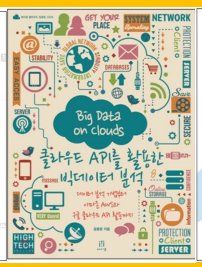
# Devops: on going pursuit of effectiveness

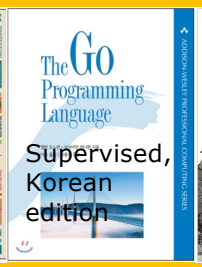
Andrew Yongjoon Kong

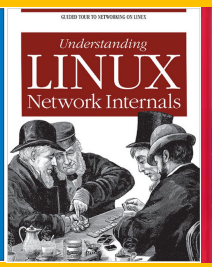
# Who am I

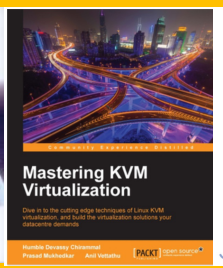
Andrew. Yongjoon kong

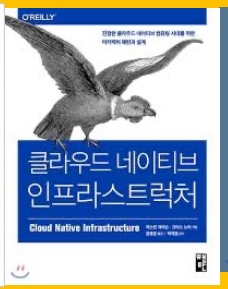
- Cloud Technical Advisory for Government Broad Cast Agency
- Adjunct Prof. Ajou Univ
- Korea Data Base Agency Acting Professor for Bigdata
- Member of National Information Agency Bigdata Advisory committee
- Kakaocorp, Cloud Tech Lead
- Talks
  - Single System Image Cloud, kakao, 20202
  - distributed 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)

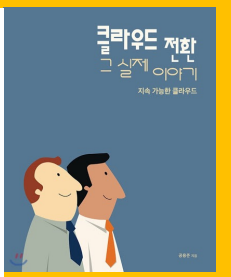












# The Problem?

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

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[이벤트] 완벽한 보안 서비스 설문조사

[리소스 라이브러리] 데이터센터의 기

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**
  - **Githup and Jira Integration**
- Demonstrating weekly progress: **Sprint Review**
- Regular status updates: **Daily Standup, Auto Testing**
- Pairing : **Github Review/Merge**

# Collaboration: kakao cloud

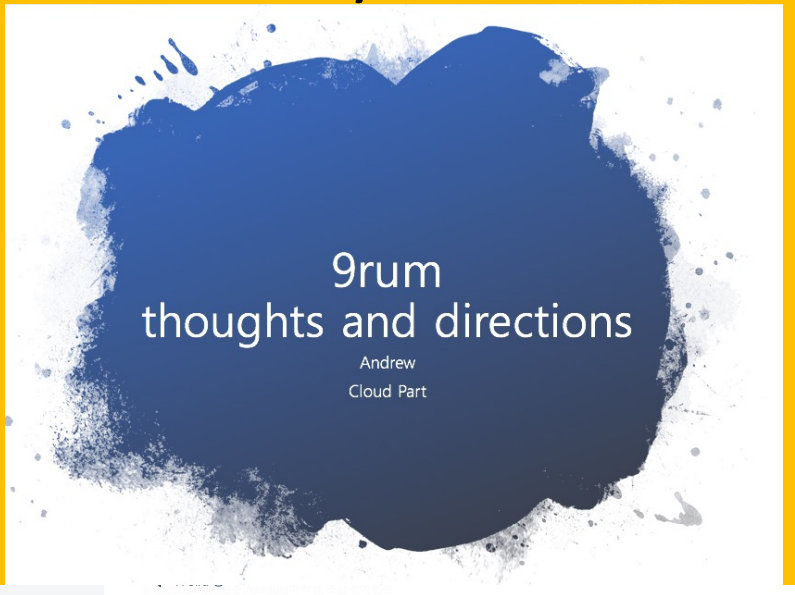
- Develop Github proxy.
  - Sending Github event to Kakao talk

