The Linux Foundation

이제응(Jerry Lee) 한국 리눅스 재단 대표

Korea Director @ Linux Foundation APAC
CNCF, Cloud Foundry, Hyperledger, LF EDGE, LF AI

리눅스는 세계에서 가장 중요한 소프트웨어 플랫폼으로 성장

100%
Supercomputer Market

82%
Smartphone Market Share

2nd
To Windows in Enterprise

90%
Mainframe Customers

90%
Public Cloud Workload

62%
Embedded Systems Market

#1
Internet Client

리눅스가 도입된 영역마다 최강자로 시장 석권!

Open-source Projects; +100 Project 운영 중

Security

We securing the internet as home to world's largest certificate authority securing100M web sites.

Let's Encrypt

CORE INFRASTRUCTURE INITIATIVE

Networking

We are home to 9 of the top 10 open source networking projects in the world backed by the majority of global network providers.

ONAP

OPEN DAYLIGHT

CORD

Cloud

We are creating a portability layer for the cloud, driving standards and developing reference tools for cloud native development.

kubernetes

CLOUD FOUNDRY

CLOUD NATIVE COMPUTING FOUNDATION

Automotive

Our Automotive Grade Linux platform is backed by 12 automakers and is either in or slated for production in millions of vehicles worldwide.

AUTOMOTIVE GRADE LINUX

Blockchain

We are creating a permanent, secure distributed ledger that makes it easier to create cost-efficient, decentralized business networks.

HYPERLEDGER

Edge/Embedded

We are creating projects used in building the majority of embedded Linux distributions and rationalizing edge computing.

Zephyr™

yocto PROJECT

EDGE X FOUNDRY™

Web

We are providing the application development framework for next generation web, mobile, serverless, and IoT applications.

node JS

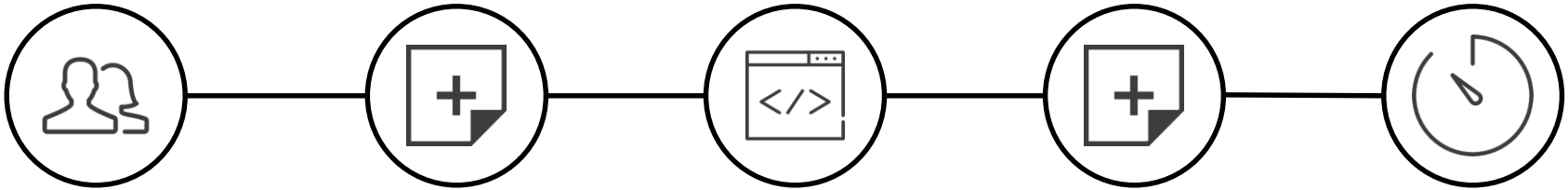
JS Foundation

Trend : 오픈소스는 초고속 성장 중

23M+
오픈소스 개발자

41B+
코드 라인 수

10,000+
신규 버전/1일



64M+
GitHub 의 Repository 수

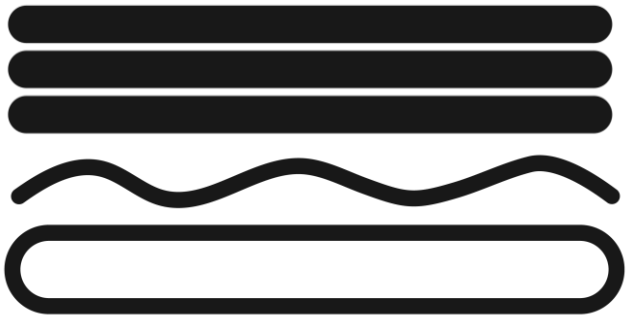
1,100+
신규 프로젝트/1일

* Source: Sourceclear, Sonatype, Github

Code Club (Sandwich)

Choose a Framework

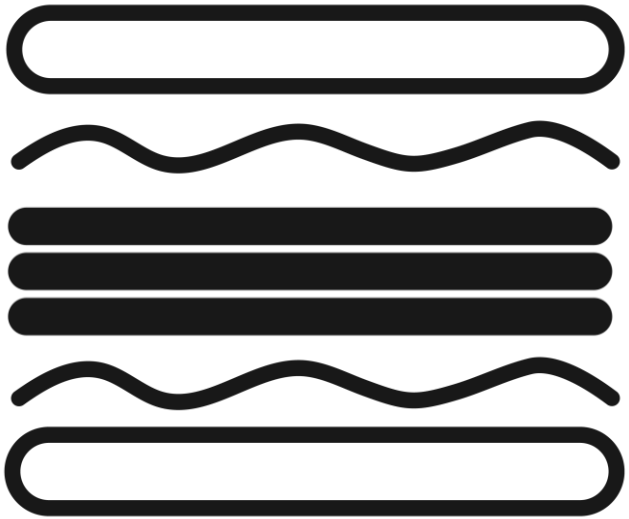
Code Club (Sandwich)



Write Custom Code

Choose a Framework

Code Club (Sandwich)



