

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

Nicolas FANJEAU

IT Tools Service Startup Leader – Airbus

Baltisar Oswald

Project Manager Cloud, SBB

Cristian Roldan

Produban PaaS Lead Engineer

DevOps in Action with OpenShift - Airbus

Nicolas FANJEAU

IT Tools Service Startup Leader - Airbus

Airbus is a global aircraft manufacturer



55,000

Employees

€40 billion

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



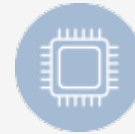
12 500
servers



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

EMBRACES THE OPEN WAY OF WORKING

- Improve the motivation and efficiency of our people and make IT more attractive through:
 - Transparency
 - Collaboration
 - Sharing
 - Empowerment
- Further increase our speed of change
- Align with the digitalization initiatives

BOOSTS THE USE OF OPEN SOURCE SOFTWARE

- Get classical Open Source advantages (lower TCO, quicker implementations, better quality & security etc..)
- Reduce our dependency from classical software suppliers
- Increase innovation, as in several areas Open Source Software solutions are more advanced (Cloud, Big Data...)

Use the
opportunity to



A PROJECT

- Solves the IT Service Management (ITSM) „dilemma“ and reduces the number of tools

Use the
opportunity to



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



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

01/2016
Kick Off

02/2016
First Release

03/2016
Open to Users

400 users

4 000 users

100 000 users

06/2016
Open to all users

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...



Jenkins



JFrog Artifactory

sonarqube



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

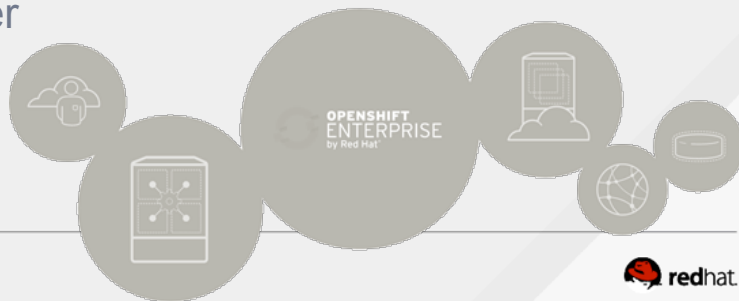
SOLUTION

- 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

- Future of **PaaS** is Open Source with the **container**



RED HAT **SUMMIT**

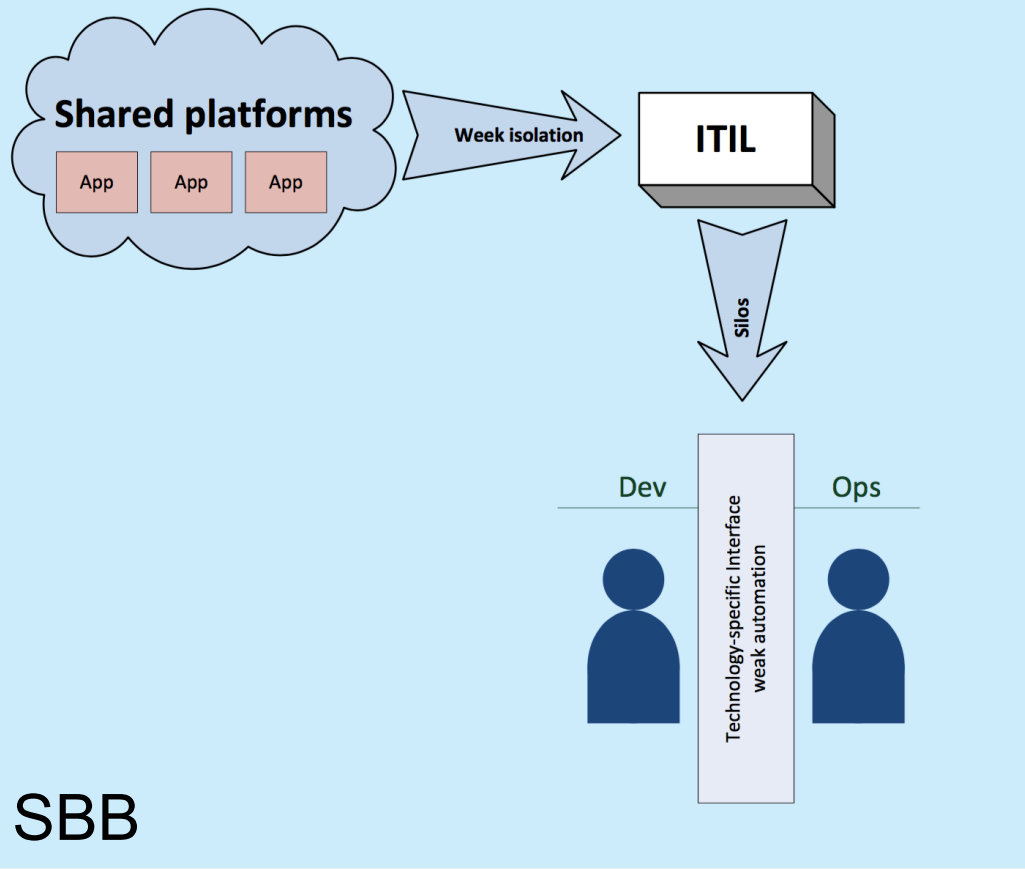
LEARN. NETWORK.
EXPERIENCE OPEN SOURCE.