# Affinity

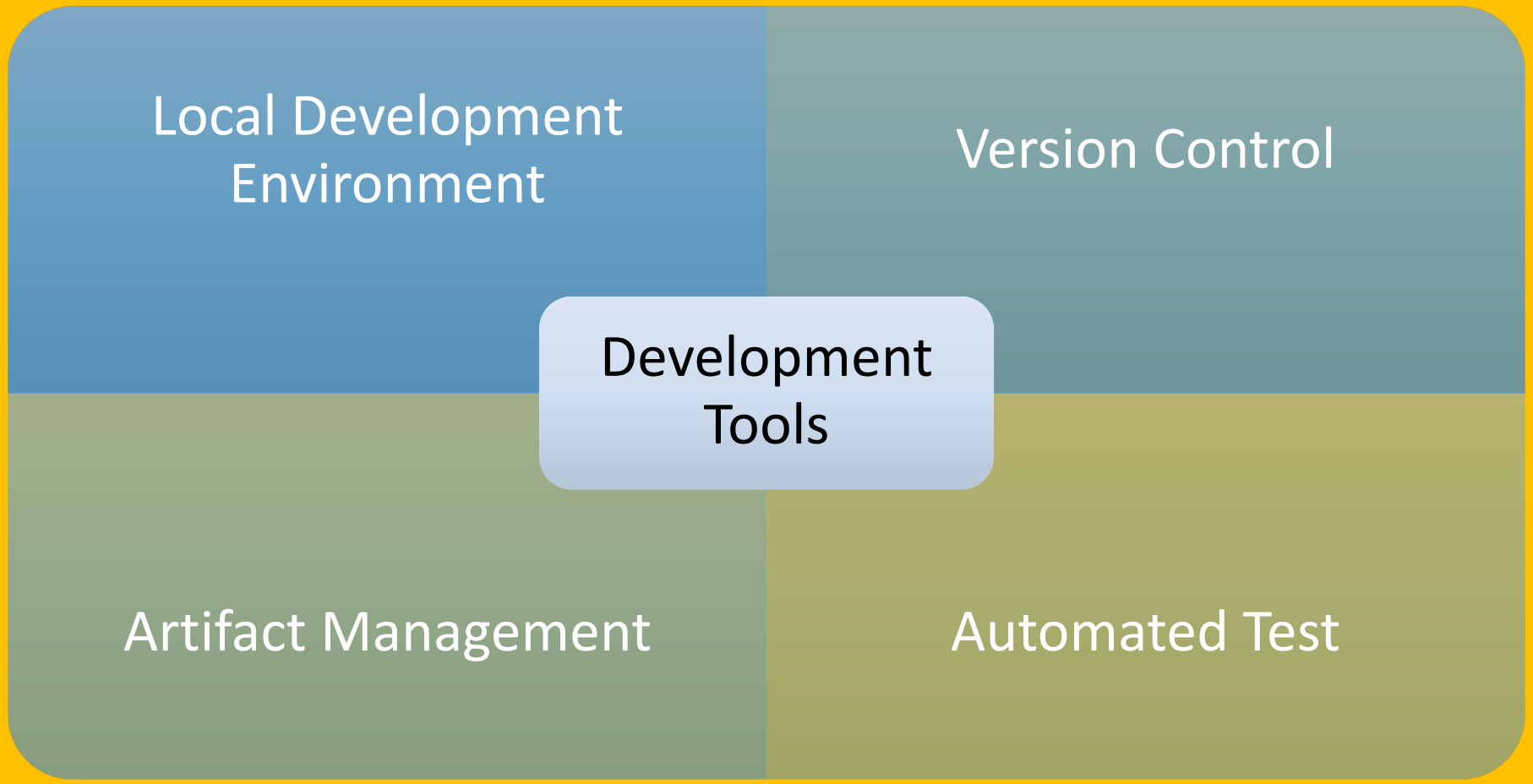
- Have to think about “What comprises Team”
- Have to fight against Diversity
  - Diversity in Gender/Race/Nationality/Age/Veteran Status/Religion/Familial Status is OK and inevitable
  - Way of Handling works
  - Measurement of success
  - Communication style in works
  - Leadership
- The key is “From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