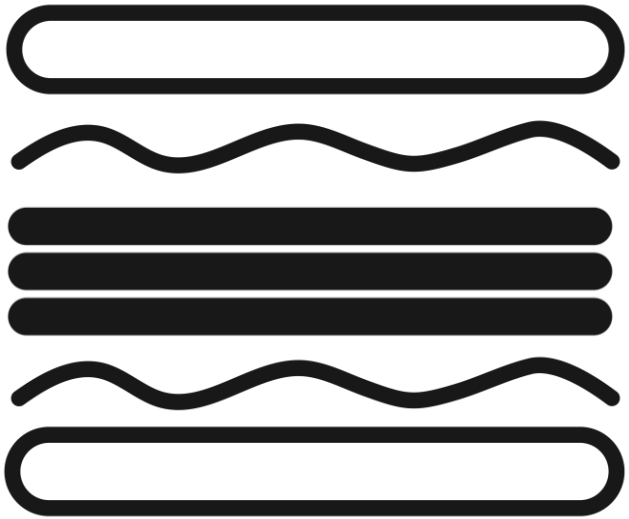
Use Open Source Libraries to Solve Problems

Write Custom Code

Choose a Framework

Code Club (Sandwich)

Open Source Code = ~ 90%



Use Open Source Libraries to Solve Problems

Open Source Code (~70%)

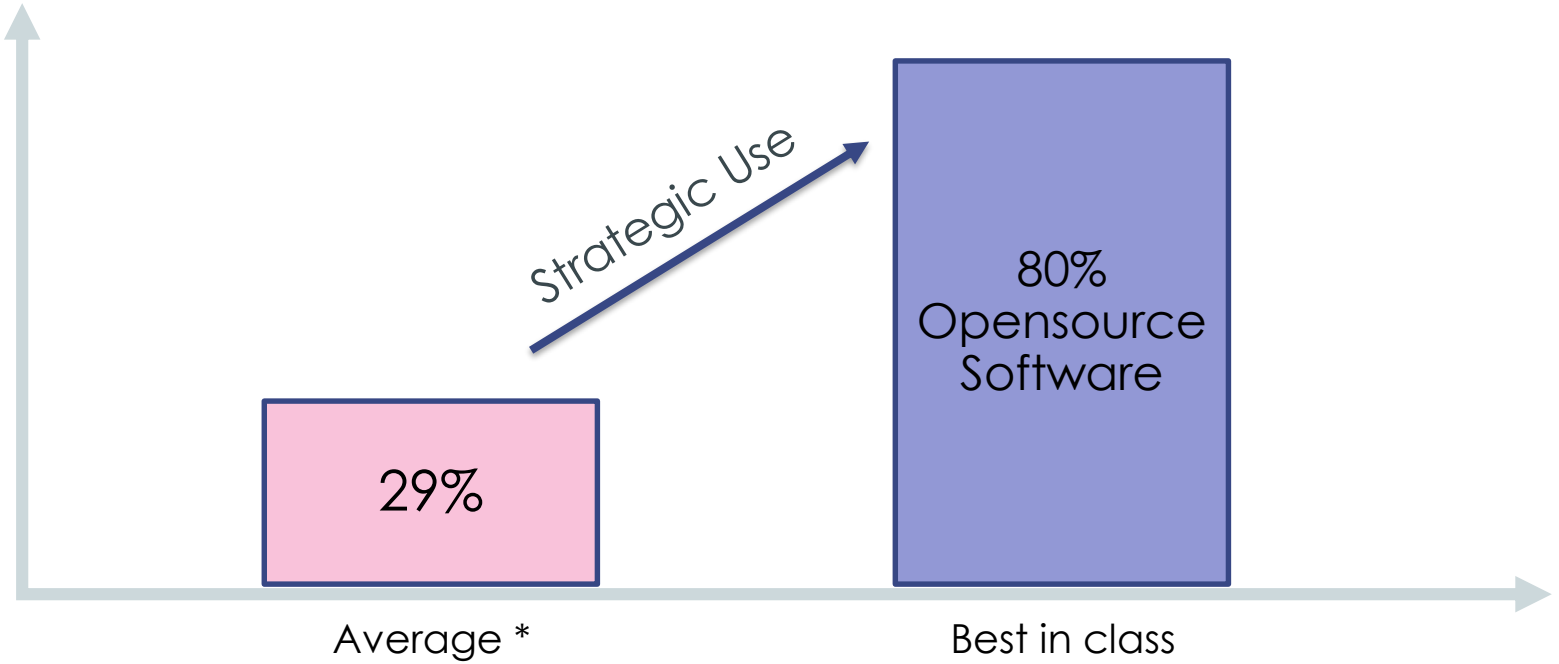
Write Custom Code

Custom Code (~10%)

