

Pivotal Summit 2019

Keynote: Delivering Better Software, Faster

노경훈 대표 **Kung Fun No**
Sales Director and Country Manager,
Korea, Pivotal



Pivotal Summit 2019 Seoul

#PivotalSummit

Business Track	
9:00am	Welcome 노경훈 대표, Pivotal
9:05am	기초 연설: Delivering Better Software, Faster + KB금융그룹 & 삼성전자 사례 노경훈 대표, Pivotal 정석호 상무, VMware 김태우 수석차장, KB금융그룹 장성권 수석, 삼성전자 김영태 상무, Pivotal
10:10am	The Evolution of a Platform 이정인 매니저, Pivotal 마크 티한 SE, Confluent
10:55am	고객 사례: LSIS with Pivotal AppTX Experience 손상기 매니저, LS산전
11:20am	Balanced Product with Balanced Team! 최희원 부소장, Pivotal Labs Japan
11:45am	Making All This Real 로즈 그레고리, 커스터머 석세스 & 트랜스포메이션 디렉터, Pivotal
12:00pm	Lunch

Pivotal Summit 2019 Seoul

#PivotalSummit

Technical Track	
1:00pm	Welcome 김영태 상무, Pivotal
1:05pm	Spring Into Kubernetes 폴 자코스키, 수석 테크놀로지스트, Pivotal
1:45pm	Diving into Reactive 마크 헤클러, Spring 개발자 애드보킷, Pivotal
2:30pm	To Strangle or Not To Strangle: Tackling the Monolith 시바 마니카바사감, 애플리케이션 트랜스포메이션 프랙티스 리더, Pivotal
2:55pm	Break
3:25pm	고객 사례: 국내 금융권 고객사의 Cloud 기반 Pivotal PAS 도입 사례 정영진 매니저, 메가존클라우드
3:35pm	Drinking from the Stream: How to Use Messaging Platforms for Scalability & Performance 마크 헤클러, Spring 개발자 애드보킷, Pivotal
4:15pm	Bringing Cloud Databases On-Premises with Greenplum and Kubernetes 박춘삼 전무, Pivotal
4:40pm	Living on the Edge With Spring Cloud Gateway 스펜서 김, Spring Cloud 코어 리더, Pivotal
5:20pm	Closing

Thanks to our sponsors



MEGAZONE
C L O U D



굿모닝아이텍(주)

데이터솔루션

Pivotal Summit 2019

The conference for cloud-native application
developers and the people who support them

Welcome

Pivotal Impacts

82%

Increased software in production



37%

Improvement in developer productivity

75,000,000 downloads
/ 1 month

78%

Increased operational efficiency



+750,000 containers
on Pivotal Application Service

Putting developers first



Getting developers to prod

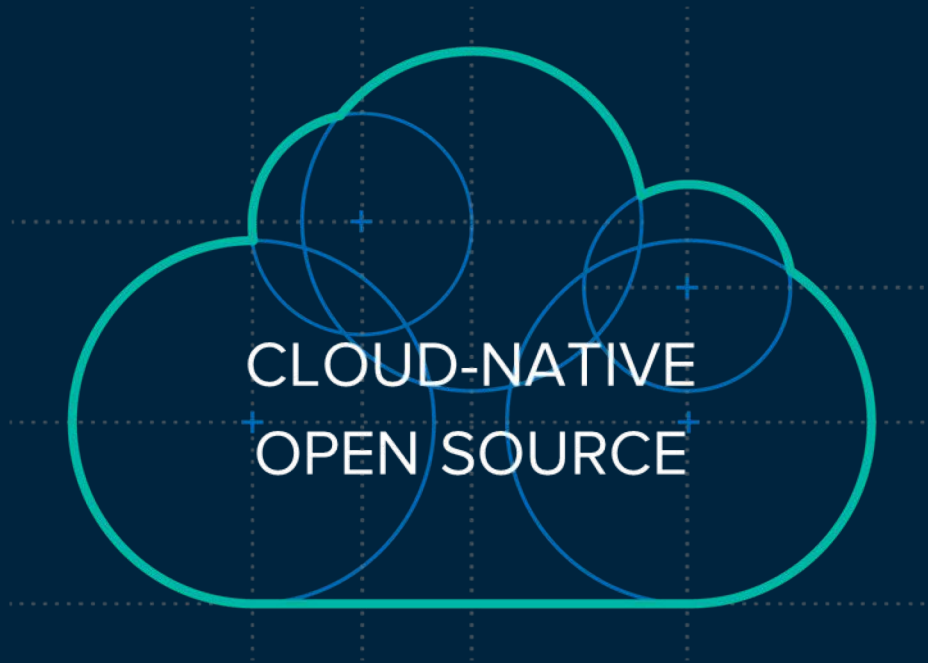


Getting developers to prod in Korea



**And more Korea Customers in finance,
manufacturing, telco, automotive, and
more...**

Cloud-native: Philosophy



Litmus test: Developer experience to prod

What's in

- Containerized
- Dev centric
- CI/CD friendly
- Testable
- Just another Boot app

What's out

Everything that slows down developers

Proprietary or hosted only API Gateways

Proprietary integration/ESB

Proprietary ETL

Continuous delivery is eating enterprise IT

2019 Accelerate State of DevOps Report



Old

Projects

Waterfall

ITIL

VMs

JavaEE

Batch



New

Products

Lean

CI/CD

**Cloud-native platforms
(k8s)**

Spring Boot

Kafka Streaming Platform

Cloud-native infrastructure



Cloud-native applications



vmware® + Pivotal®

Pivotal Summit 2019

VMware Tanzu

Seok-Ho, Jeong
Senior SE Manager / VMware Korea



VMware Tanzu



VMware Tanzu

Build



bitnami

Pivotal



spring

Manage

VMware Tanzu
Mission Control



Run

VMware PKS | Project Pacific

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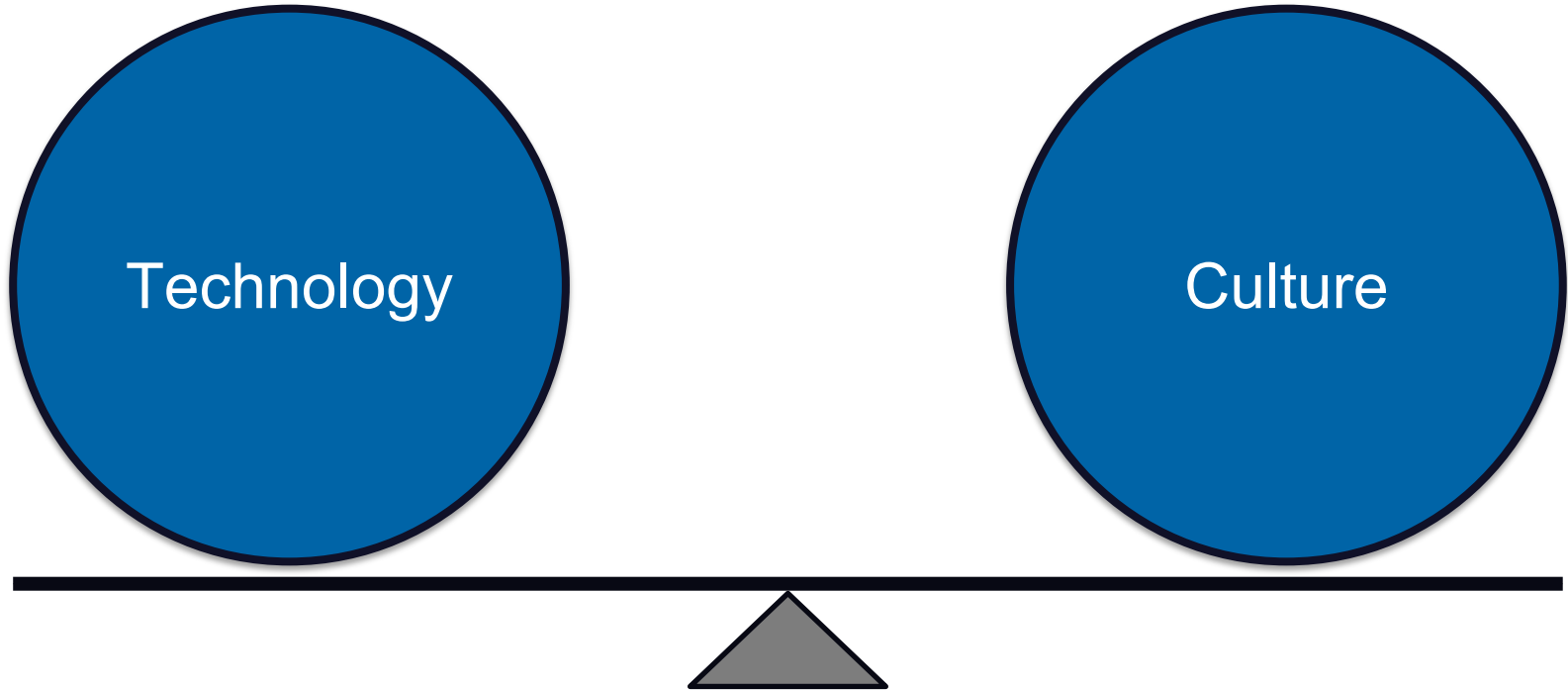
Digital Transformation with Pivotal

Philip Kim (philipkim@pivotal.io)

November 19, 2019

Amoris Hall, GS Tower

Digital Transformation with Balanced Approach





Pivotal Platform

→ **PAS**

Accelerate delivery speed for mission-critical apps.

