

Devops: on going pursuit of effectiveness

Andrew Yongjoon Kong

Who am I

Andrew. Yongjoon kong

- Cloud Technical Advisory for Government Broad Cast Agency
- Adjunct Prof. Ajou Univ
- Korea Data Base Agency Acting Professor for Bigdata
- Member of National Information Agency Bigdata Advisory committee
- Kakaocorp, Cloud Tech Lead
- Talks
 - Single System Image Cloud, kakao, 20202
 - distributed container native computing platform, kakao, 2019
 - cloud native platform 9RUM, kakao 2018.
 - Scalable Loadbalancer with VM orchestrator (2017, netdev, korea)
 - Full route based network with linux (2016, netdev, Tokyo)
 - SDN without SDN (2015, openstack, Vancouber)



The Problem?

컴퓨팅

"단 2명이 오픈스택 VM 8천개 맡아보니..."

카카오 공용준 수석, SK텔레콤 개발자포럼 현장발표

임민철 기자

입력 : 2016.06.27.17:27

수정 : 2016.06.30.13:50

800



[이벤트] 완벽한 보안 서비스 설문조사
[리소스 라이브러리] 데이터센터의 가

USER STORIES

KakaoTalk speaks volumes about the future of cloud services

The insanely popular messaging service runs 5,000 virtual machines on OpenStack.



Nicole
Martinelli
March 30, 2016

The Secret of the effectiveness?!



The Term : Devops

- Devops is about **finding ways** to adapt and innovate social structure, culture, and technology together in order to **work more effectively**
- Devops is no longer composite of two words “Development + Operation”
- Cultural movement that changes
 - how individuals think about their work,
 - values the diversity of work done,
 - supports intentional processes that accelerate the rate by which businesses realize value, and measures the effect of social and technical change

Devops Misconceptions

- Devops only for Developers and System administrators
- Devops is a team
- Devops is a Job Title
- Devops Means Doing All the Work with Half the People
- Devops is about Tool/Automation

Devops Anti-Patterns

- Blame Culture
 - Prefer not to blame
- Silos
 - Prefer share or usable product
- Root Cause Analysis
 - Prefer quick/frequent response

Devops four Pillars



Collaboration



Affinity



Tools



Scailing

Collaboration comprises


- Asynchronous code review
- Documentation
- Updating issues and bug report
- Demonstrating weekly progress
- Regular status updates
- Pairing

Collaboration: Kakao cloud

- Asynchronous code review: **Github Pull Request**
- Documentation: **Source code** or **Wiki Page**
- Updating issues and bug report:
 - **Jira Comment**
 - **Github and Jira Integration**
- Demonstrating weekly progress: **Sprint Review**
- Regular status updates: **Daily Standup, Auto Testing**
- Pairing : **Github Review/Merge**

Collaboration: kakao cloud

- Develop Github proxy.
 - Sending Github event to Kakao talk



The image displays two side-by-side screenshots of KakaoTalk chat interfaces. The left chat window, titled 'Watchtower', shows three messages: a 'PULL REQUEST' closed by 'al-l' with a link to a GitHub pull request, a 'PUSH' to the '/master' branch by 'andrew-kong' with a link to a GitHub compare page, and another 'PUSH' to the '/master' branch by 'infra' with a link to a GitHub compare page and a celebratory message about Jenkins bumping to v2.6.6. The right chat window, titled '큐베' (Kube), shows messages from '[krane bot]' including 'Unmerged commits', a successful GitHub pull request merge for 'itf' by 'al-l', a successful GitHub pull request merge for 'openstack' by 'al-l', and a failed GitHub pull request merge for 'CCC-1191' by 'charlie-choe'.