Choose a Framework

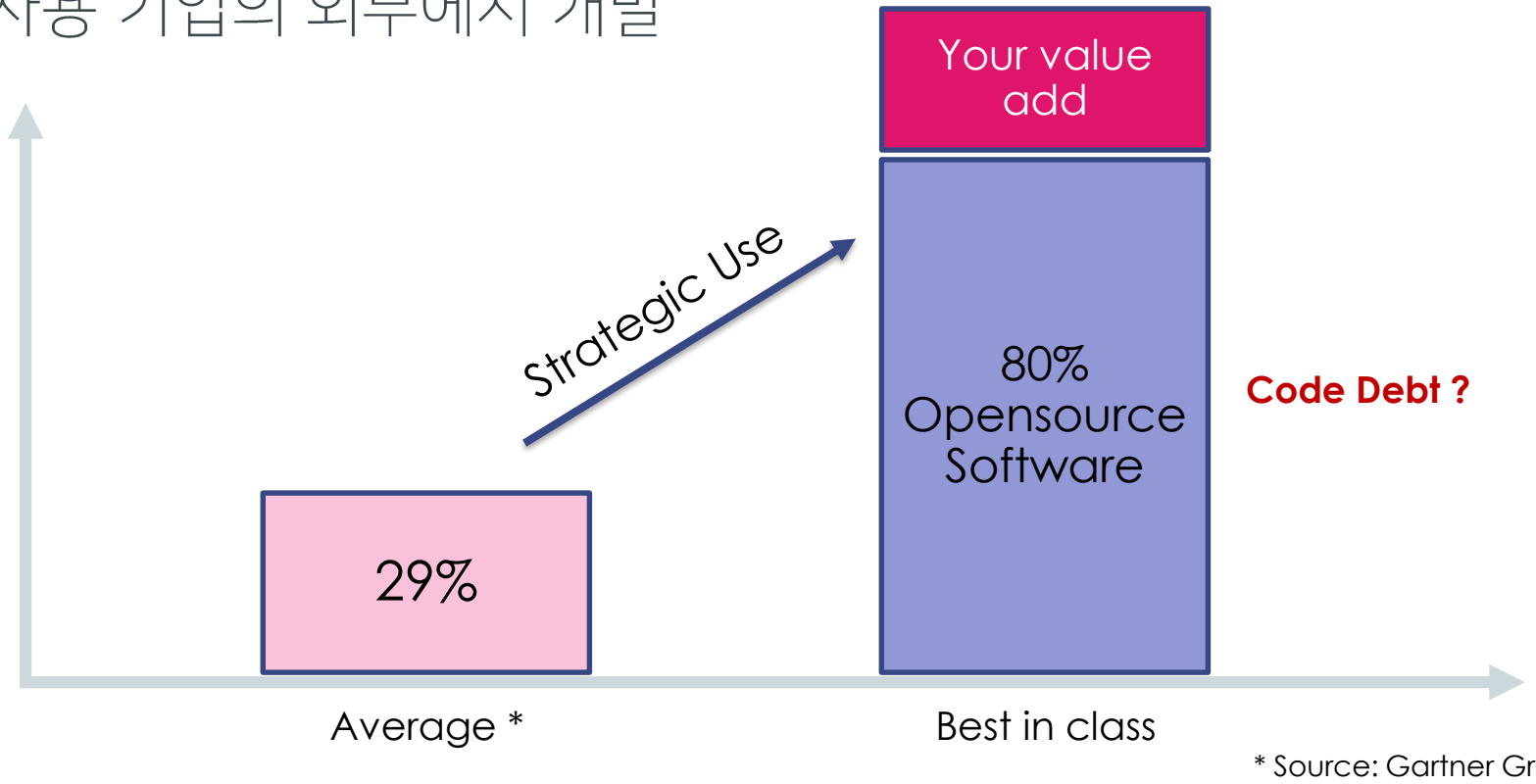
Open Source Code (~20%)

현재 IT 기술에 사용되는 System & 서비스 Code는 대부분 실 사용 기업의 외부에서 개발



* Source: Gartner Group

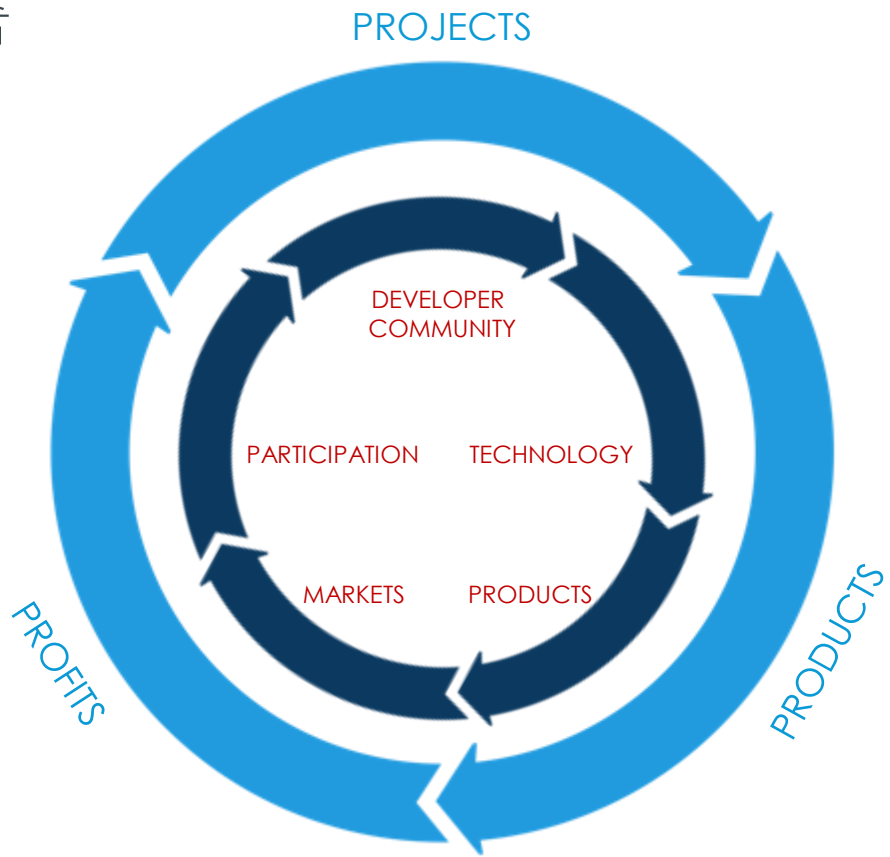
현재 IT 기술에 사용되는 System & 서비스 Code는 대부분 실 사용 기업의 외부에서 개발