→ **PKS**

Install and manage a fundamental part of next-generation distributed systems.



Pivotal Labs

→ **Pivotal Labs**

Help build your own customer-centric product team

→ **Platform Dojo**

Redesign your operations team to improve velocity and stability.

→ **App Transformation**

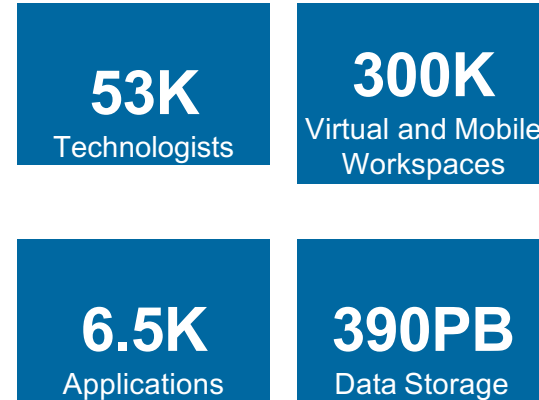
Unlock new value from an existing business application.

Technology and Business Scale at JPMC

Business Scale



Technology Scale



Uniquely Positioned for Success



Trust



Speed



Breadth



Efficiency

Framework – Standardized



Moneta Web

Moneta Boot

Moneta Bootstrap

Platform – Resilient & Scalable

Hybrid Multi-Cloud



Key Principles



Best-of-breed 4 cloud strategy



Application portability and open standards



**Platform choice
CaaS, PaaS**



**Service to Service
Communications**



Pivotal Platform

→ **PAS**

Accelerate delivery speed for mission-critical apps.

→ **PKS**

Install and manage a fundamental part of next-generation distributed systems.



Pivotal Labs

→ **Pivotal Labs**

Help build your own customer-centric product team

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Redesign your operations team to improve velocity and stability.

→ **App Transformation**

Unlock new value from an existing business application.

TD Ameritrade Snapshot



- #1 in Customer Service (3 years in a row)
- #1 in Platform & Tools *8 years in a row)
- #1 in Education (7 years in a row)
- #1 for Beginner Investors (7 years in a row)
- #1 for Broker Innovation (2 years in a row)
- #1 for New Tool: Apple Business Chat
- #1 for Trader App: TD Ameritrade Mobile Trader (2 years in a row)
- #1 for Trader Community (5 years in a row)
- #1 for Desktop Platform: thinkorswim (4 years in a row)

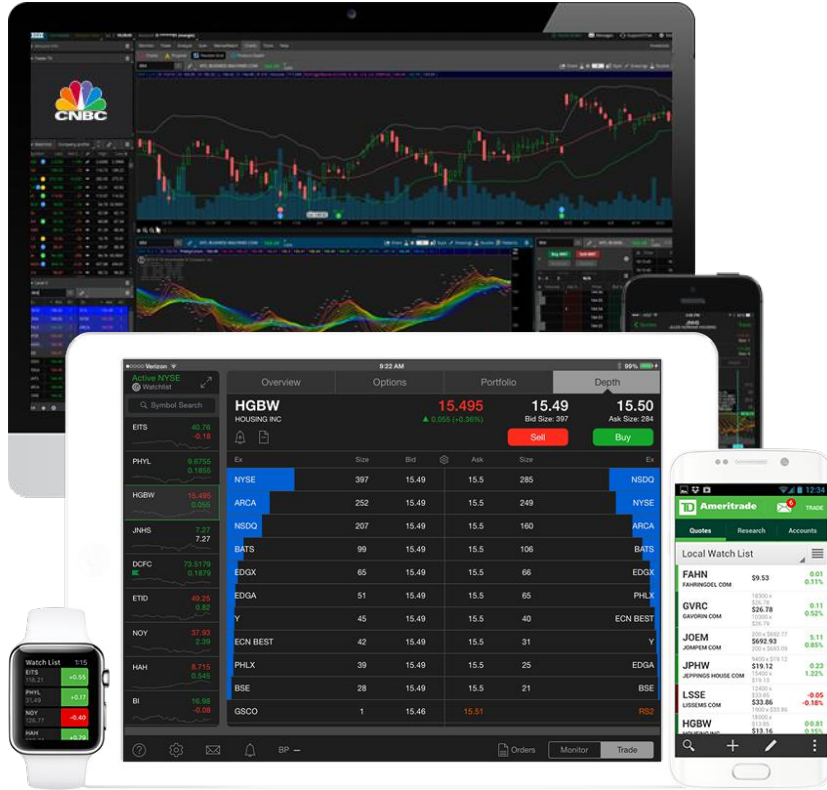
 **StockBrokers.com**
2019 Broker Review

#1 Overall Broker

Named #1 overall broker in the StockBrokers.com in 2019

- Online Trading Service in USA
- Founded in 1971
- 9,000 employees

Software Engineering at Ameritrade



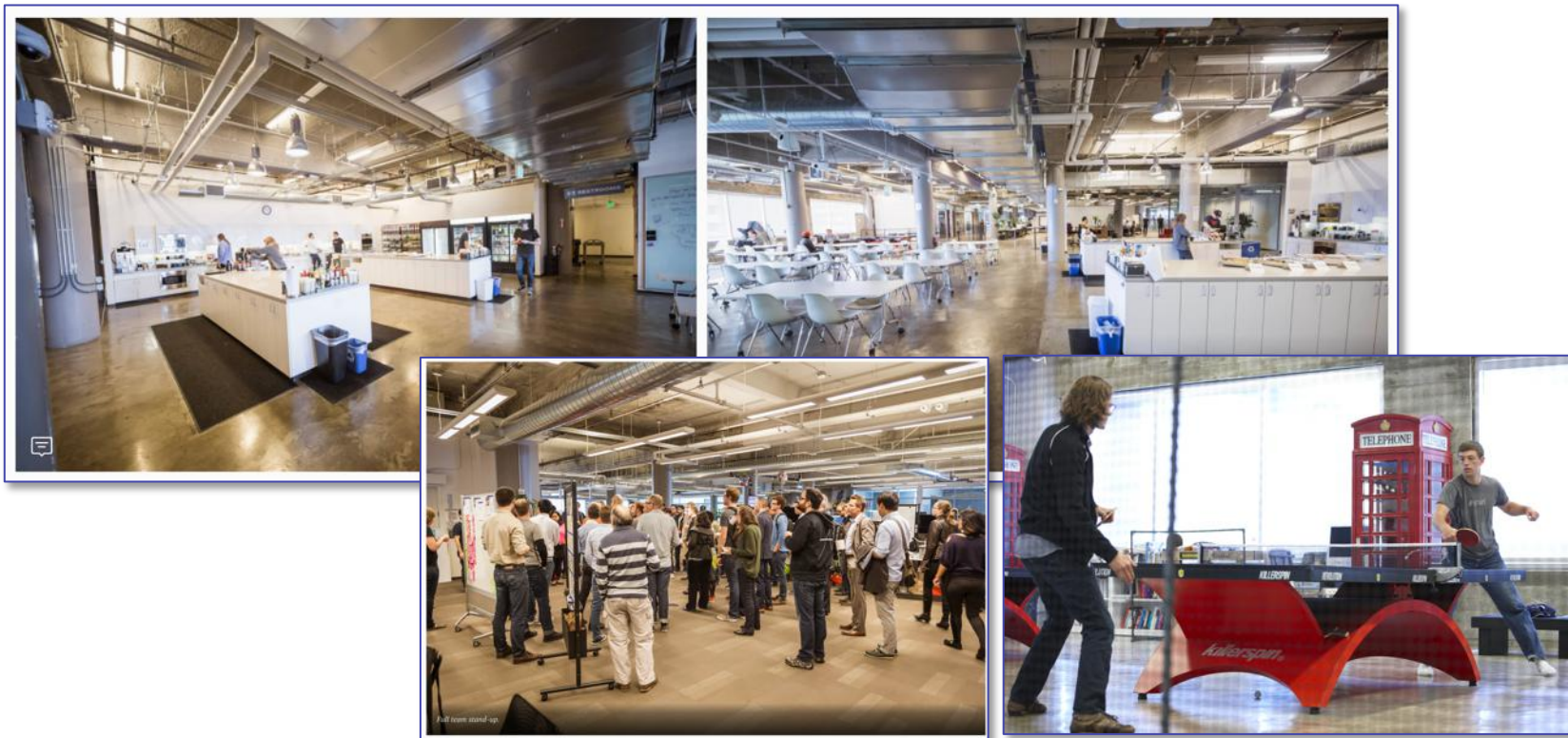
- Over 1,000 engineers, QA, and DevOps globally
- Core stack primarily JavaScript and Java on Pivotal Platform
- Agile Transformation
 - Started in 2016 with a set of pilot applications
 - Now over 85% agile, across all lines of business
 - Business “go-lives” increase by 3x vs. 2016 baseline

Pivotal Journey at Ameritrade



- 2017: TDAX
 - Retail Digital Platform (web mobile app)
- 2017: NCE (New Client Experience)
 - Retail account opening application
- 2017: Advisor Client
 - Web portal for institutional clients
- 2018: TraderX
 - Web-based advanced trading platform
- 2018–2019
 - Over 300 apps and 4000 containers
 - microservices and automation