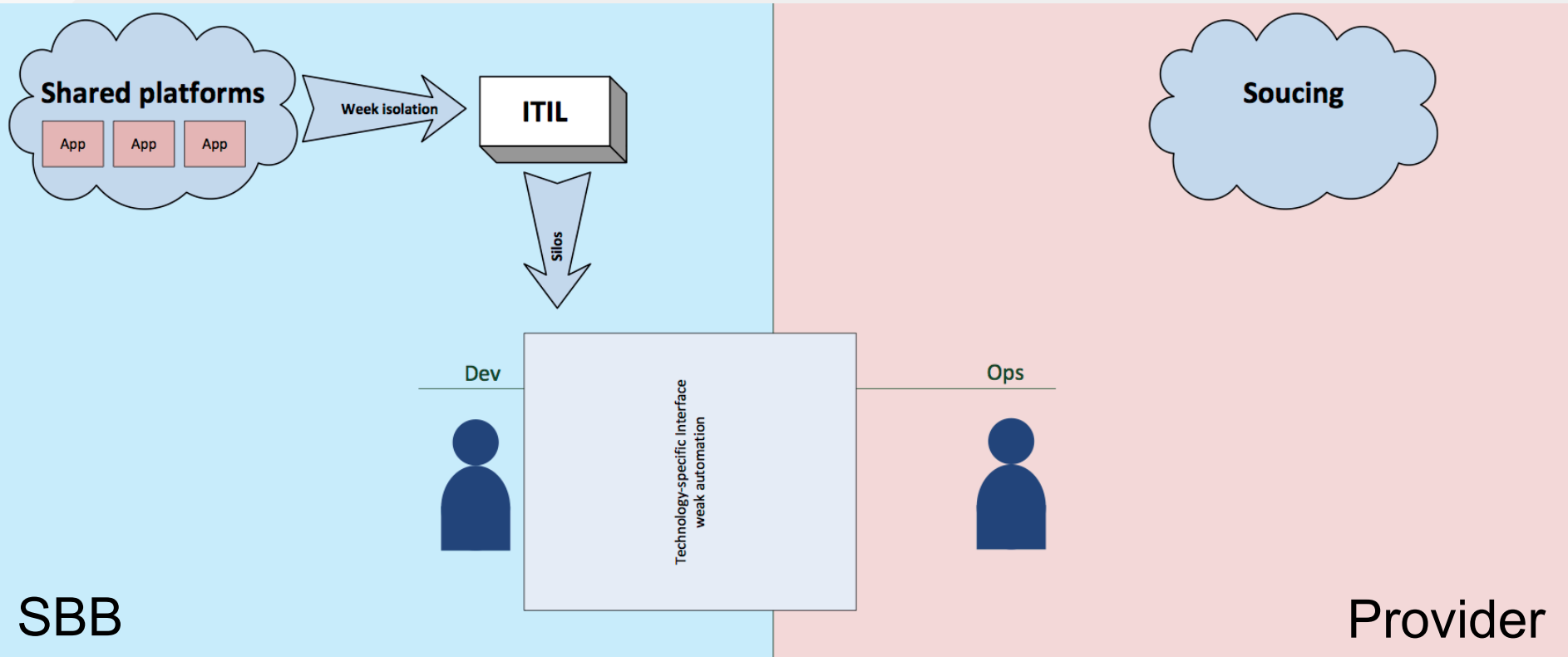
DevOps @ Swiss Railways SBB

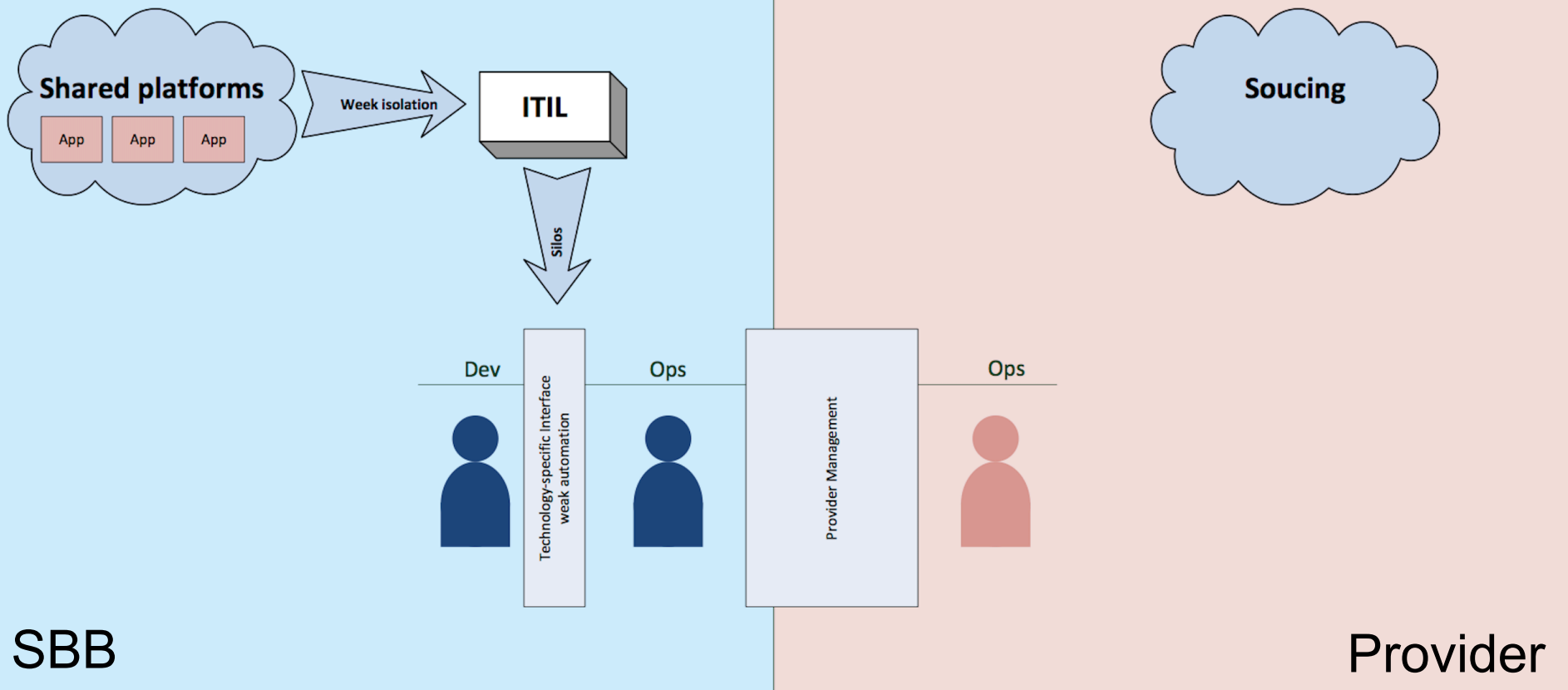
Baltisar Oswald
Project Manager Cloud, SBB