* Source: Gartner Group

신뢰를 바탕으로한 생태계 구축

지속 가능한 프로젝트는 개발자
커뮤니티를 가지고 있으며,
프로젝트에 재투자 해주며,
커뮤니티의 개발자를 고용하는 기업을
가지고 있다.



CNCF 소개 & Update

CLOUD NATIVE
COMPUTING FOUNDATION

CNCF(Cloud Native Computing Foundation) 소개

CLOUD NATIVE COMPUTING FOUNDATION

- 2015년 12월, Linux 비영리 재단 산하 Project 재단 https://www.cncf.io/

Graduated

Orchestration

Monitoring

Service Proxy

Service Discovery

Container Runtime

Logging

Distributed Tracing API

Remote Procedure Call

Networking API

Distributed Tracing

Software Update Spec

Security

Storage

Messaging

Service Mesh

Package Management

Storage

Registry

Key/Value Store

Policy

Container Runtime

Key/Value Store

Incubating

- Platinum Member :

CNCF 프로젝트 성숙도

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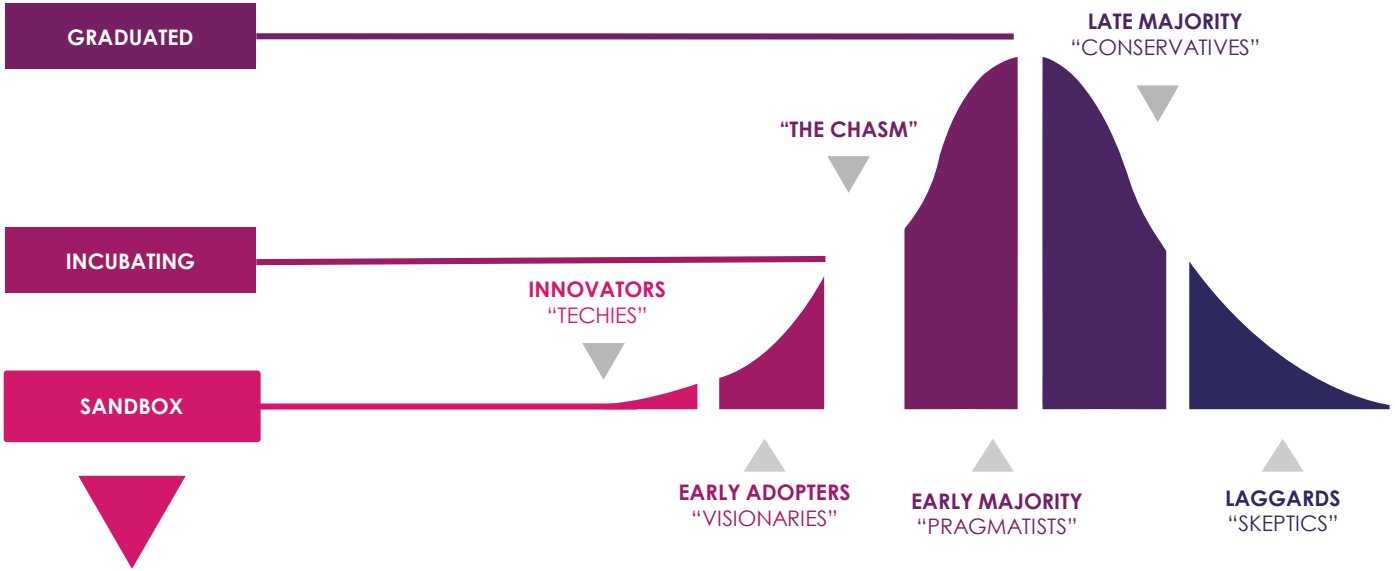

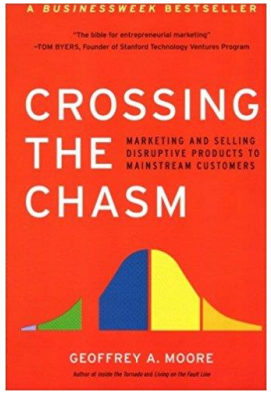

Sandbox

spiffe	SPIRE	cloudevents	TELEPRESENCE	OPENMETRICS	cortex	Buildpacks.io	Falco	Dragonfly	Virtual Kubelet	KubeEdge	BRIGADE	Network Service Mesh	OpenTelemetry	OpenEBS	Thanos	flux
Identity Spec	Identity	Serverless	Tooling	Metrics Spec	Monitoring	Packaging Spec	Container Security	Image Distribution	Nodeless	Edge	Scripting	Networking	Telemetry Spec	Storage	Monitoring	GitOps

From 가상화 To 클라우드 네이티브(Cloud Native)