Watchtower

Type: [PULL REQUEST]
action: closed
link: <https://github.daumkakao.com/ITF/kfield/pull/616>
title: CCC-1580 region 형태로 devel 구성할 수 있게 변경
user: al-l

Type: [PUSH]
branch: /master
comments: CCC-1580 region 형태로 devel 구성할 수 있게 변경
link: <https://github.daumkakao.com/ITF/kfield/compare/3ef681f03d72...19d1cbe73730>
user: andrew-kong

Type: [PUSH]
branch: /master
comments: [Jenkins] Finished bumping to v2.6.6 🎉🎉🎉
link: <https://github.daumkakao.com/ITF/kfield/compare/19d1cbe73730...5d2de8f42415>
user: infra

큐베

[krane bot]
[Unmerged commits]

🌟 itf 🌟 - (2016-08-22 11:53:05)
[kfield]
↪️✅ CCC-1580 region 형태로 devel 구성할 수 있게 변경 (<https://github.daumkakao.com/ITF/kfield/pull/616>) by al-l

🌟 openstack 🌟 - (2016-08-22 11:53:07)
[neutron]
↪️✅ CCC-1666 classless-static-route에 default gw 추가 (<https://github.daumkakao.com/openstack/neutron/pull/47>) by al-l
[stacktach]
↪️❌ CCC-1191 enable kengine worker (<https://github.daumkakao.com/openstack/stacktach/pull/11>) by charlie-choe

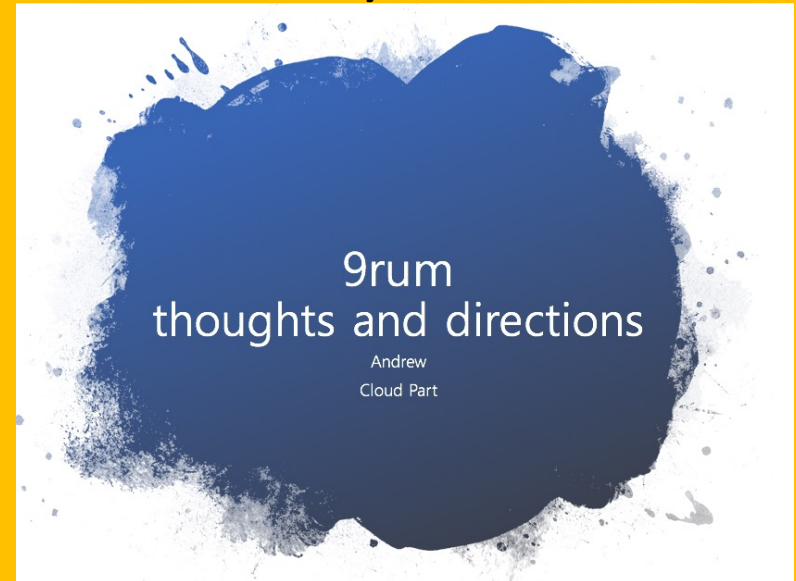
Affinity

- Have to think about “What comprises Team”
- Have to fight against Diversity
 - Diversity in Gender/Race/Nationality/Age/Veteran Status/Religion/Familial Status is OK and inevitable
 - Way of Handling works
 - Measurement of success
 - Communication style in works
 - Leadership
- The key is “From individual to Teams”



3 Vs (sample) for the team stickyness

- Vision
 - Programmable Connection with Business and Service
- Value
 - OKR
- Validation
 - Sprint and Release



Plannings

2018 Mission, OKR, MileStones

2019 Mission, OKR, MileStones

다플로이셀 2019 OKR

서비스셀 2019 OKR

컴퓨팅셀 2019 OKR

텔레메트리셀 2019 OKR

Progressing

u_FAQ (OPs Howto for On-Call)

w_Focus meeting

x_Rules of Engagement.