# 3 Vs (sample) for the team stickyness

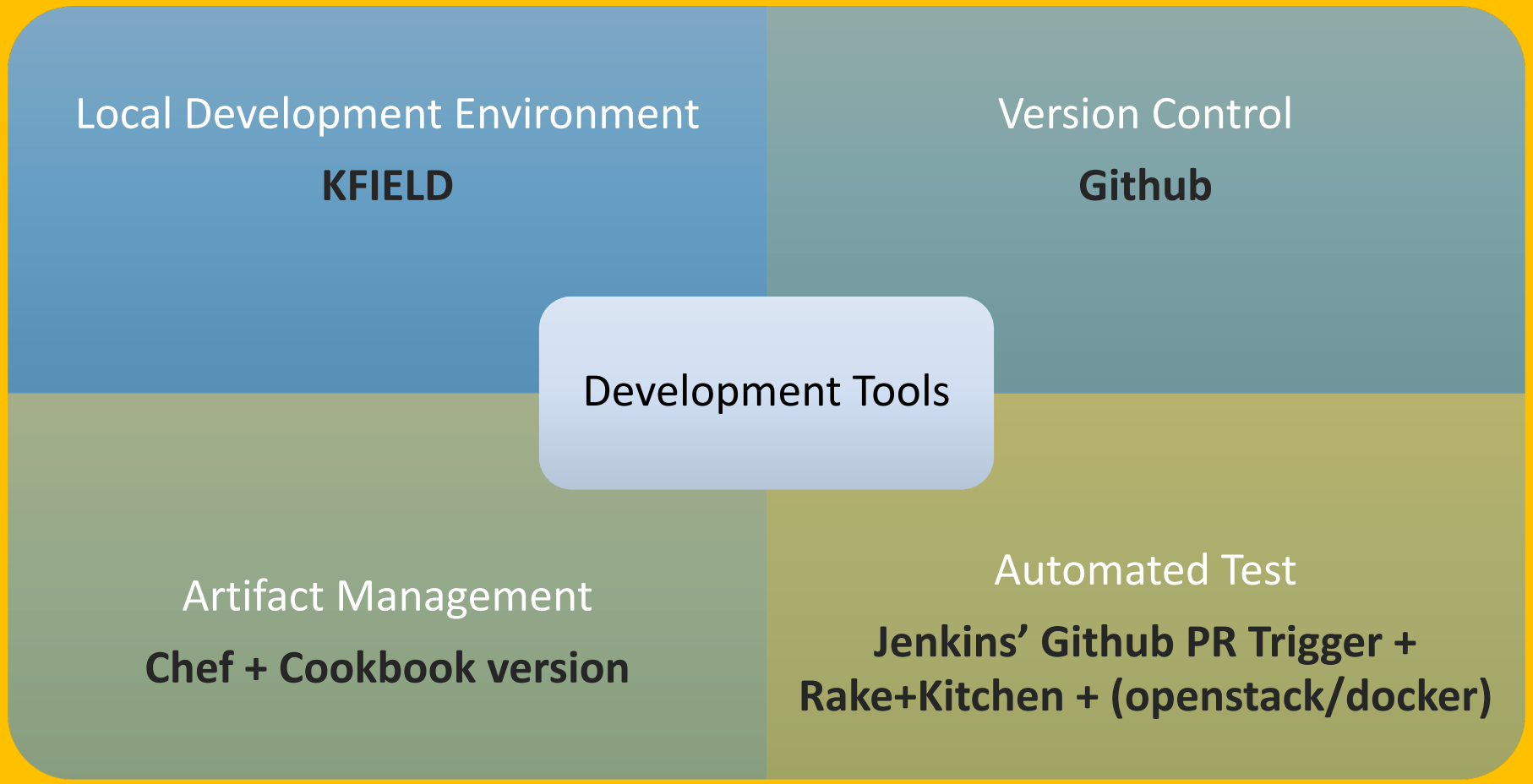
- Vision
  - Programmable Connection with Business and Service
- Value
  - OKR
- Validation
  - Sprint and Release