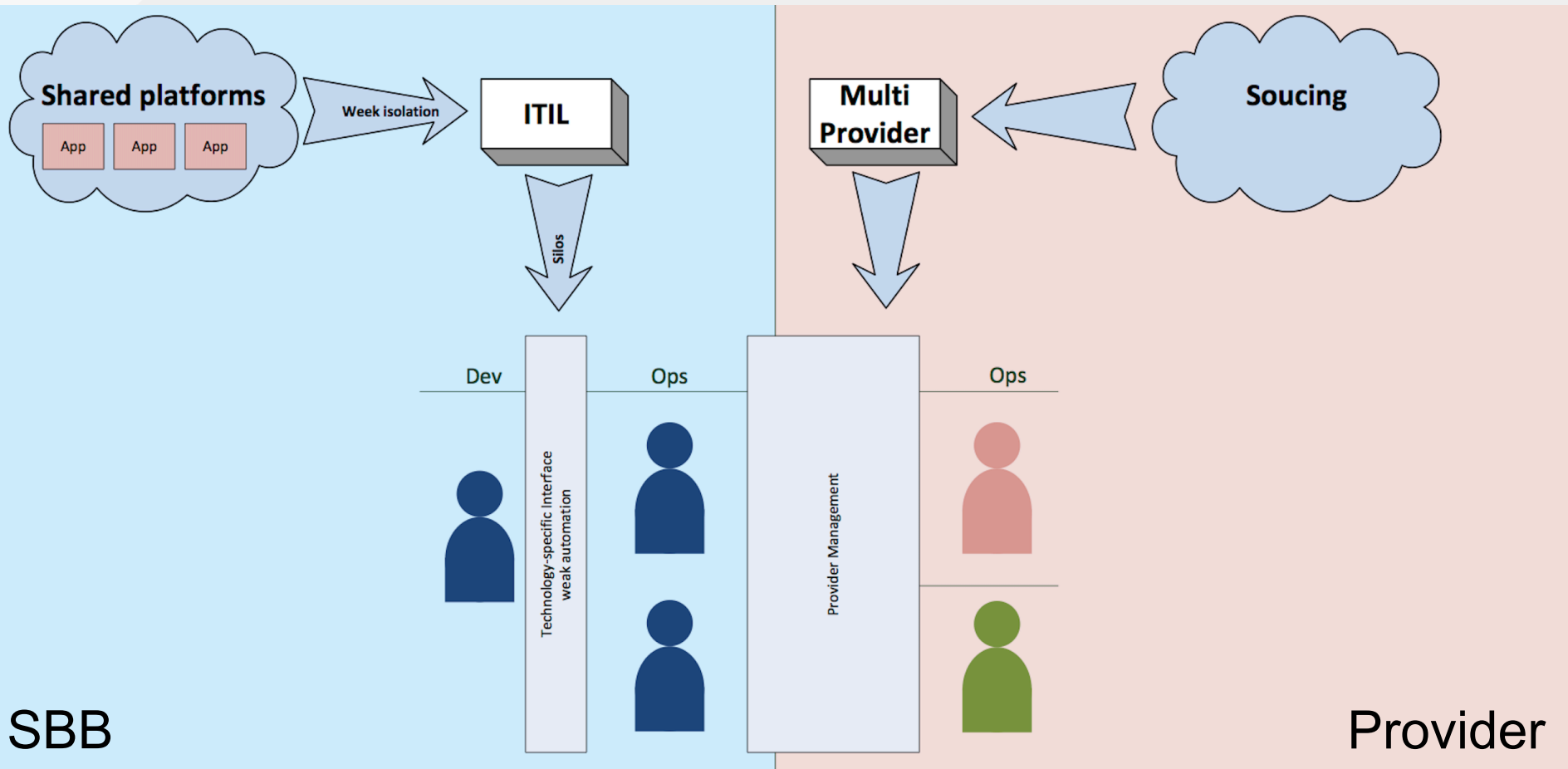
Who is Swiss Railways (SBB)?