y_Meeting Notes

z_Deprecated Documents

기타

클라우드 다플로이셀

회고록

공간 도구

Part Vision

Programmable Connection with IT Services and Computing Resources

Simple-Effective-Cloud-Resource-Management

Part Mission

Create Personalized, Automated Resource Life Cycle Management applications

Part KPI

자동화, 개인화, 효율적인 클라우드를 위한 신규 서비스 4개 이상 개발

App launcher

Billing Service

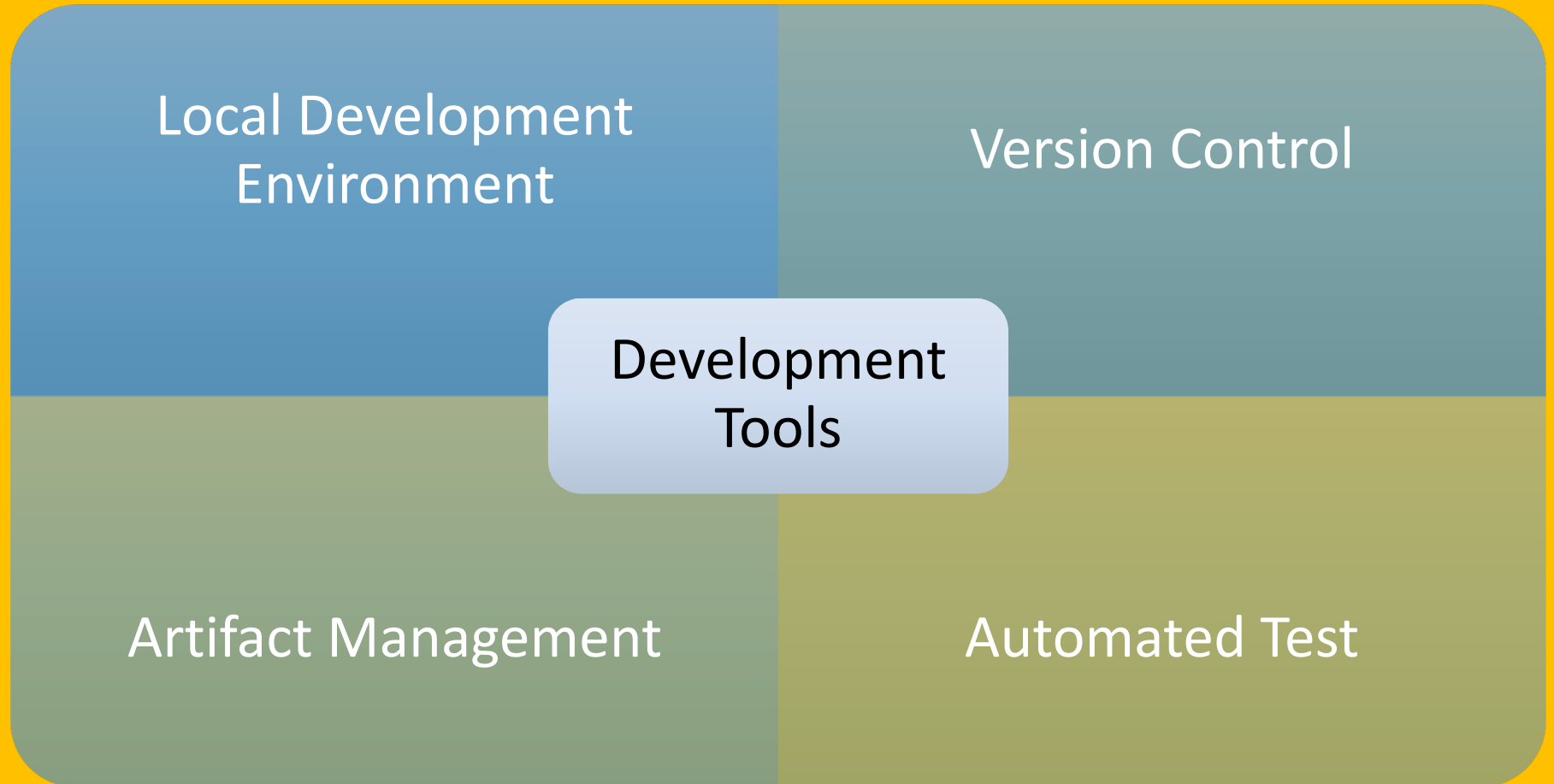
Cloud Service Market

Physical Server Provision

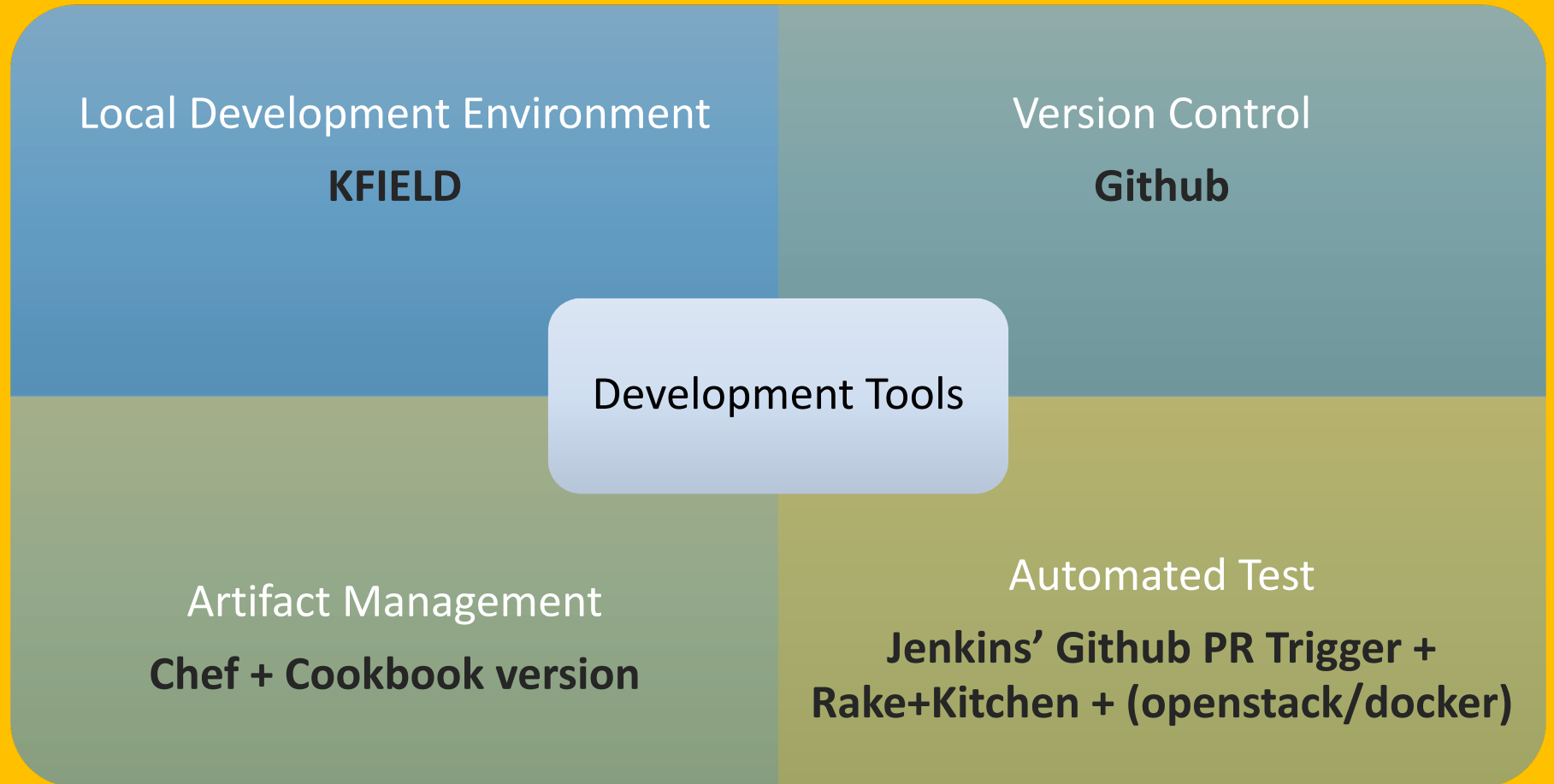
Part OKR

As a cloud service developer, we will accomplish "Automated / Personalized / Effective Cloud " as Measured by These Result