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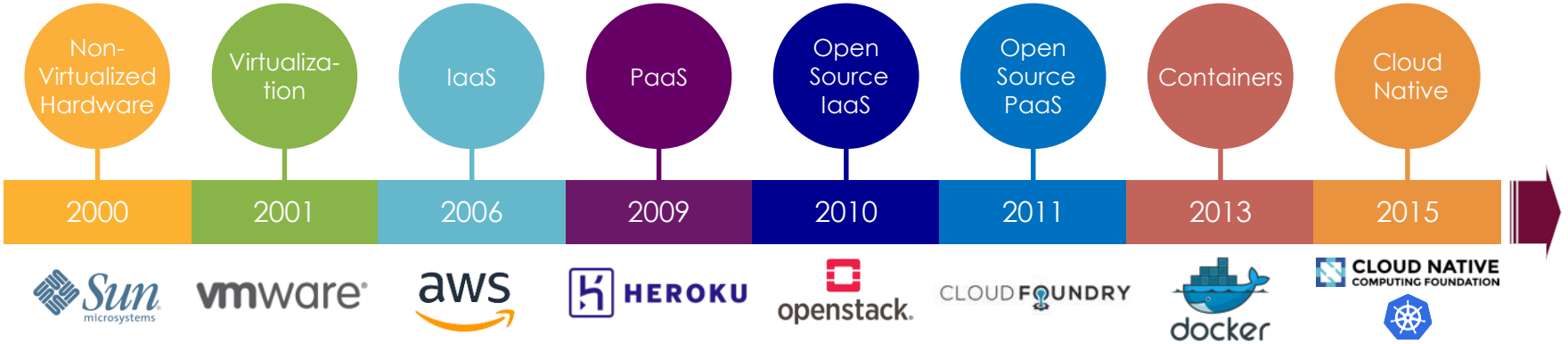
kubernetes

- Cloud Native Computing for Open-source Collaboration:
  - Application을 Microservice 단위로 Segmentation
  - Part별로 개별 Container Package
  - Container Orchestration을 통한, Resource 활용 최적화