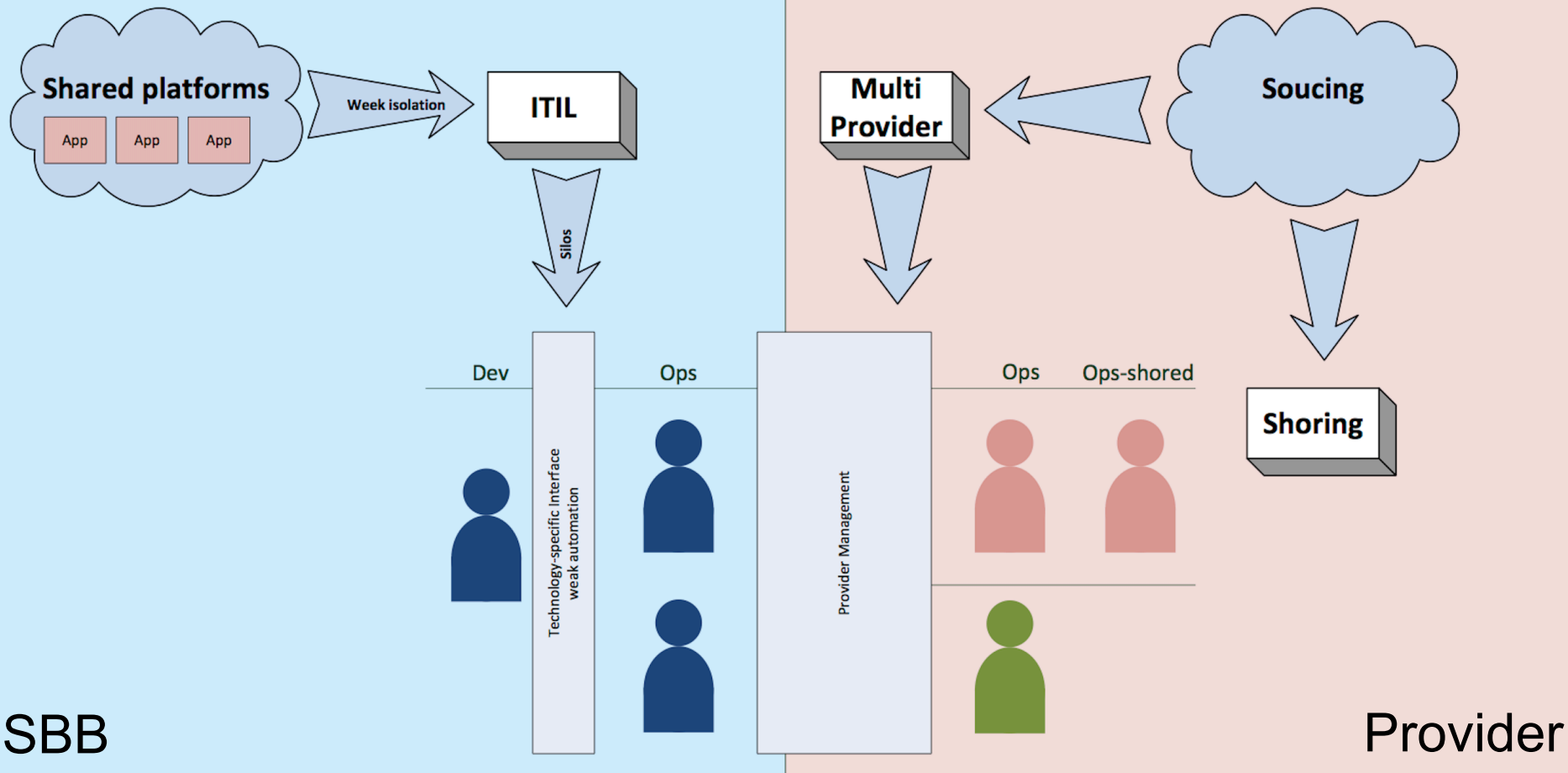
DevOps & Provider Management

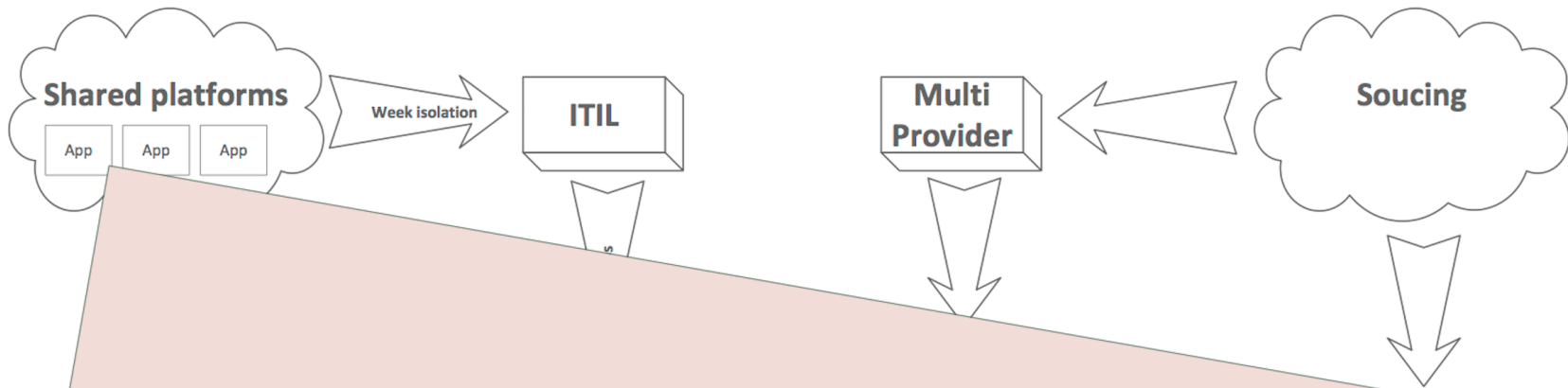




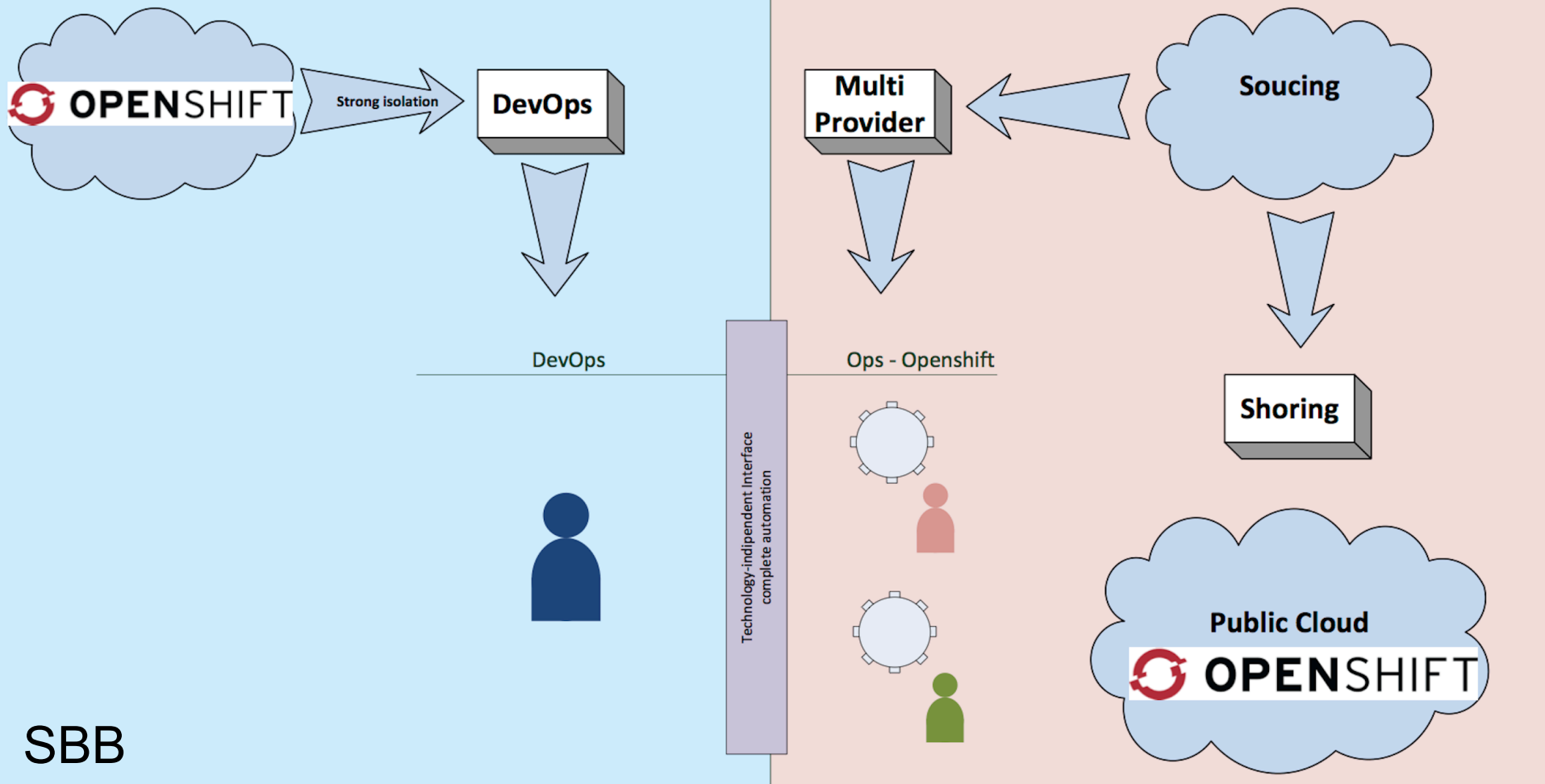








dev opsopsops damn oooooops!



Use cases

Next steps



RED HAT **SUMMIT**

LEARN. NETWORK.
EXPERIENCE OPEN SOURCE.

DevOps in Action with OpenShift – Produban / Santander

Cristian Roldan
Produban PaaS Lead Engineer

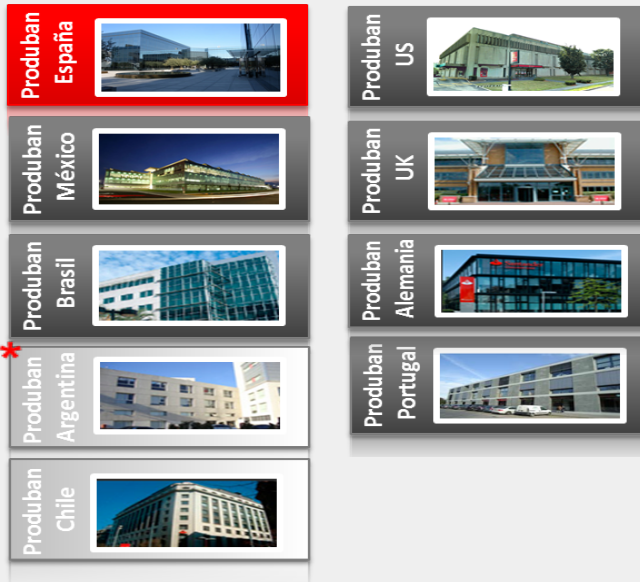
ceroldan@produban.com