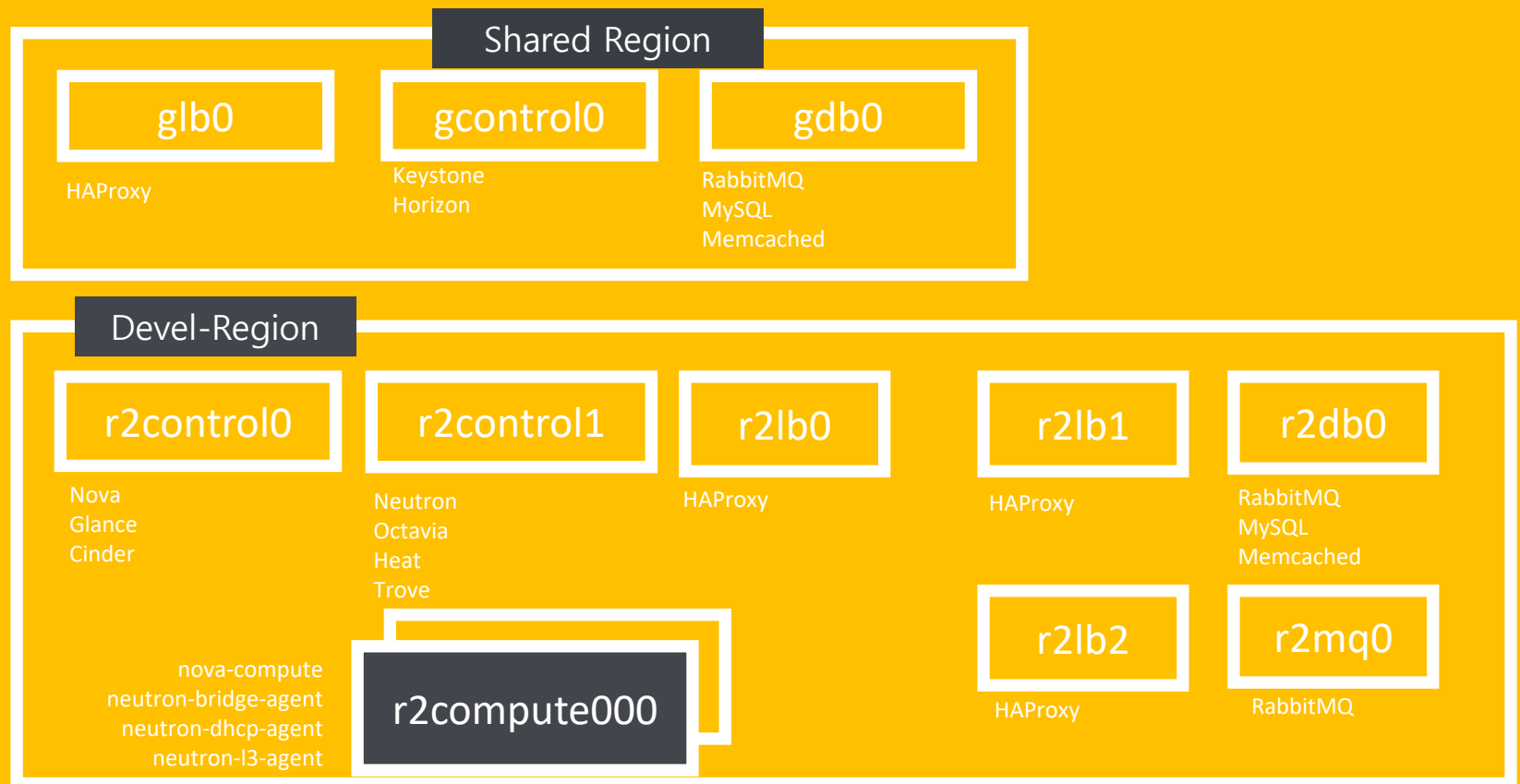
Tools



Tools: kakao cloud



Tools: Local Development Simulator, KField