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KB CLAYON with Pivotal

November 19, 2019

Amoris Hall, GS Tower

Speaker : 김태우 수석차장 / KB금융지주



Contents

- KB 금융클라우드 CLAYON
- Culture of CLAYON
- Tech of CLAYON

KB 금융클라우드 CLAYON

*b KB 금융그룹

*b KB 금융지주

*b KB 국민은행

*b KB 증권

*b KB 손해보험

*b KB 국민카드

*b KB 생명보험

*b KB 캐피탈

*b KB 저축은행

*b KB 데이터시스템

*b KB 자산운용

*b KB 부동산신탁

*b KB 인베스트먼트

*b KB 신용정보



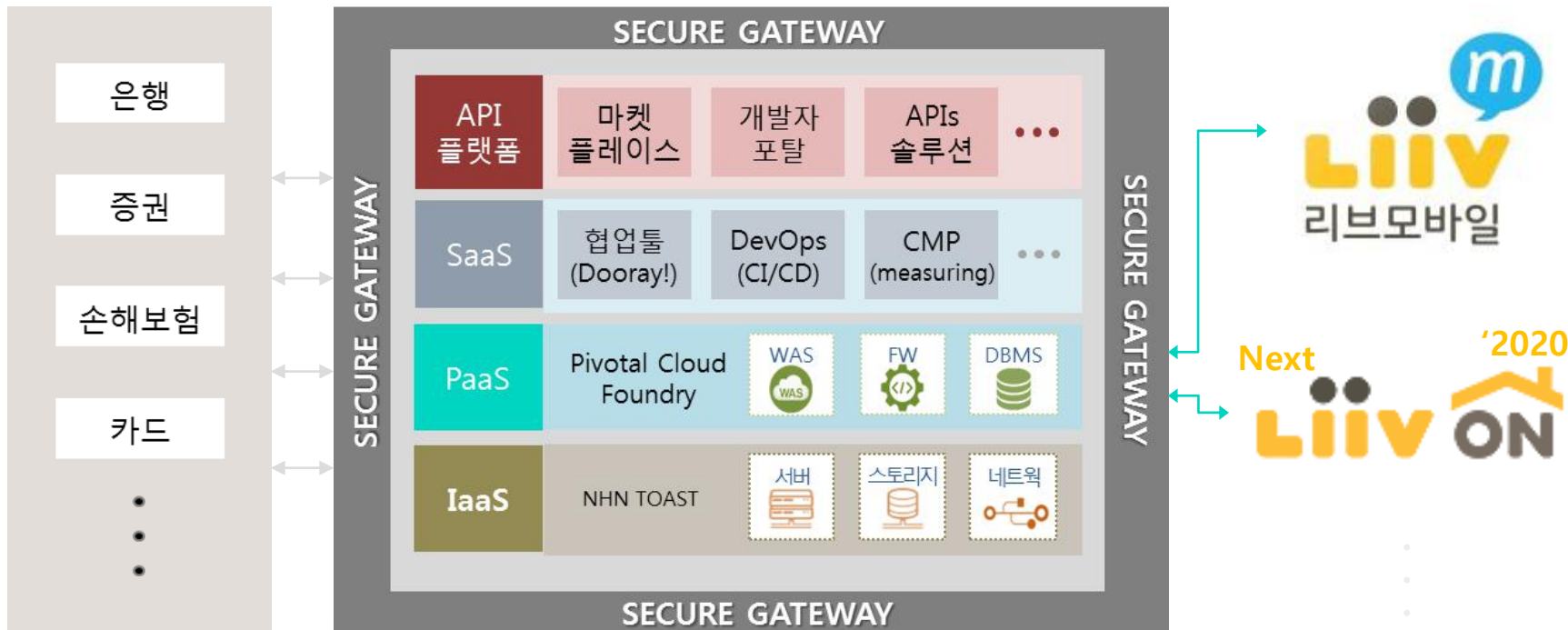
- ① 수용성
- ② 빠른 실행 / 변화 대응
- ③ 안전한 서비스 제공

CLAYON 구조

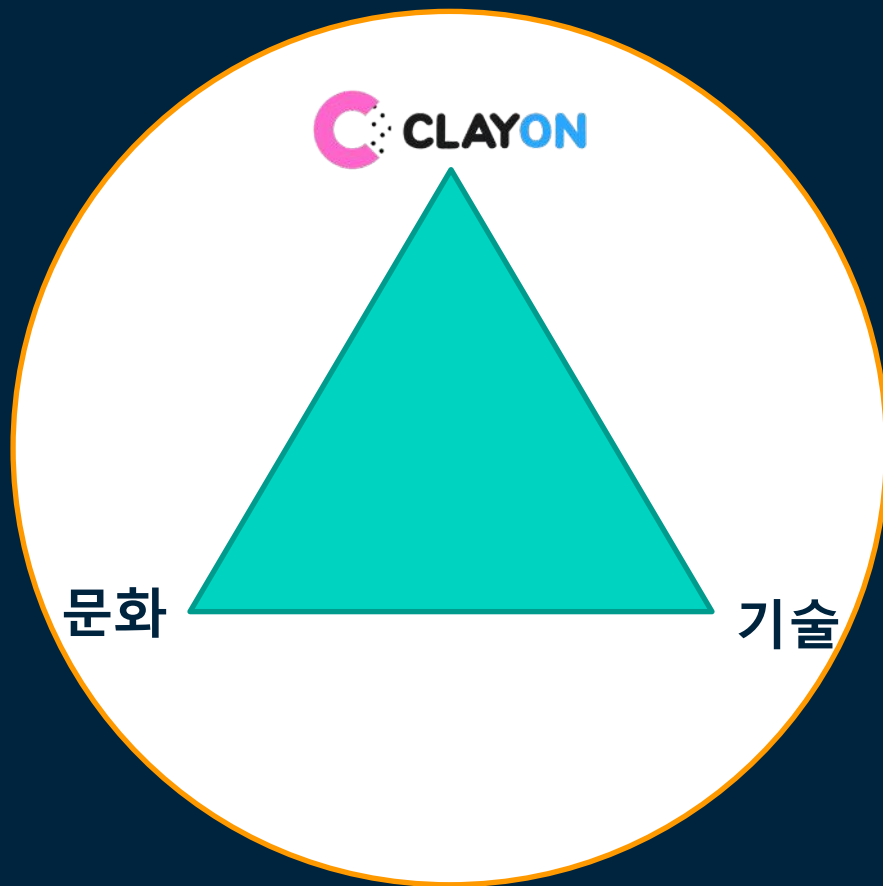
계열사내부시스템
(Legacy)



대고객 서비스



변화



Culture of CLAYON

문화 - 금융 클라우드 구축 및 활용을 위한 문화 변화

Platform
Ops Service (Dojo)

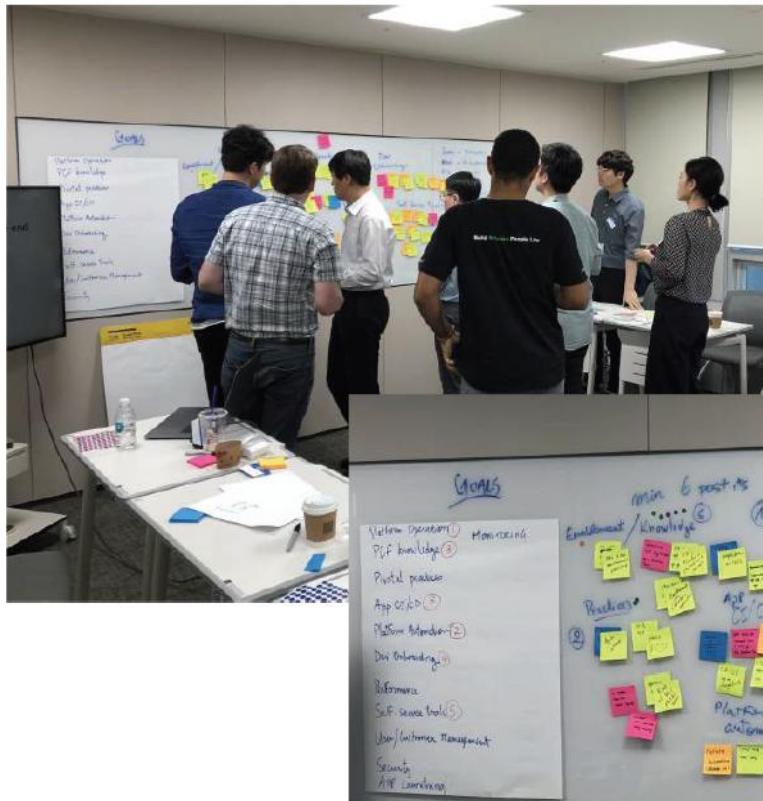
디지털 콘텐츠랩

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CLAYON Agile 문화 정착

Goals from Inception

- Platform Operation
- Platform Automation
- PCF Knowledge
- App CI/CD
- Dev Onboarding
- Self Service Tools



문화 - 금융 클라우드 구축 및 활용을 위한 문화 변화

Platform
Ops Service (Dojo)

디지털 콘텐츠 랩

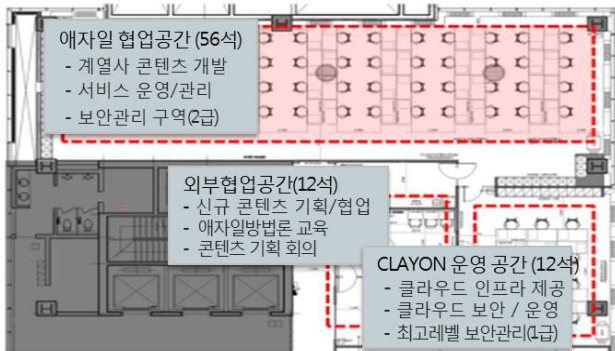
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CLAYON Agile 문화 정착