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 ?

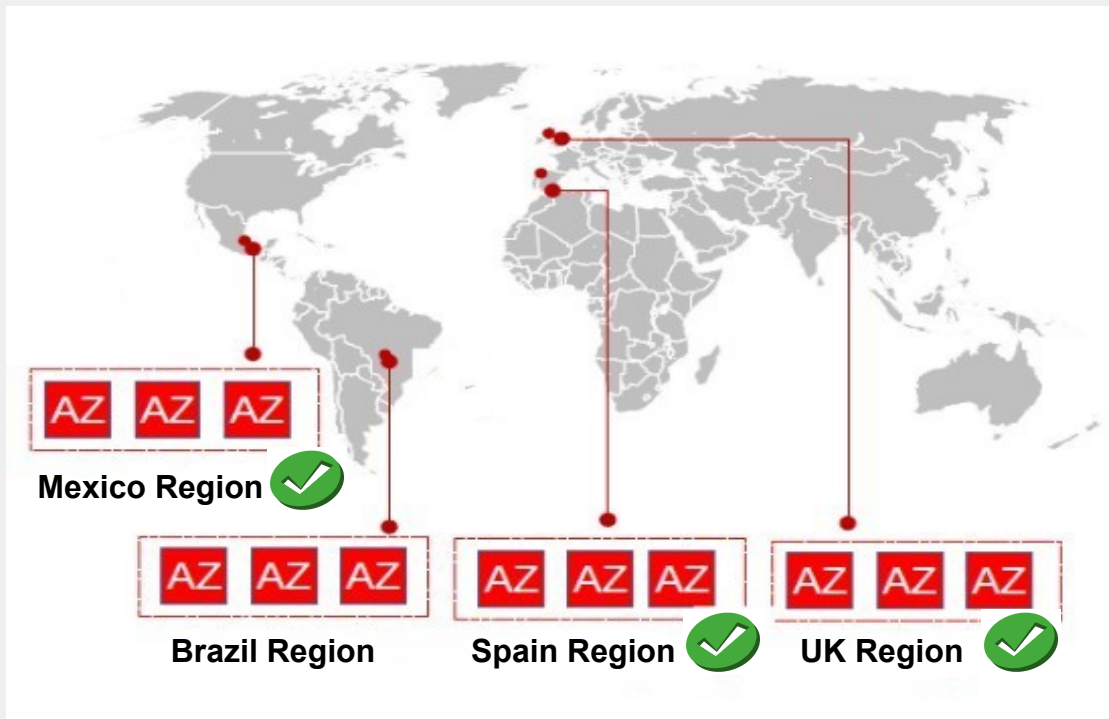
- Dev and Ops could be different companies.
- Dev and Ops working in silos.
- “Dev is the culprit” or “Ops is the culprit”.
- Dev some times doesn't know Ops environment.
- Ops some times doesn't know Dev complexity, runtimes, configuration.
- A lacks of communication between Dev and Ops .
- Dev and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