Tools: Version Control, Github

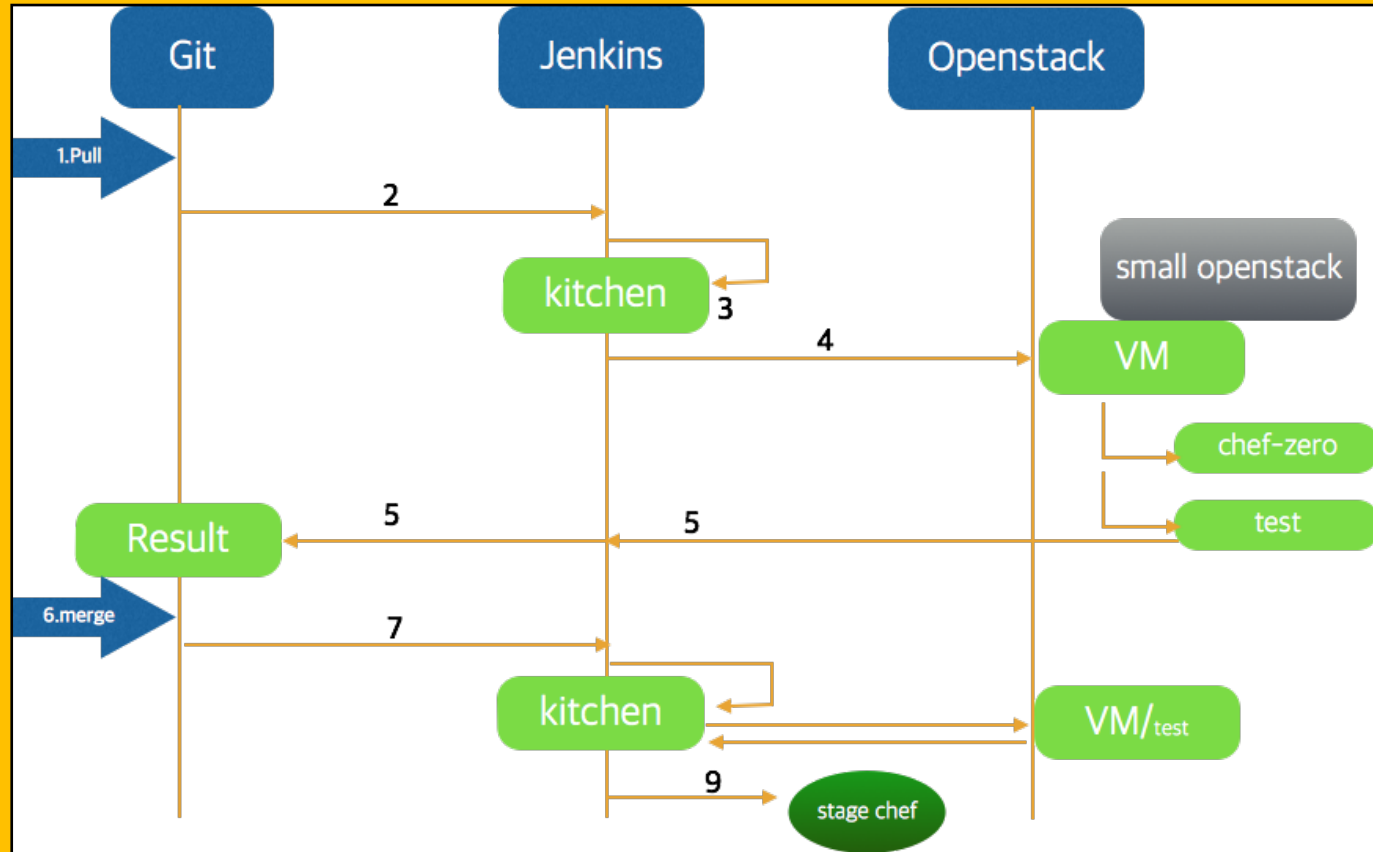
- Pull Request based commit history management
- No Self Merge rule Applied