KB 디지털 콘텐츠랩



위치	KB손보 합정사옥 8층 (110평 규모)
규모	80석 규모 개발업무 공간
목적	스타트업/계열사간 혁신콘텐츠 발굴 계열사 Agile 조직의 CLAYON 활용 DT 역량강화 및 협업문화 내재화



Agile 협업 공간



안면인식 통제(자체 개발)



혁신 & 상생을
위한 공간 구성



그룹 화상 커뮤니케이션



CLAYON 플랫폼 운영실

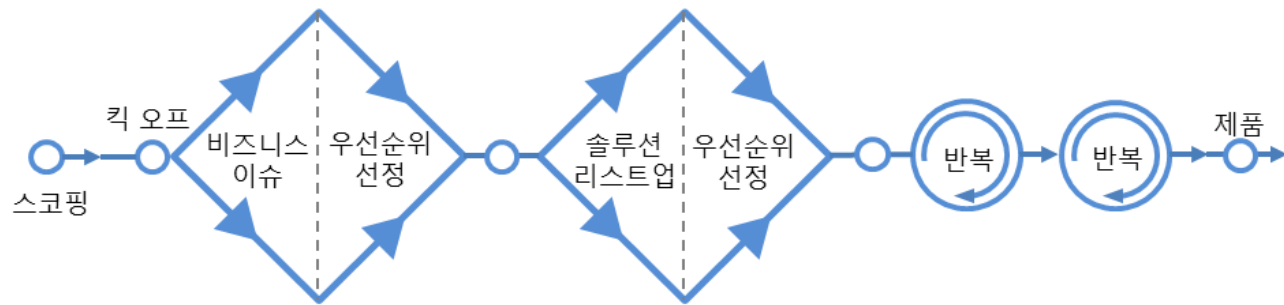
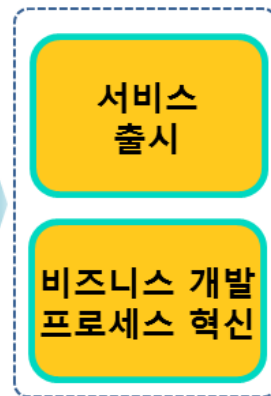
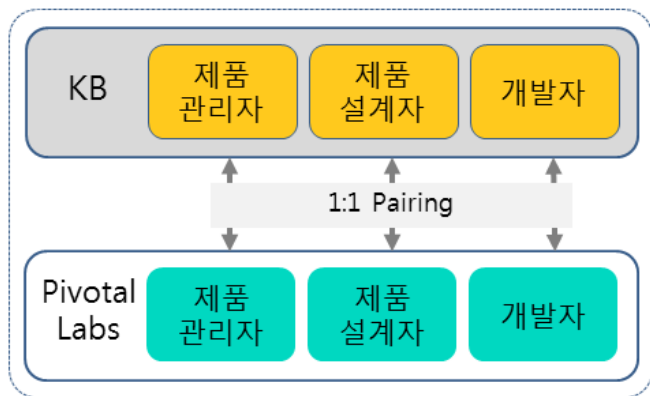
문화 - 금융 클라우드 구축 및 활용을 위한 문화 변화

Platform
Ops Service (Dojo)

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CLAYON Agile 문화 정착



문화 - 금융 클라우드 구축 및 활용을 위한 문화 변화

Platform
Ops Service (Dojo)

디지털 콘텐츠랩

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CLAYON Agile 문화 정착

비즈니스

Lean

- 문제 발견
- 우선 순위 지정
- 최소기능제품 정의
- 데이터 기반 가설 검증

디자인

사용자 중심 설계

- 사용자 인터뷰
- 문화기술적 연구
- 페르소나 정의
- 프로토타입 생성

문화

DevOps

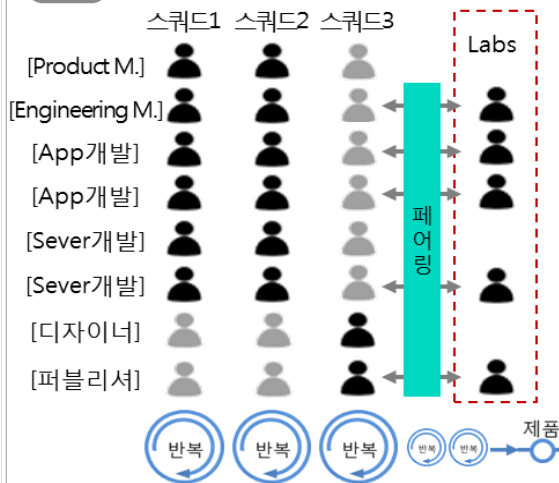
- 기획, 개발, 운영 협업
- 신속한 제품 출시
- 빠른 복구 시간
- 예측, 효율, 보안 강화

개발

익스트림 프로그래밍

- 패어 프로그래밍
- 테스트 주도 개발
- 짧은 반복
- 지속적 통합 및 배포

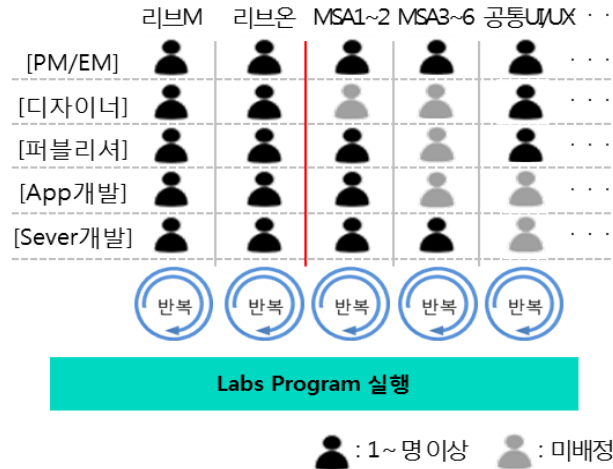
착수



CLAYON
API
플랫폼

[MSA1]
[MSA2]
[MSA3]

운영



Tech of CLAYON

기술 - 금융클라우드 구축 및 활용을 위한 신기술 도입

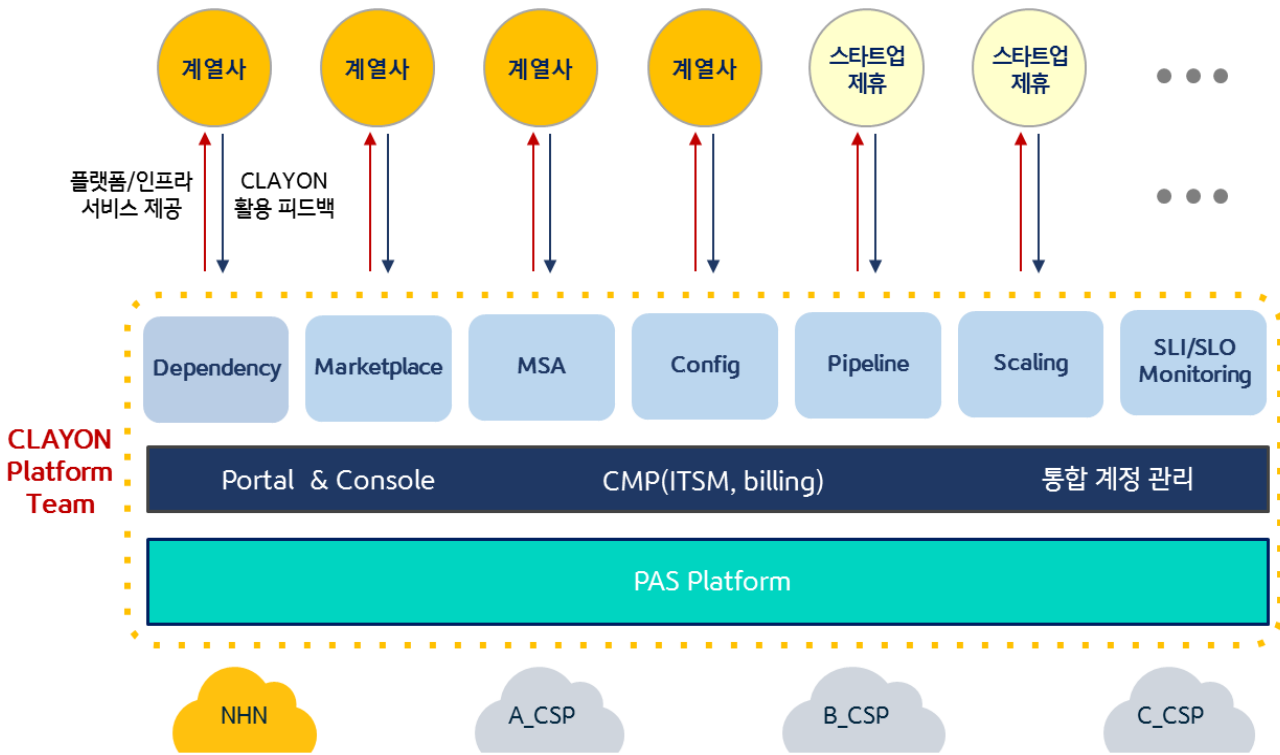
CLAYON 플랫폼 팀

오픈소스 활용

DevOps

멀티클라우드 기반 확보

대고객 서비스 어플리케이션



기술 - 금융클라우드 구축 및 활용을 위한 신기술 도입

CLAYON 플랫폼 팀

오픈소스 활용

DevOps

멀티클라우드 기반 확보

Tool Set	Tool	활용
개발 프레임워크	 Spring boot	Java/JSP 기반 웹 프레임워크
	 JavaSE/JavaEE	객체지향 프레임워크
	 .Net	Microsoft Window 프로그램 개발 프레임워크
	 Rails	Ruby용 웹 프레임워크
Web/WAS	 NGINX	오픈소스 웹 서버 프로그램
	 Apache Tomcat	Java기반 웹 어플리케이션 서버
	 Jetty	HTTP 서버 및 JAVA 서블릿 컨테이너

