect



Claudiu Barzu

DevOps



Pablo Alonso

DevOps



David Pascual

RedHat Consultant

Systems Engineer. Lover paddle tennis, tennis, tourism and leisure in general.

Ing. Computer and Telecommunications. I'm a fan of the world of engineering and, in particular, engineering applied to ICT.

Computer Engineer. Technology enthusiast, the Xbox and mountain bike.

Electronic Engineer. He likes Granada and horseback riding.

Computer Eng. and Industrial Eng. I like to learn new technologies and keep balance with the Aeroyoga which is another of my passions!

The team junior computer engineer. I like to learn new things and formula 1!.

Ing. Telecommunication. I love computer science, telecommunications, science ... and always learning something new.

Redhat People. Redhat lover.



Julián Fernández

IT Architect



Javier Ortiz

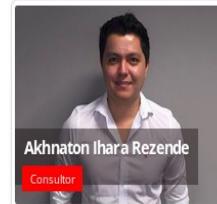
DevOps

Computer engineer. Passionate about new technologies, sport and dogs.



ScrumMaster

Computer Engineer. Technology, videogames and boardgames lover. If it pains or hurts, review and change!



Akhnaton Ihara Rezende

Consultor

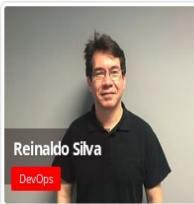
IT consultant expert in application development and administration of application servers. Always seeking for new technologies and concepts.



Fabio Machado

Systems Engineer

Senior Consultant, Adapt the Open-Source



Reinaldo Síva

DevOps

Informatics Engineer and just enjoying the work at the the rhythm of Marillion (well, or the beat of Maelo)



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