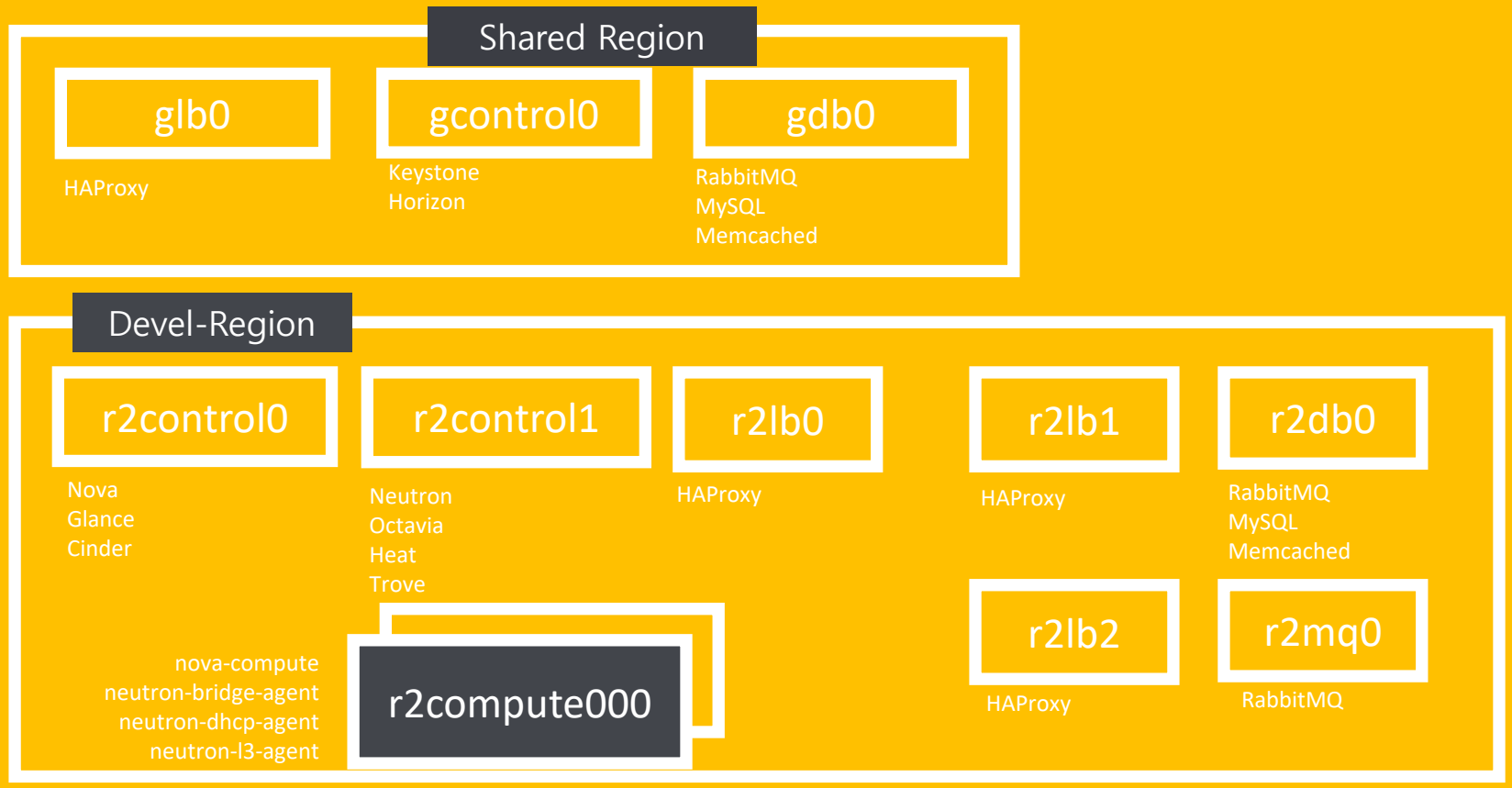
# Tools


Local Development Environment
Version Control
Development Tools
Artifact Management
Automated Test