Tool Set	Tool	활용
개발언어	 Java JavaScript	Java기반 스크립트언어
	 Node.js	이벤트 기반 자바스크립트런타임
	 Python	인터프리터 방식의 프로그래밍언어
	 Go 언어	구글에서 만들어진 프로그래밍 언어
Database	 PHP	서버 사이드 스크립트 언어
	 MySQL	오픈 소스 DBMS
	 Redis	오픈 소스 메모리 기반 DBMS
	 PostgreSQL	오픈 소스 RDBMS
	 MongoDB	NoSQL DBMS

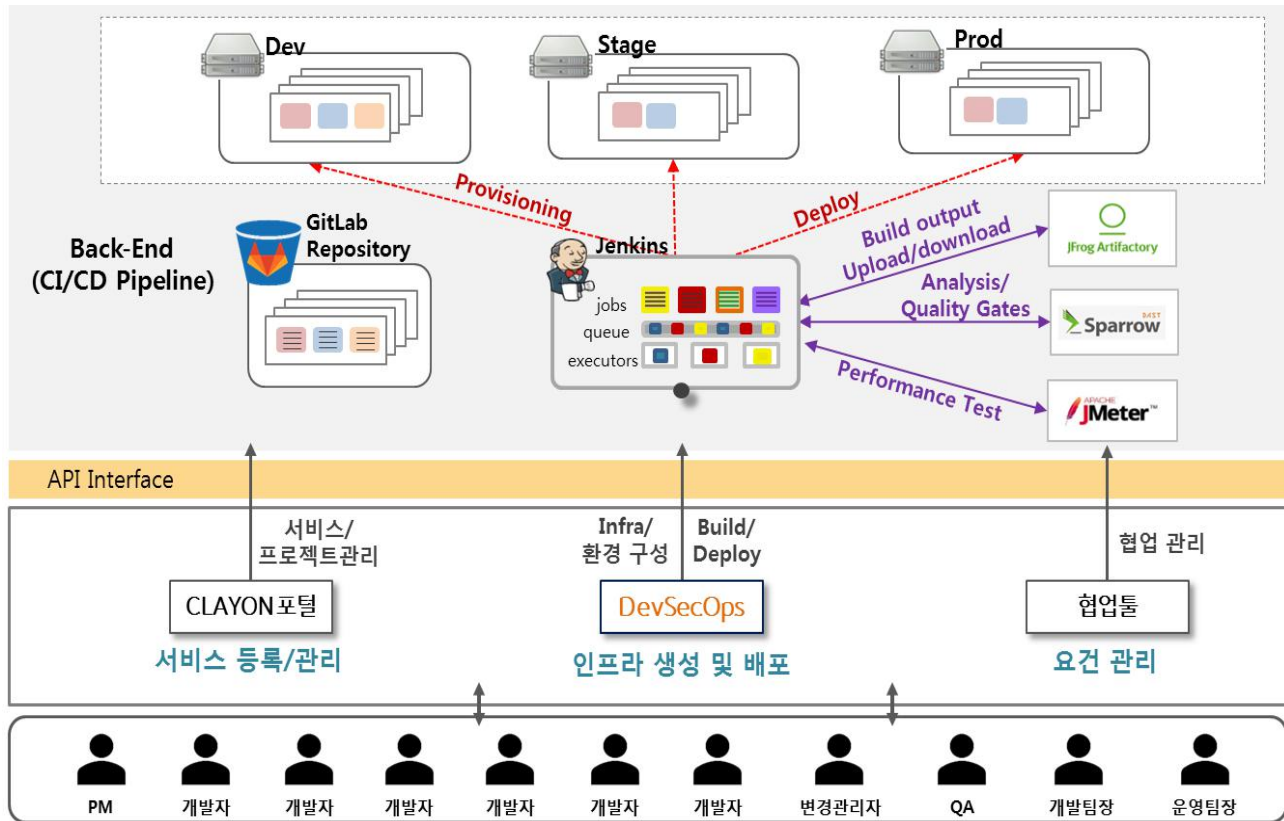
기술 - 금융클라우드 구축 및 활용을 위한 신기술 도입

CLAYON 플랫폼 팀

오픈소스 활용

DevOps

멀티클라우드 기반 확보



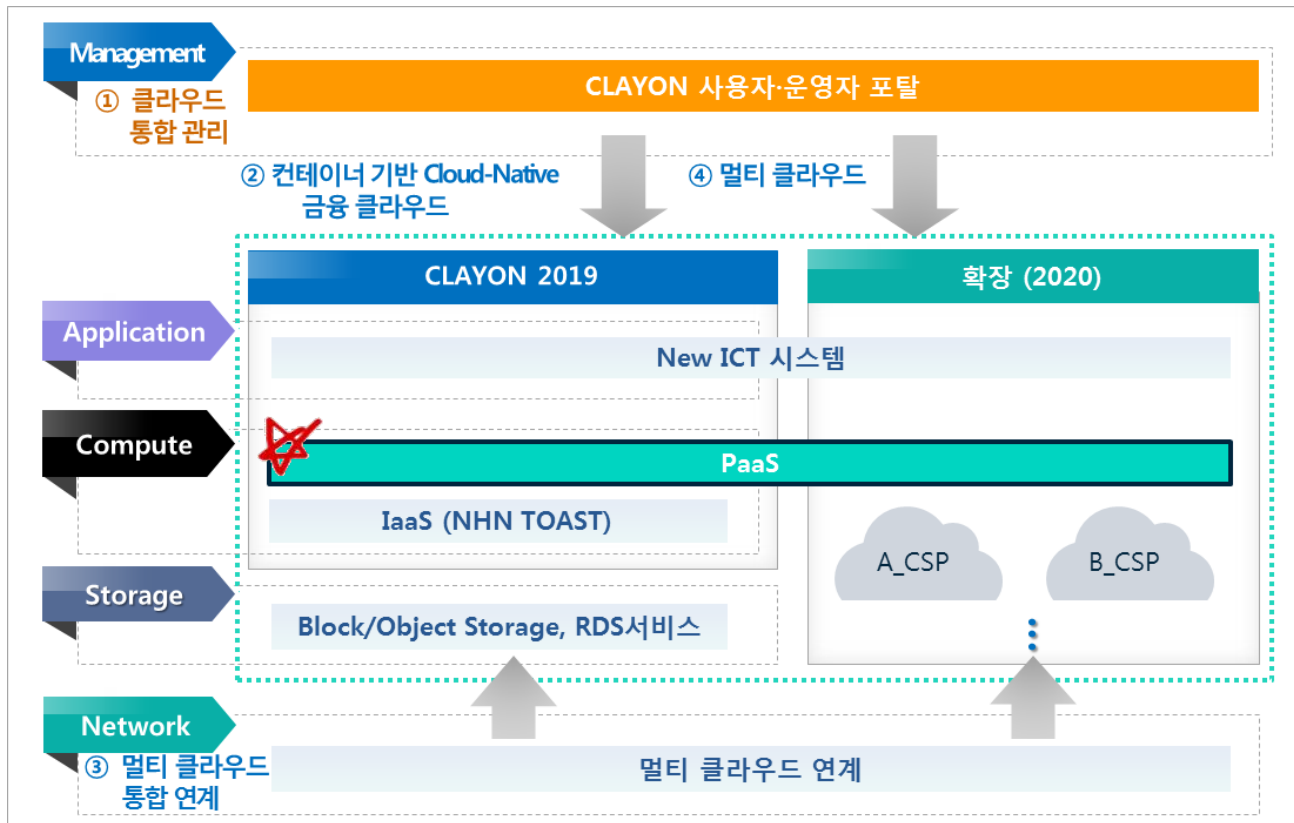
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CLAYON 플랫폼 팀