Artifact Management : Chef /Cookbook version

- Two Species source code
 - One is Openstack Code (nova, neutron , cinder)
 - One is Openstack Deploying Code (chef , infra-automation)
- From Chef code, it uses openstack's certain branch
- Use cookbook metadata for artifact version.
 - Automatic Engaged after testing and merged
- NoP! Now it's using container!

Automated Test & Build : Jenkins Test

- Triggered



- Sometimes use on-demand test , “Test this please” comment on github pull request

Automated Test & Build : Jenkins Test

Build Pipeline Dashboard View



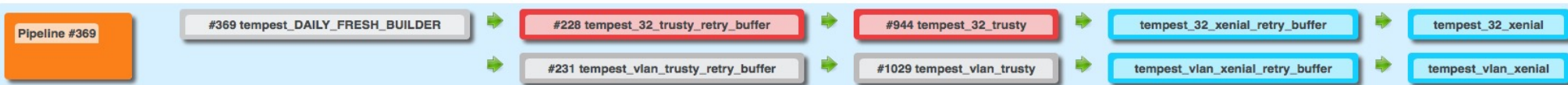
Build Pipeline: Build Pipeline Dashboard View



Build Pipeline Dashboard View



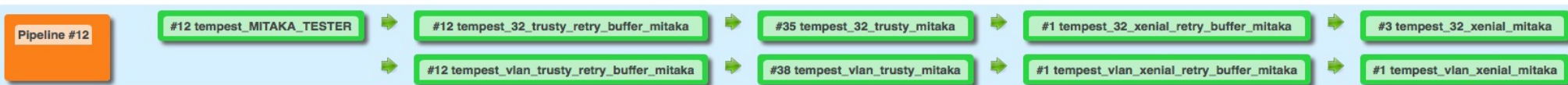
Build Pipeline: Build Pipeline Dashboard View