# Tools: kakao cloud



# Tools: Local Development Simulator, KField



# Tools: Version Control, Github

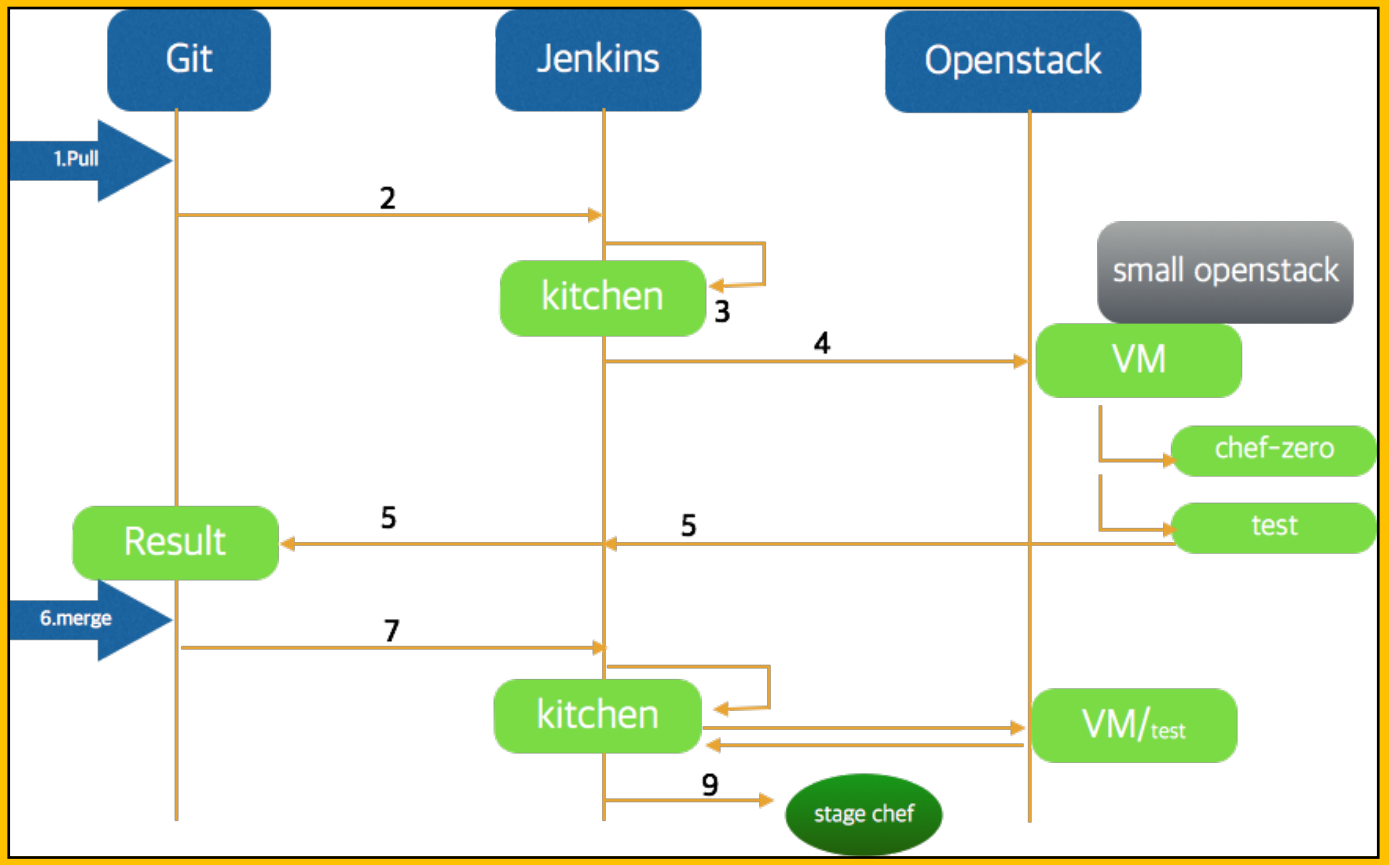
- Pull Request based commit history management
- No Self Merge rule Applied