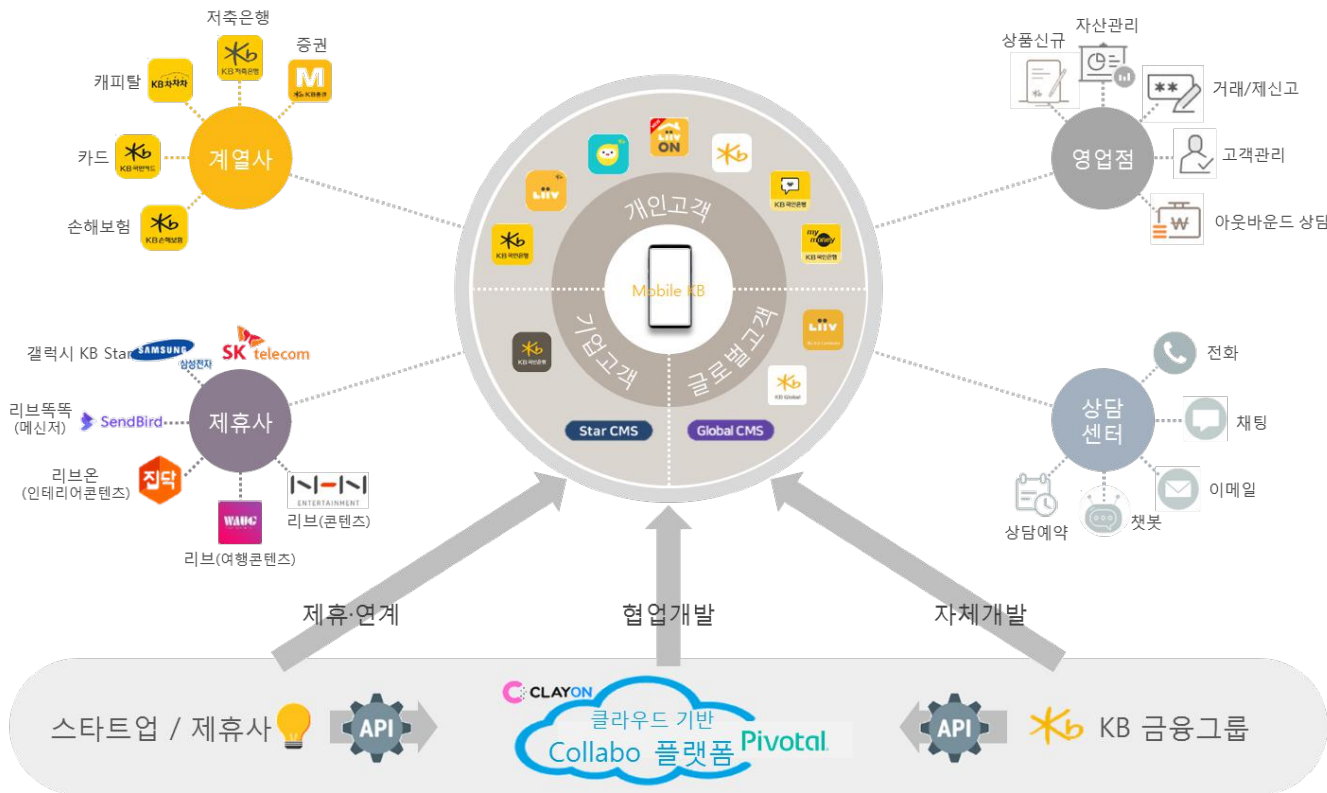
오픈소스 활용

DevOps

멀티클라우드 기반 확보



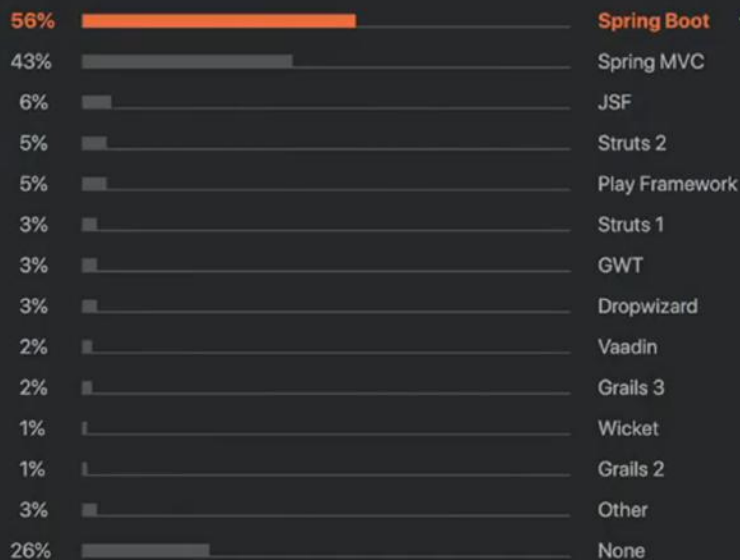
『연결과 협업 중심의 KB금융 ECO System』



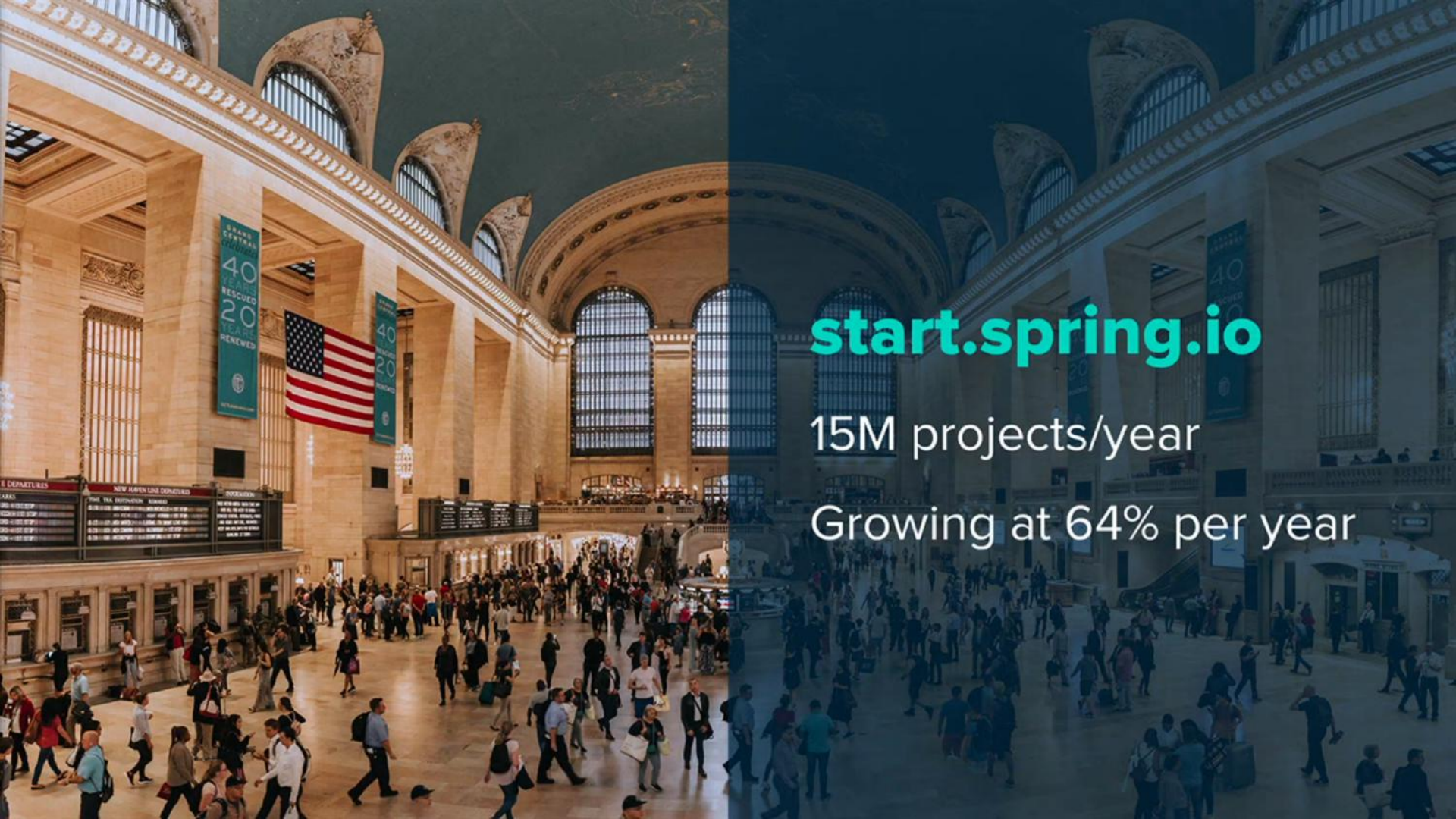
Open Source Spring

JetBrains Developer Ecosystem 2019*

What web frameworks do you use, if any?



“Spring Boot has become the most popular Java web framework, adding 14% since last year.”

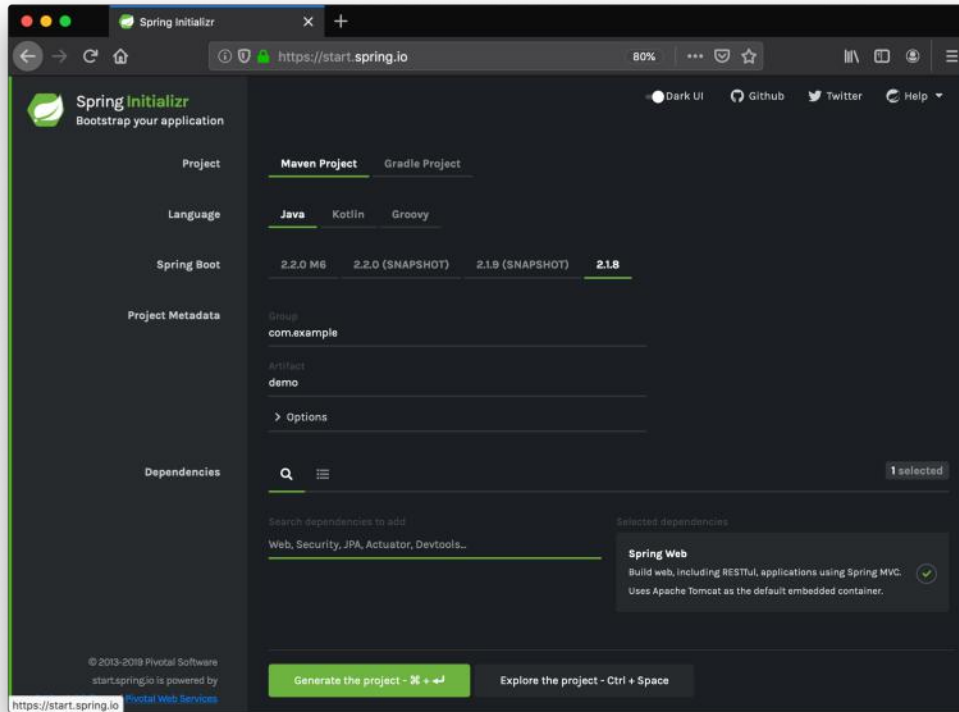


start.spring.io

15M projects/year

Growing at 64% per year

Developer Productivity Updates with Spring Initializr



start.spring.io

Generates Spring Boot Project Structure for Developers

The new Share feature makes exchanging project setup as simple as sharing a URL

The Project Explorer feature allows developers to examine the project before downloading or they can just “copy-paste” the configuration

Netflix Platform Team

NETFLIX

130 million customers

In over **190** countries

Streaming **140 million** hrs/day

- Libraries
 - Discovery via Eureka
 - Configuration
 - Service to Service communication
 - Metrics, Tracing, Security, Logging
- Originally in-house frameworks
- As of 2019, implemented via Spring

Why Spring?