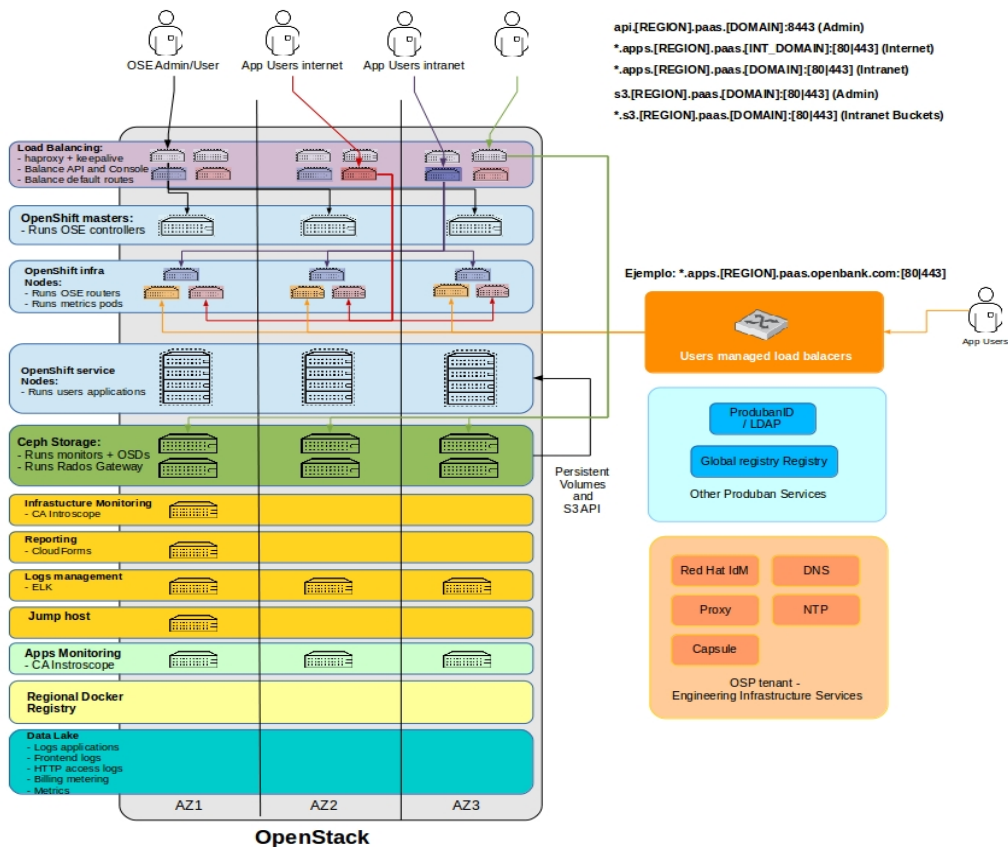
Multi-region OpenShift Enterprise on OpenStack



- 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 displays the BOAE OpenShift Status Page. At the top left, it says 'BOAE OpenShift Status' followed by an orange 'beta' badge. In the top right corner, there is a 'Subscribe to notifications' link. Below the header, there are three tabs: 'Status' (selected), 'Issues and Changes', and 'Uptime'. Under the 'Status' tab, there is a 'Check date' field showing '2016-06-07 21:28' and a 'View' button. The main content area is divided into three sections: 'Robots', 'Components', and 'Nodes'. Each section contains a grid of green status bars, each with a checkmark icon and a label. The 'Robots' section has four items: 'Internet Sample App', 'Intranet Sample App', 'Production Oc Client', and 'Non-Production Oc Client'. The 'Components' section has eight items: 'Api Server', 'Load Balancer Internet', 'Load Balancer Intranet', 'Registry', 'Router Intranet', 'Router Internet', 'S3', and 'Ceph'. The 'Nodes' section is further divided into 'Production' and 'Non Production' sub-sections. The 'Production' sub-section has three items: 'vmz2nodep16', 'vmz2nodep01', and 'vmz2nodep14'. The 'Non Production' sub-section has six items: 'vmz2nodep09', 'vmz2nodep13', 'vmz2nodep08', 'vmz2nodep12', 'vmz2nodep07', and 'vmz2nodep04'.

Robots
✓ Internet Sample App
✓ Intranet Sample App
✓ Production Oc Client
✓ Non-Production Oc Client

Components
✓ Api Server
✓ Load Balancer Internet
✓ Load Balancer Intranet
✓ Registry
✓ Router Intranet
✓ Router Internet
✓ S3
✓ Ceph

Nodes
Production
✓ vmz2nodep16
✓ vmz2nodep01
✓ vmz2nodep14
Non Production
✓ vmz2nodep09
✓ vmz2nodep13
✓ vmz2nodep08
✓ vmz2nodep12
✓ vmz2nodep07
✓ vmz2nodep04

- 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

The screenshot shows the BOAW OpenShift Status page. At the top, it says "BOAW OpenShift Status" with a "beta" badge. There's a "Subscribe to notifications" link. Below this are three tabs: "Status", "Issues and Changes", and "Uptime". The "Issues and Changes" tab is selected. Under this tab, there's a "Check date:" field with "2016-06-07" and a "View" button. Below this, it says "Changes on 2016-06-07" and "There are no changes on the selected date." Further down, under "Next changes", it shows a date "2016-06-09" and a section titled "Upgrade BOAW to OpenShift 3.2". This section includes labels for "production and non-production", "medium", and "upgrade". It states the upgrade is programmed from 2016/06/09 18:30 to 2016/06/09 22:00 and that they are performing a major version upgrade to OpenShift 3.2. It also provides links to the official changelog and the OpenShift 3.2 release notes.