# 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!

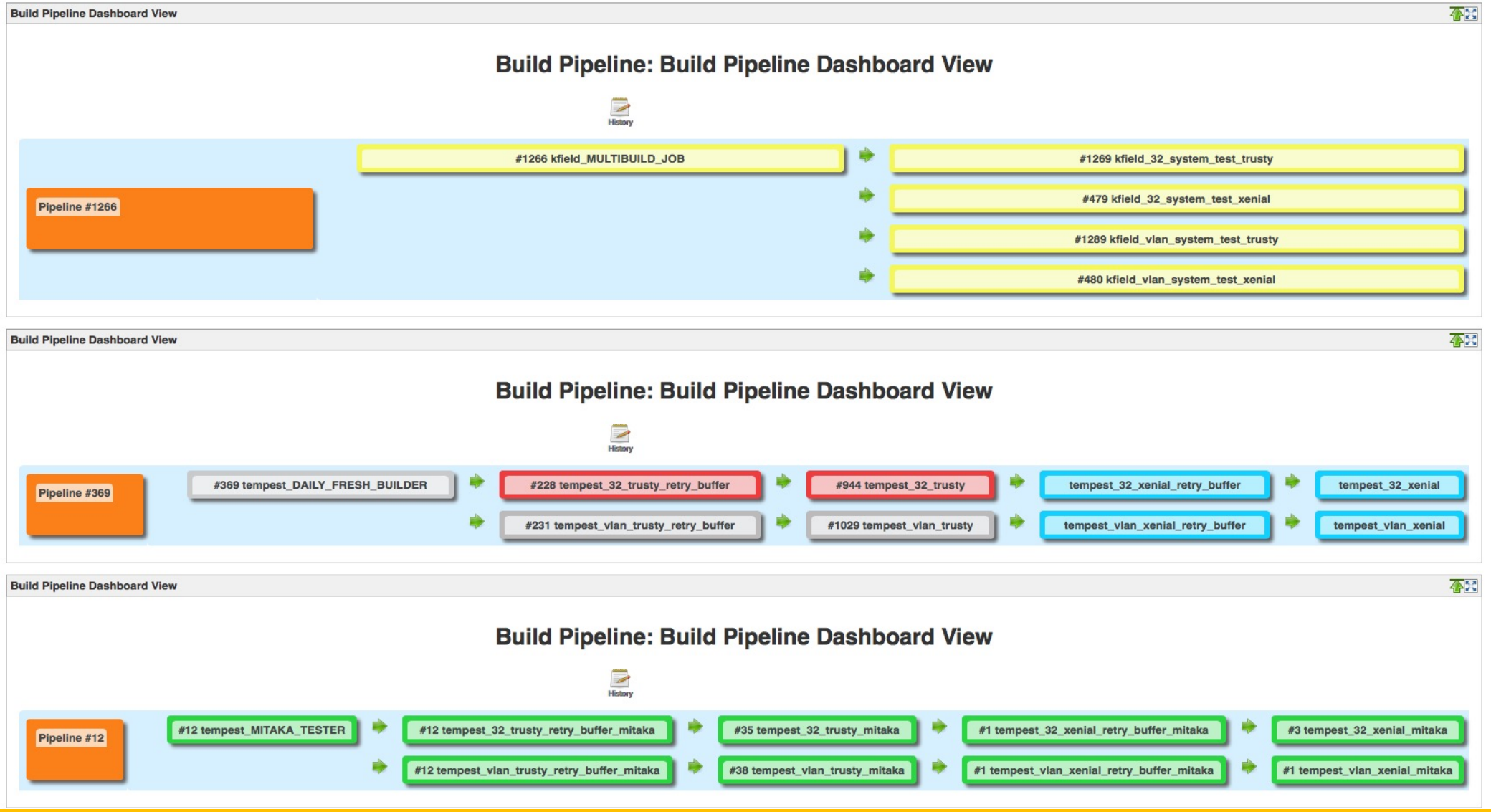
# Automated Test &Build : Jenkins Test

- Triggered




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