NETFLIX ORIGINAL

STRANGER THINGS

95% Match 2017 2 Seasons 4K Ultra HD 5.1

When a young boy vanishes, a small town uncovers a mystery involving secret experiments, terrifying supernatural forces and one strange little girl.

Winona Ryder, David Harbour, Matthew Modine
TV Shows, TV Sci-Fi & Fantasy, Teen TV Shows



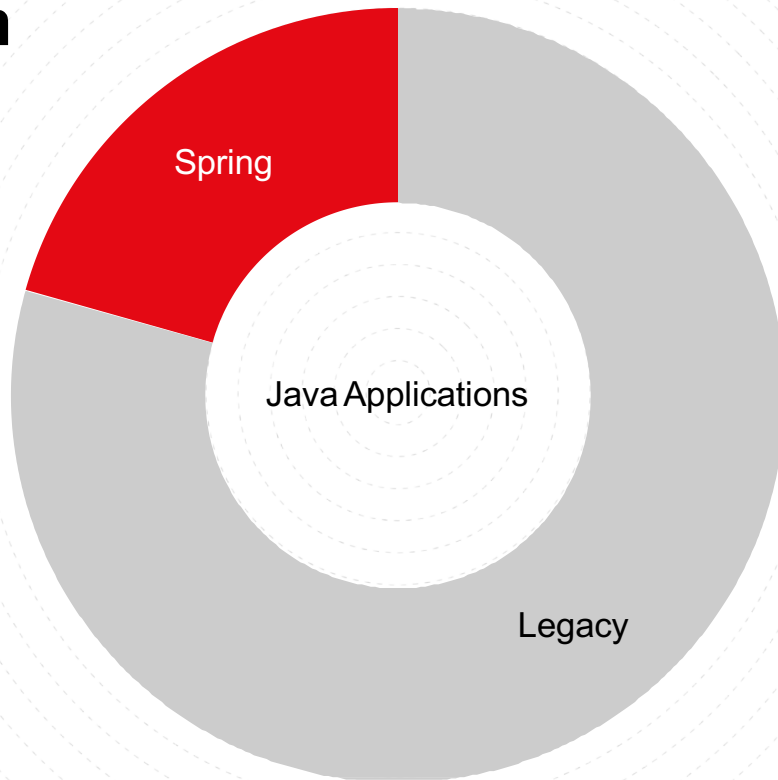
Popular on Netflix



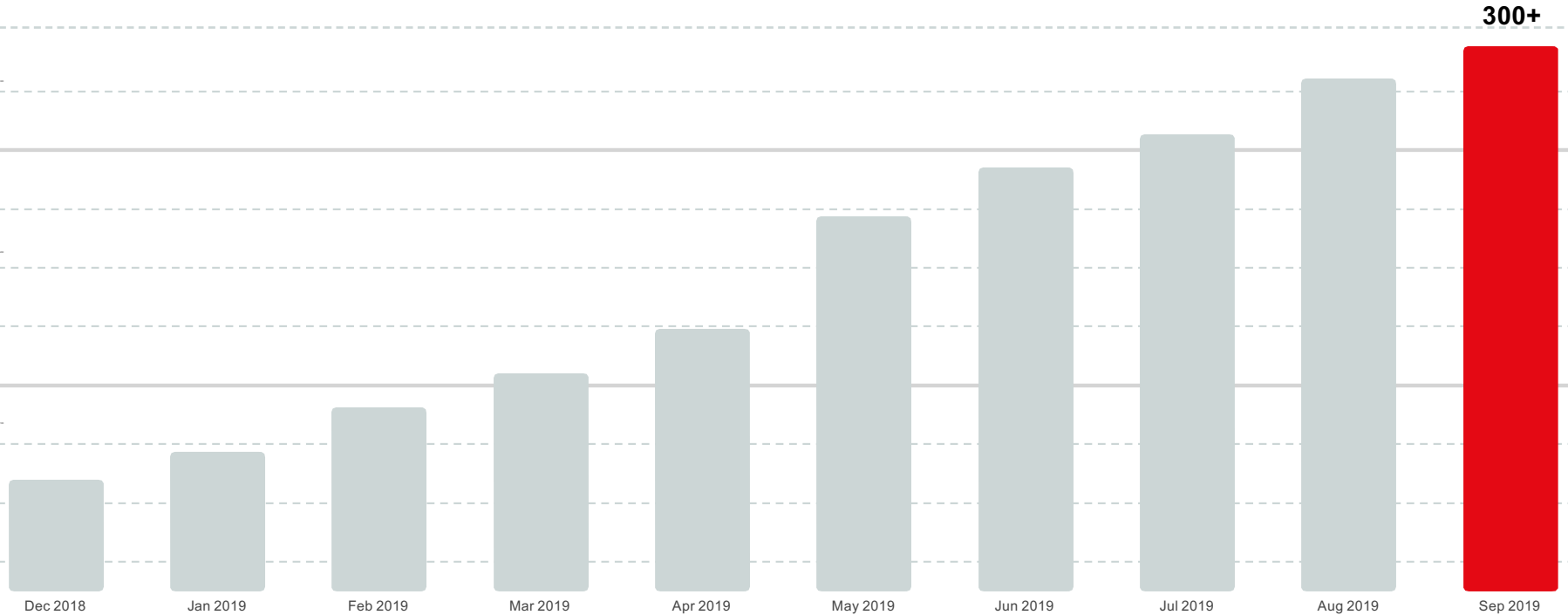
Recently Watched



Spring Applications vs Legacy Platform



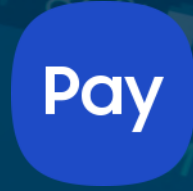
Spring Boot Applications in Production



Pivotal Summit 2019

Spring Cloud for Samsung Account

Salva Jung
Samsung Electronics

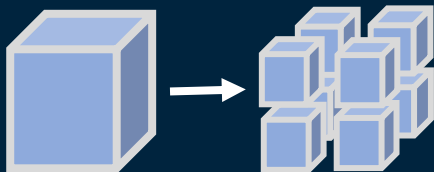


SAMSUNG Account

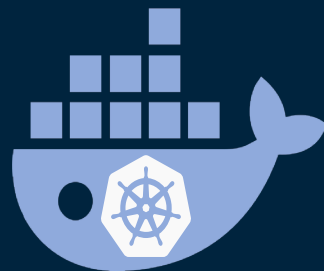




클라우드
마이그레이션



마이크로서비스로
리팩토링



컨테이너 기반
클라우드 네이티브

Main Spring Products We Are Using



Spring
Boot