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

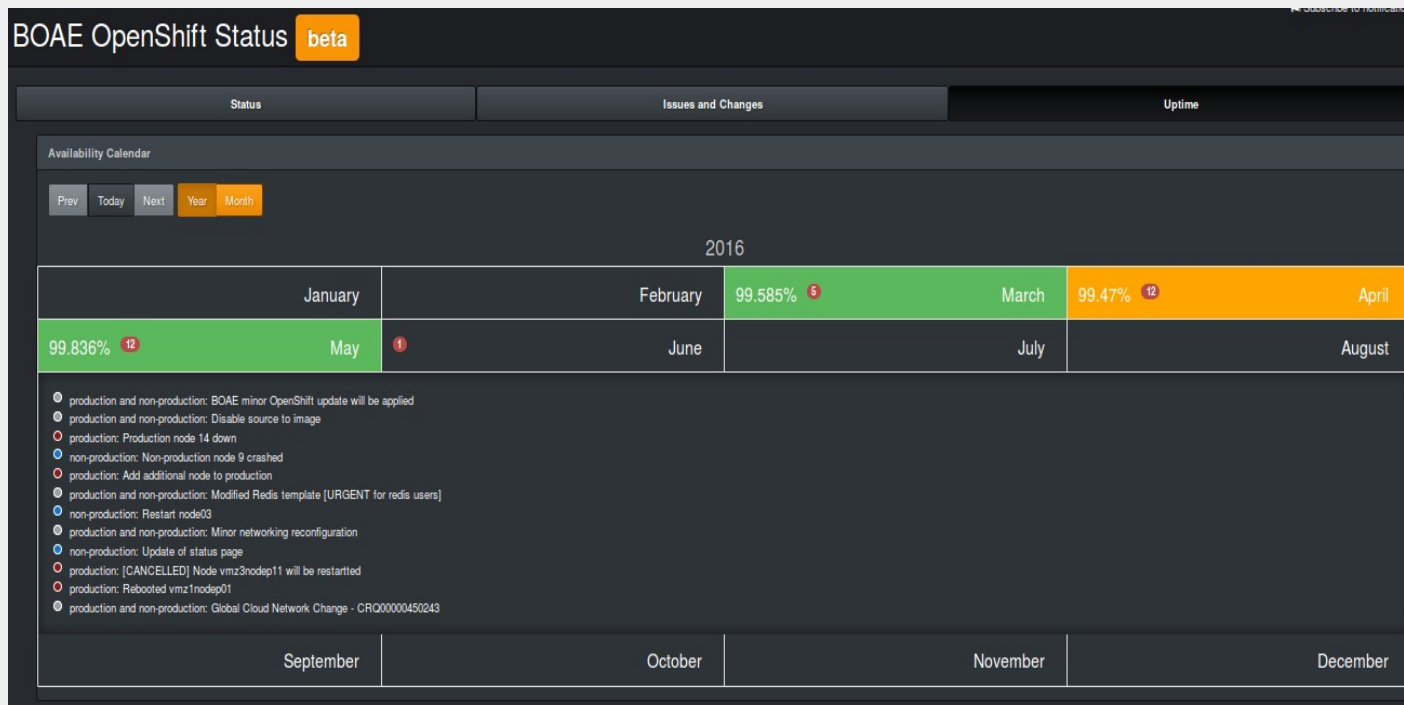
We are going to perform a major version upgrade to OpenShift 3.2.

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://kld.gsnet.corp/content/openshift-v3-clients>).

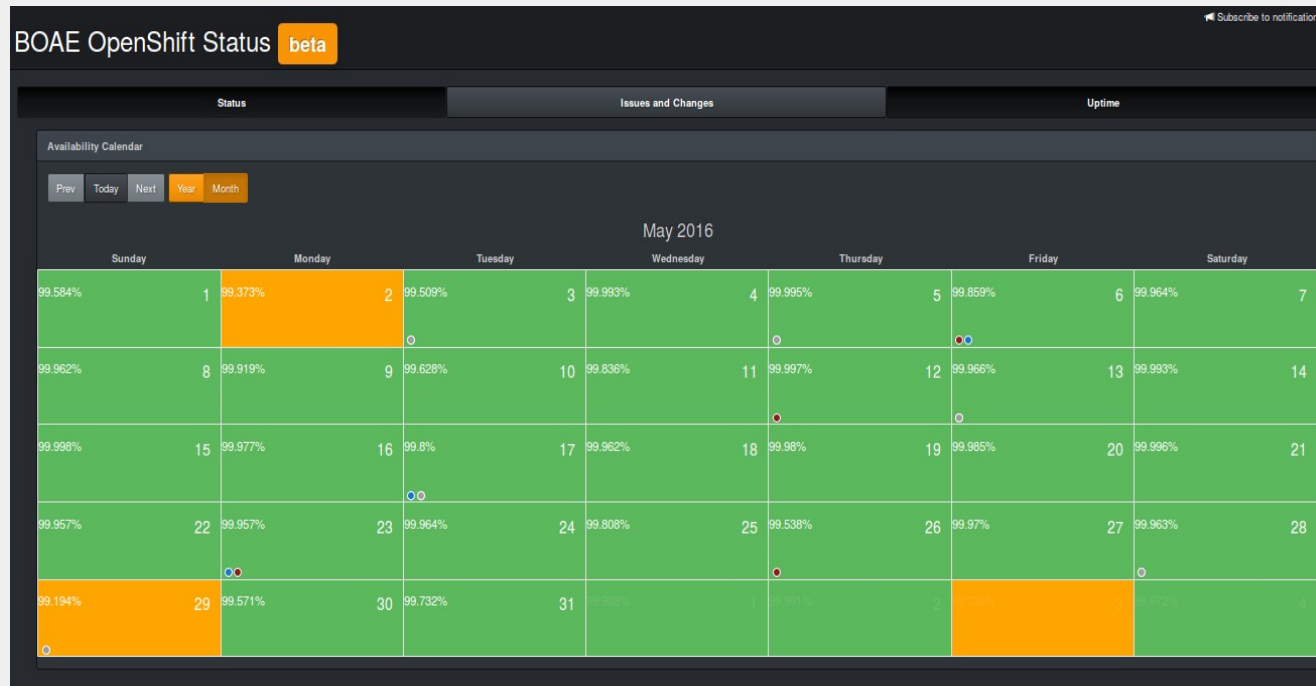
- This is a public service **(Only for Produban's customers)**.
-
- We publish all the issues and changes.
-
- If the issue or change is critical we send an e-mail to all the customer.