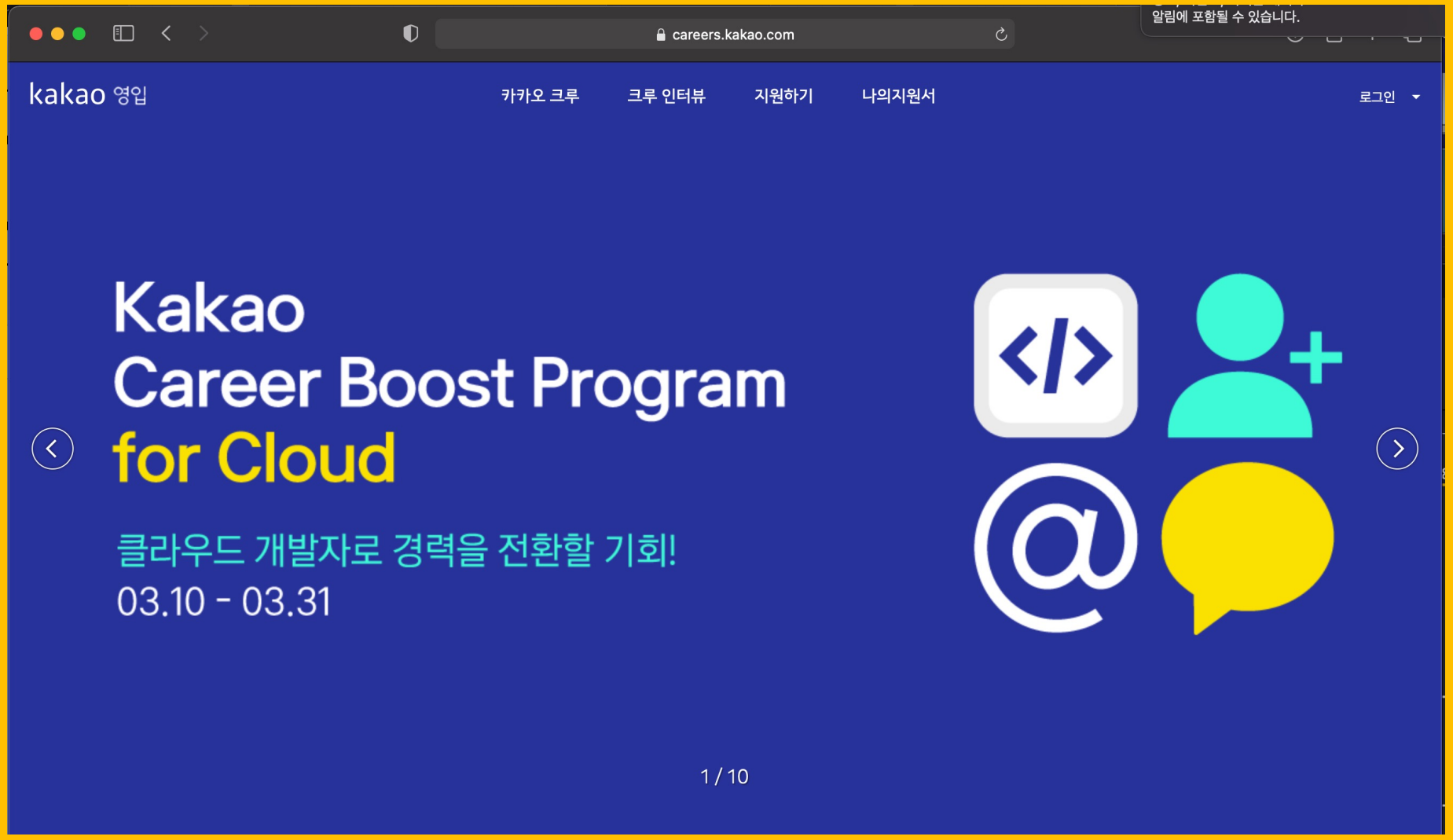
# Automated Test &Build : Jenkins Test



# 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!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