Spring
Security



Spring
Cloud

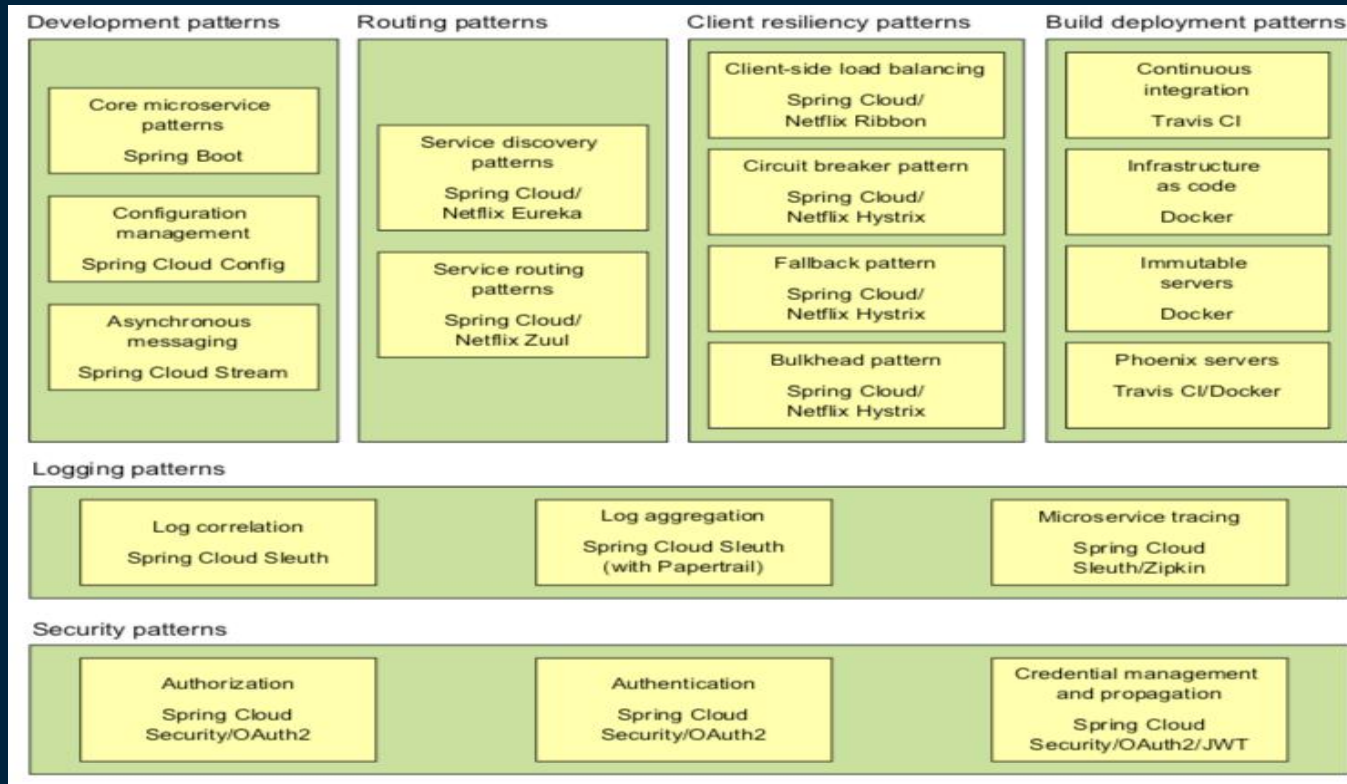


Spring
Framework



Spring Tool
Suite

Sub Projects of Spring Cloud



Configuration Servers+



Consul



APACHE
ZooKeeper™

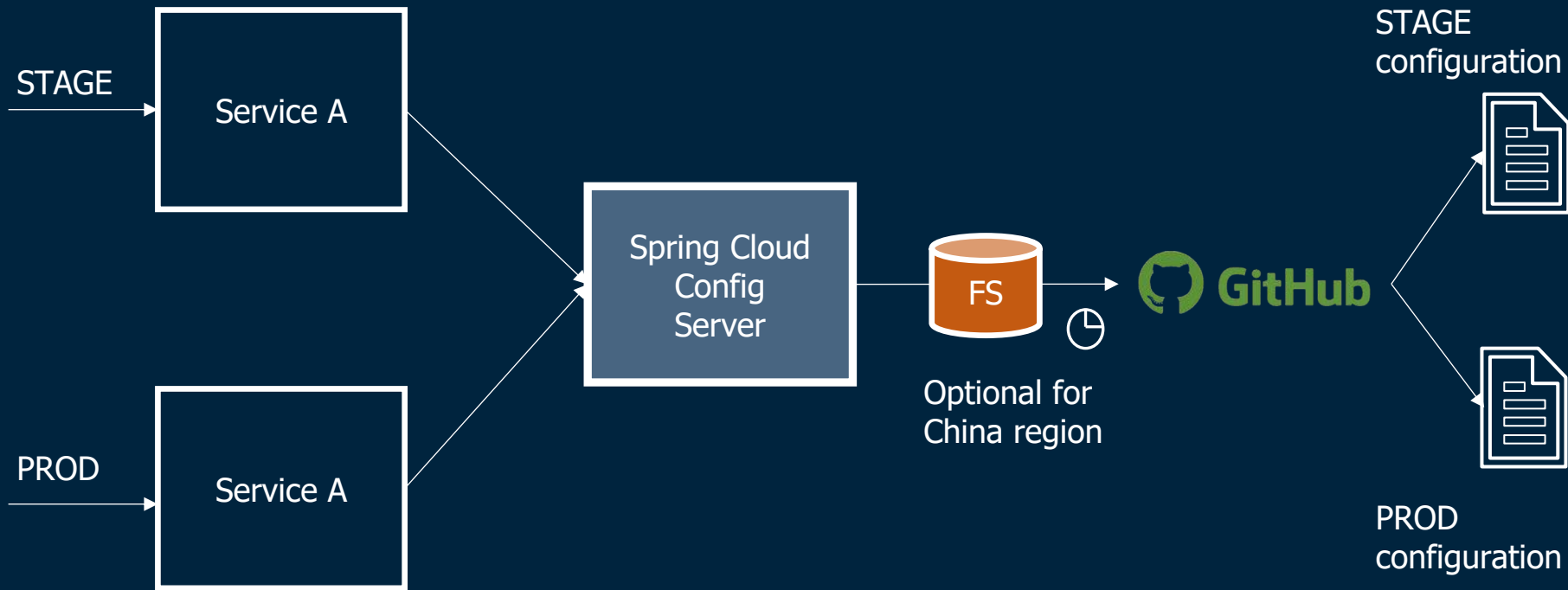


Spring Cloud Config

Spring Cloud Config

- Centralized, external and dynamic configuration
- Backed by file system or Git
- Protecting sensitive data with symmetric/asymmetric keys

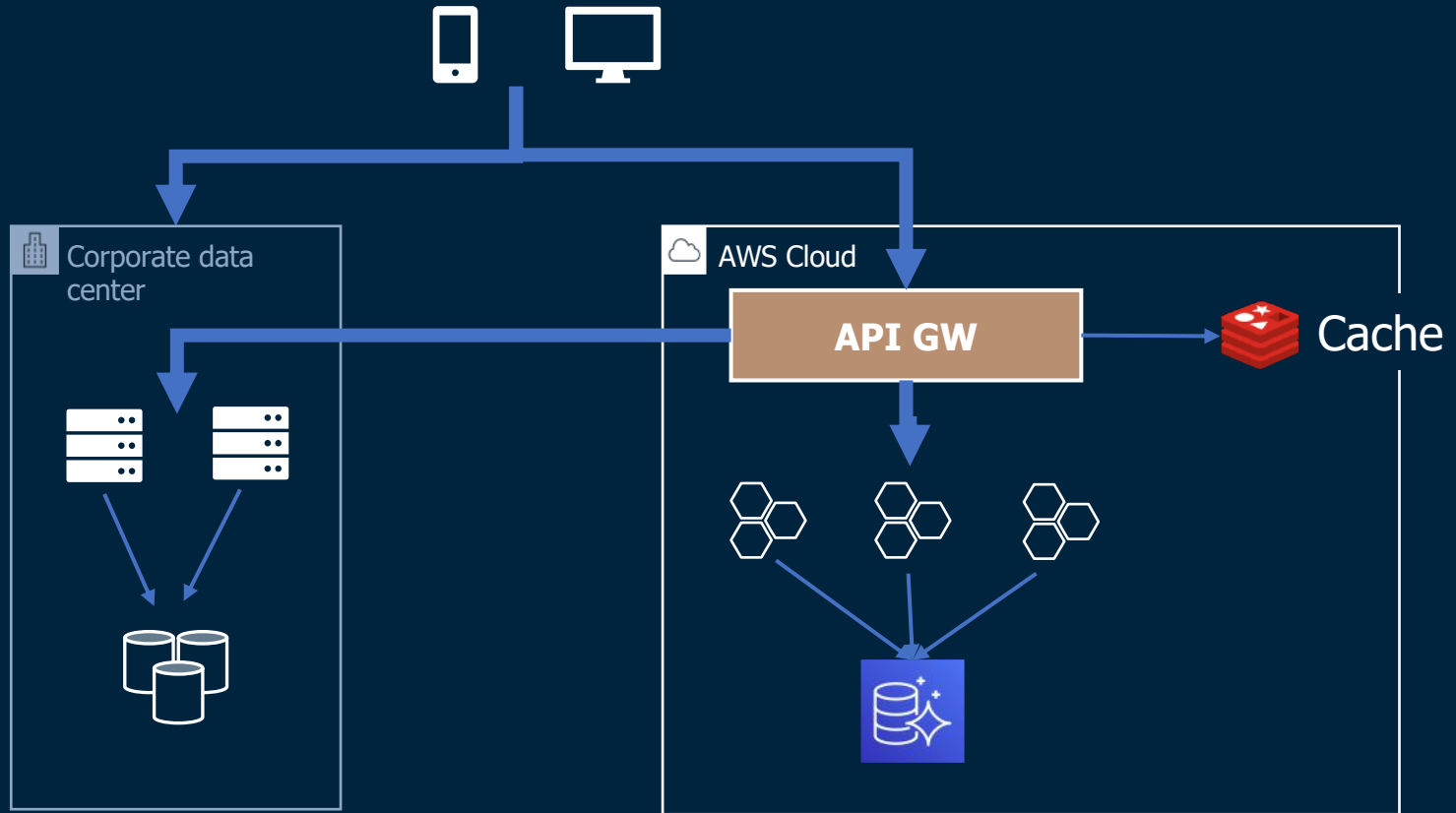
Spring Cloud Config



Spring Cloud API Gateway

- Static & Dynamic routing
- Authentication & authorization
- Metric collection & logging
- Handles caching
- Protocol translation

Spring Cloud API GW for Migration & Caching



Closing

Summary

**Technology
+
Culture**

**Spring Boot
1 Java
Framework**

**Spring
for
MSA**

Stay Connected.

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