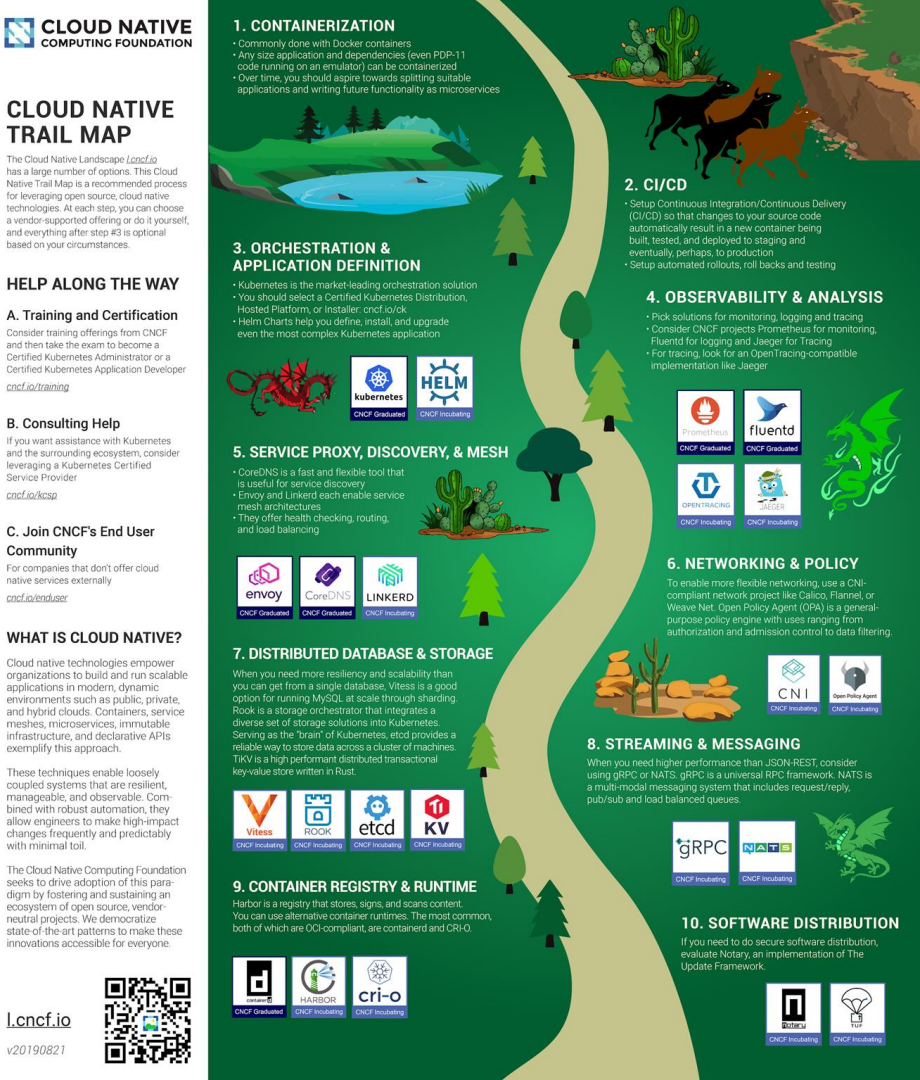
CNCF 에 참여 해야 하는 이유

CLOUD NATIVE COMPUTING FOUNDATION

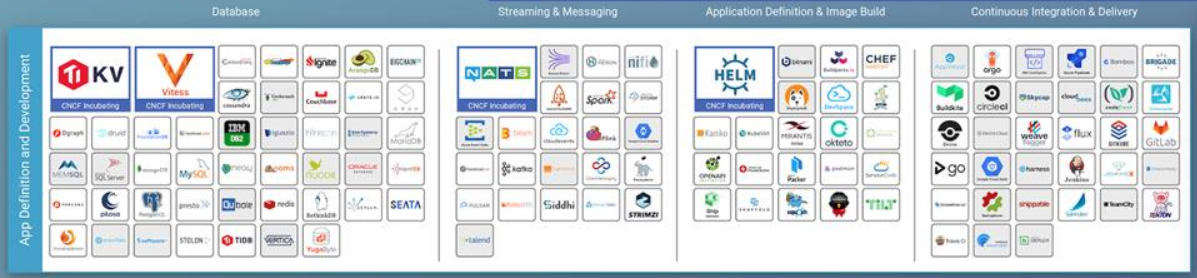
- 재단의 중립성이 더 많은 공헌(Contribution) 유입
- CNCF 기술 자문 위원회(Technical Oversight Committee) 보증(Certification) 및 지원
- End User 및 Service 제공자가 속한 CNCF Community와 교류 활성화
- Full-time Press 및 System 분석팀 지원
- Documentation, Case Study 및 Support Service에 연간 수천만 달러 지원
- 중립 기반의 Committer들을 보유하고, 각 project 고유의 Governance 정의
- Full-time Support 지원 (CNCF Staff)
- KubeCon + CloudNativeCon 행사 및 CNCF Event에 참여하여, Member사 Project 소개
- 전 세계의 Meetup 참여 기회 제공
- CI(Cross-Cloud Integration) 및 Scale Testing을 위한 Cloud Resource 지원

Cloud Native Trail Map

Trail Map: l.cncf.io



Overwhelmed? Please see the CNCF Trail Map. That and the interactive landscape are at l.cncf.io



This landscape is intended as a map through the previously uncharted terrain of cloud native technologies. There are many routes to deploying a cloud native application, with CNCF Projects representing a particularly well-traveled path

l.cncf.io

CLOUD NATIVE COMPUTING FOUNDATION

CLOUD NATIVE Landscape

Redpoint Amplify

CNCF Cloud Native Interactive Landscape

CLOUD NATIVE Landscape

CLOUD NATIVE COMPUTING FOUNDATION

The Cloud Native Trail Map (png, pdf) is CNCF's recommended path through the cloud native landscape. The cloud native landscape (png, pdf), serverless landscape (png, pdf), and member landscape (png, pdf) are dynamically generated below. Please open a pull request to correct any issues. Greyed logos are not open source. Last Updated: 2019-07-16 22:17:13Z

You are viewing 1,158 cards with a total of 1,725,127 stars, market cap of $10.38T and funding of $57.68B.

Try it now at https://l.cncf.io

Tweet 694

Landscape | Card Mode | Serverless | Members

Reset Filters

Grouping: No Grouping

Sort By: Stars (high to low)

Category: Any

CNCF Relation: Any

License: Any

Organization: Any

Headquarters Location: Any

Example filters:

Cards by age
Open source landscape
Member cards
Cards by stars
Cards from China
Certified K8s/KCSP/KTP
Cards by MCap/Funding

Download as CSV

No Grouping (1158)

Kubernetes ★55,292 Cloud Native Computing Foundation (CNCF)	**Elastic** ★42,628 Elastic MCap: $7.09B	**Netdata** ★39,579 Netdata	**Ansible** ★38,340 Red Hat MCap: $33.43B	**Redis** ★37,543 Redis Labs Funding: $146.6M	**Serverless** ★30,993 Serverless Funding: $13M
Grafana ★29,826 Grafana Labs Funding: $1.23M	**No Code** ★29,736 No Code	**Dubbo** ★27,880 Apache Software Foundation	**etcd** ★26,033 Cloud Native Computing Foundation (CNCF)	**Prometheus** ★25,134 Cloud Native Computing Foundation (CNCF)	**Traefik** ★23,355 Containous Funding: $1.06M
Apache Spark ★22,617 Apache Software Foundation	**Kong** ★22,580 Kong Funding: $69.1M	**RethinkDB** ★22,388 Linux Foundation	**gRPC** ★22,130 Cloud Native Computing Foundation (CNCF)	**GitLab** ★21,901 GitLab Funding: $168.2M	**Sentry** ★21,457 Sentry Funding: $26.5M