Build Pipeline Dashboard View



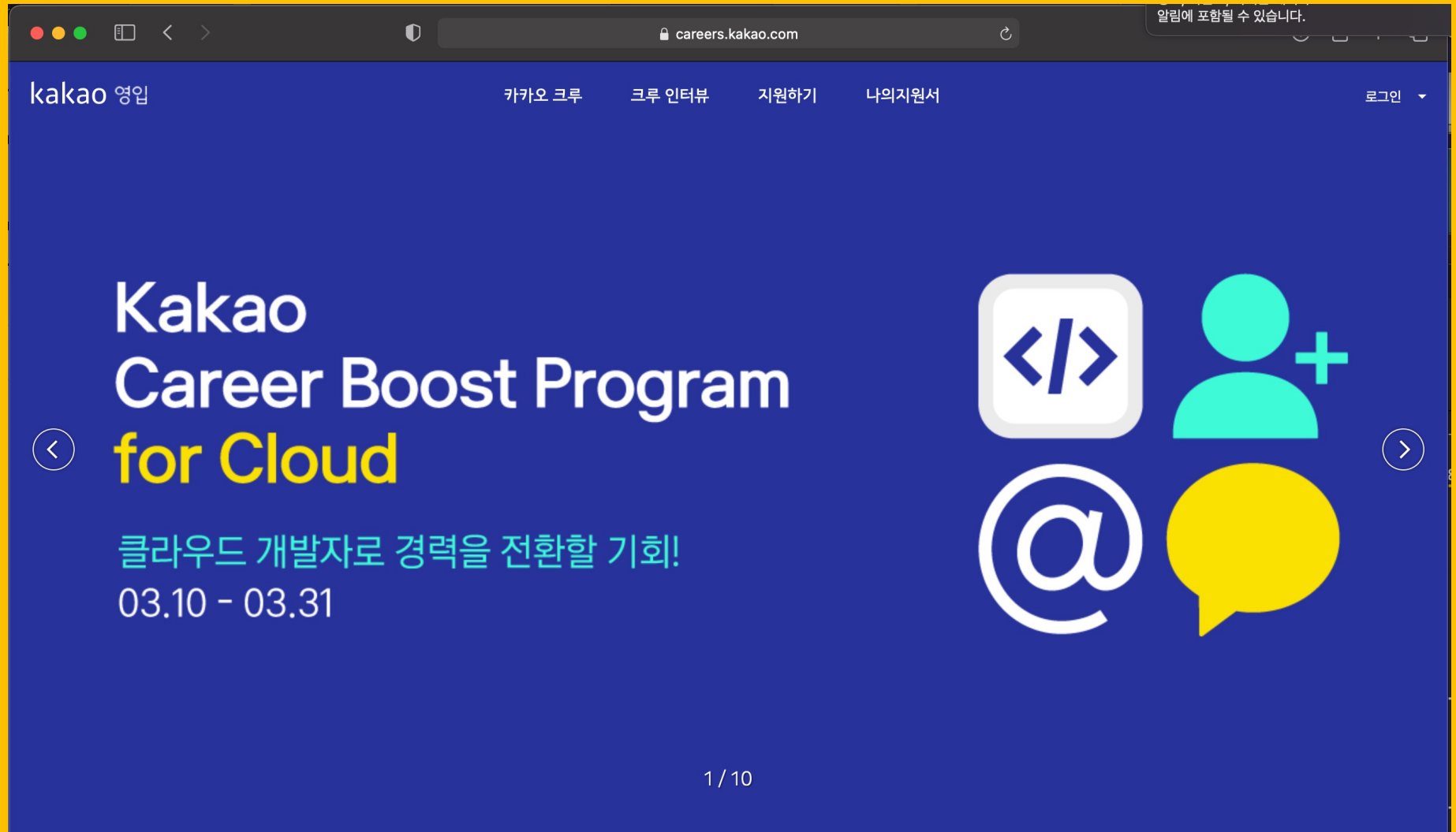
Build Pipeline: Build Pipeline Dashboard View



After 5 years

- Team's growing(members almost 10 times bigger!)
- From resource managing, now we cover Data Pipe Line + Storage + Push services and portal
- Now we're heading for Service PaaS and NCD

We're hiring!



The screenshot shows a web browser window with the URL `careers.kakao.com`. The page has a dark blue header with the text "kakao 영입" on the left and navigation links "카카오 크루", "크루 인터뷰", "지원하기", and "나의지원서" in the center. A "로그인" link with a dropdown arrow is on the right. The main content area features the title "Kakao Career Boost Program for Cloud" in white and yellow text, with a left arrow icon. Below the title is the text "클라우드 개발자로 경력을 전환할 기회!" and the dates "03.10 - 03.31". On the right side of the main content, there are four icons: a code symbol in a rounded square, a person icon with a plus sign, an @ symbol, and a yellow speech bubble. A right arrow icon is also present. A small notification in the top right corner of the browser says "알림에 포함될 수 있습니다."

careers.kakao.com

kakao 영입

카카오 크루 크루 인터뷰 지원하기 나의지원서 로그인 ▾

알림에 포함될 수 있습니다.

Kakao Career Boost Program for Cloud

클라우드 개발자로 경력을 전환할 기회!
03.10 - 03.31

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