Global PaaS Uptime (monthly)



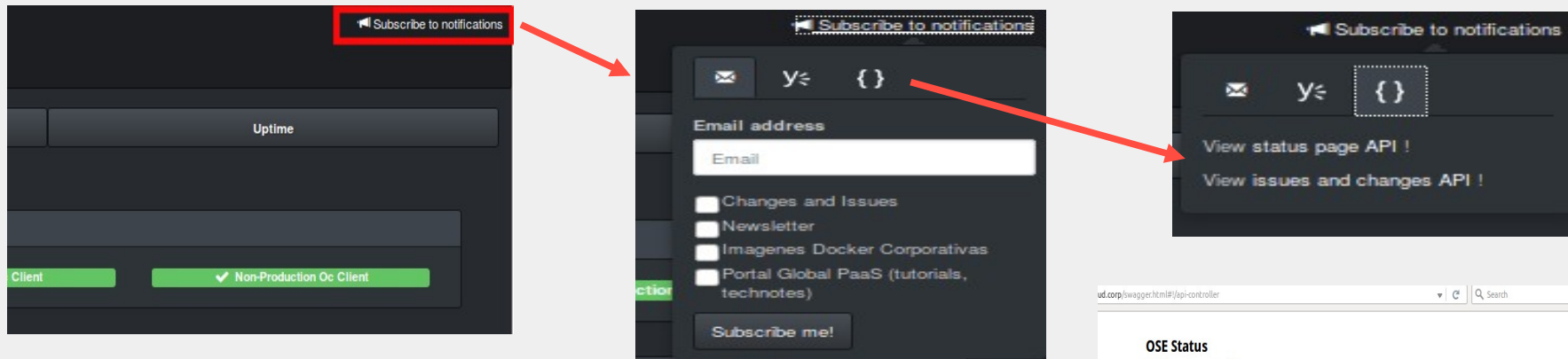
- This is a public service **(Only for Produban's customers)**.
-
- For every month Uptime and Issues/Changes are shown.
-
- Measure and monitoring are key services for Global PaaS team

Global PaaS Uptime (daily)

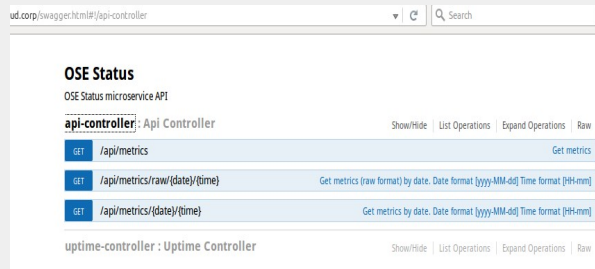


- Measure/Monitoring that's the Global PaaS Spirit
- For continuous improvements, monitoring and measure are key services.
- Uptime is used to calculate SLA for customers.

Global PaaS Subscribe to notification Service



- 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

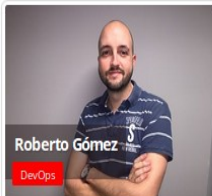
Systems Engineer. Lover paddle tennis, tennis, tourism and leisure in general.



Daniel Cortés

IT Architect

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



Roberto Gómez

DevOps

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



Silvia Nieves

Produban

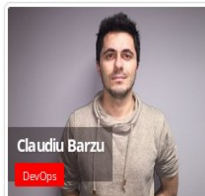
Electronic Engineer. He likes Granada and horseback riding.



Cristabel Talavera

IT Architect

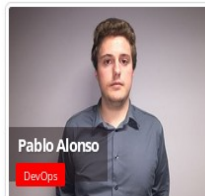
Computer Eng. and Industrial Eng. I like to learn new technologies and keep balance with the Aeroyoga which is another of my passions!



Claudiu Barzu

DevOps

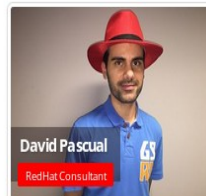
The team junior computer engineer. I like to learn new things and formula 1.



Pablo Alonso

DevOps

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



David Pascual

RedHat Consultant

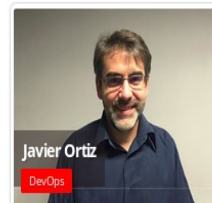
Redhat People. Redhat lover.



Julián Fernández

IT Architect

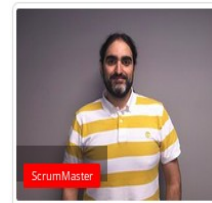
Computer engineer. Passionate about new technologies, sport and dogs.



Javier Ortiz

DevOps

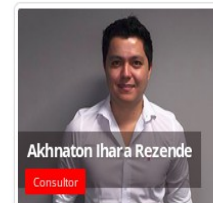
Degree in computer science. Moving from Production Engineering.



ScrumMaster

ScrumMaster

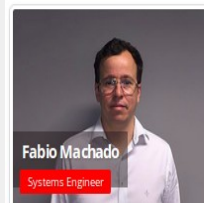
Computer Engineer. Technology, videogames and boardgames lover. If it pains or hurts, review and change!



Akhnaton Ihara Rezende

Consultor

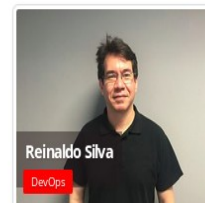
IT consultant expert in application development and administration of application servers. Always seeking for new technologies and concepts.



Fabio Machado

Systems Engineer

Senior Consultant, Adapt the Open-Source



Reinaldo Silva

DevOps

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

The logo features the text "RED HAT" in a smaller, white, sans-serif font above the word "SUMMIT" in a larger, bold, white, sans-serif font. Both are contained within a red, speech-bubble-like shape with a pointed bottom.

RED HAT SUMMIT

LEARN. NETWORK.
EXPERIENCE OPEN SOURCE.