Kubernetes(K8S) 검색 추이

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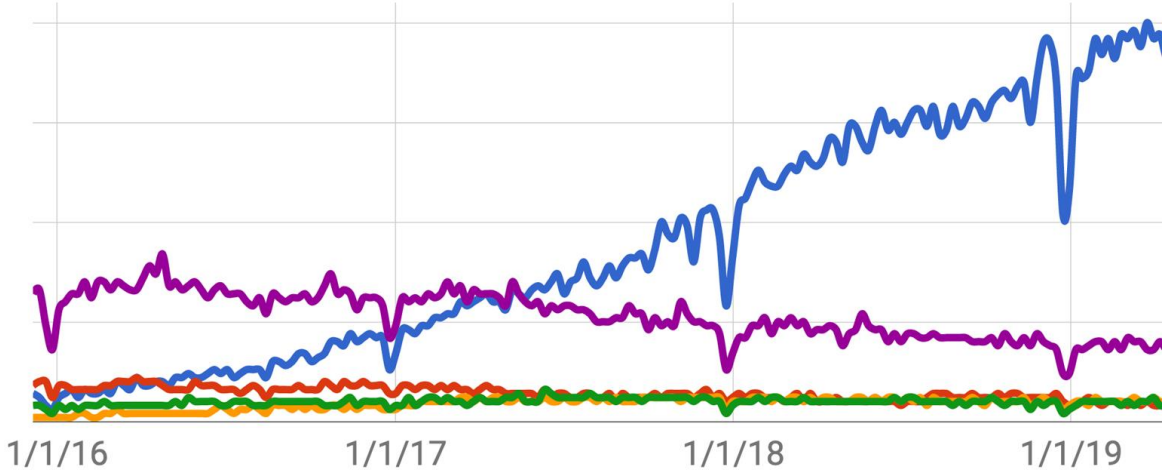
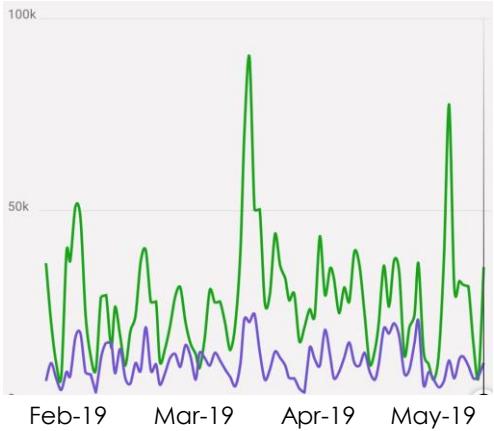
Google 검색



Kubernetes OpenStack Mesos Docker Swarm Cloud Foundry

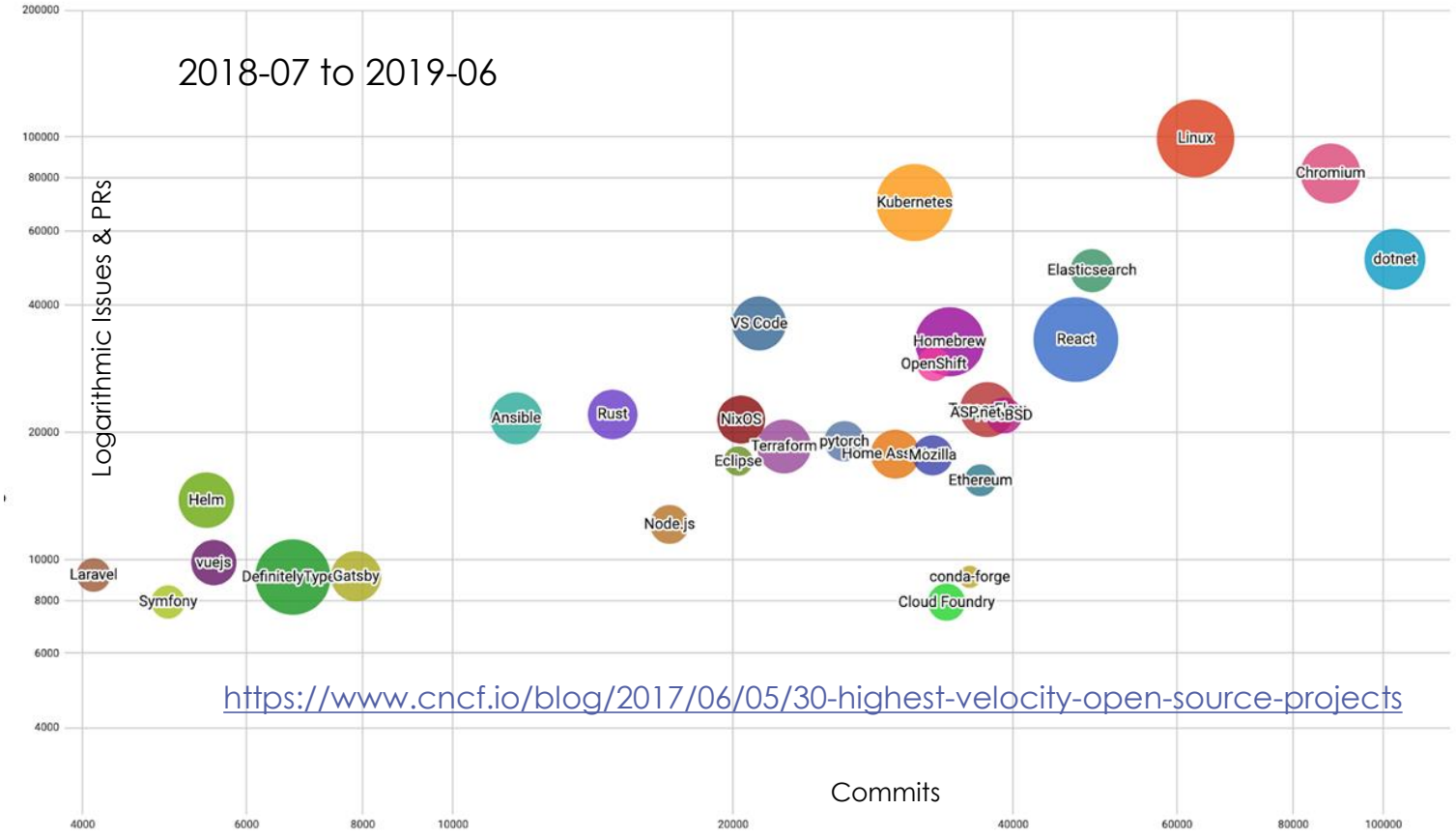
WeChat



Kubernetes OpenStack

30 Highest Velocity Open Source Projects

CLOUD NATIVE COMPUTING FOUNDATION



https://www.cncf.io/blog/2017/06/05/30-highest-velocity-open-source-projects

105+ End User 커뮤니티

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Plus 9 non-public members

400+ Member사와 지속적인 성장

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Platinum Members

Alibaba Cloud, aws, Apple, cisco, DELL Technologies, FUJITSU, Google Cloud, HUAWEI, IBM Cloud, intel, JD.COM, Microsoft Azure, ORACLE, Pivotal, Red Hat, SAMSUNG SDS, SAP, vmware

Gold Members

arm, AT&T, BAIDU AI CLOUD, CapitalOne, DigitalOcean, HORTONWORKS, inspur 浪潮, JFrog, Kingsoft Cloud, Kong, NEC, NetApp, salesforce, SUSE, Tencent Cloud, ZTE

End User Members

Akatsuki, Apple, ATLASSIAN, Bloomberg, CAMBIA, CapitalOne, ebay, DENSO, DiDi, GitHub, globo.com, Goldman Sachs, indeed, intuit, JD.COM, MathWorks, Mattermost, Morgan Stanley, MUFG, NAIC, NCSOFT, Pinterest, salesforce, Spotify, SQUARESPACE, STATE STREET, TRADESHIFT, twitter, ADVANCED RESEARCH COMPUTING TECHNOLOGY SERVICES, WIKIMEDIA FOUNDATION, YAHOO! JAPAN

End User Supporters

adidas, AMADEUS, AUDITBOARD, box, cookpad, cruise, CURVE, DOORDASH, FORM3, Granular, Psystems, Kuelap, la Mobilière, mastercard, Nasdaq, The New York Times, nielsen, PostFinance, PUSHER, reddit, ricardo.ch, SAP Concur, shopify, showmax, SIMPLENEXUS, Spredfast, StateFarm, stix, testfire labs, textkernel, THREDUP, ticketmaster, TWO SIGMA, UPSIDER, Wabtec, Werkspot, wework, woorank, workday, WP engine, zalando, zendesk

Academic/Nonprofit

CableLabs, CAMBIA, CENGN, CLOUD FOUNDRY, ECLIPSE FOUNDATION, GOLDEN GATE UNIVERSITY, INTERNET 2, NAIC, NIPR, OpenCloud Foundation, SEL, ADVANCED RESEARCH COMPUTING TECHNOLOGY SERVICES, TTA 한국정보통신기술협회 Telecommunications Technology Association, WIKIMEDIA FOUNDATION

400+ Member사와 지속적인 성장 (silver 1)

CLOUD NATIVE COMPUTING FOUNDATION

400+ Member사와 지속적인 성장 (silver 2)

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CNCF 최신 News

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Certified Kubernetes Conformance

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- CNCF는 Kubernetes Certified Program 출시
  - Implementation을 통한 적합성 확인 및 결과 Upload
  - Kubernetes 구현의 준수 여부를 위한 신규 Mark와 더 유연한 Kubernetes Trademark의 사용
  - K8s 1.9 & 1.10 를 위한 Submission 접수 중
  - https://www.cncf.io/certification/software-conformance/

- 87 Certified Kubernetes Partners

CNCF MOOC 및 On-line Training

- edX 상에 무료 Introduction to Kubernetes Self-pace Course 개설
- Kubernetes Fundamentals Course
  - Certified Kubernetes Administrator (CKA) 시험 대비 Course
  - $299, 중간 개발자 Level
- Training을 필요로하는 기업을 위한 Open-source curriculum 준비
  - CKA 시험 Coupon – 대량 구매 시, 할인가 적용

Online, Proctored Kubernetes Exams

CLOUD NATIVE COMPUTING FOUNDATION

- Online, 감독 주관하의 Kubernetes 숙련도 시험
  - Scenarios로 구성된 시험 문제를 Command Line을 통해 해결하는 시험이며, 객관식 문제는 없음
  - 시험시간 : 3 시간
  - 응시비용 : $300
  - Quarterly exam updates to match K8s releases
- Certified Kubernetes Administrator (CKA)
  - Over 1,500 registrations already
  - https://www.cncf.io/certification/expert/cka/
- Certified Kubernetes Application Developer (CKAD)
  - Certifies that users can design, build, configure, and expose cloud native applications for Kubernetes
  - https://www.cncf.io/certification/expert/cka/ckad/

Kubernetes Certified Service Provider (KCSP)

CLOUD NATIVE COMPUTING FOUNDATION

- KCSP 인증을 획득한 Member사는 Kubernetes를 성공적으로 도입할 수 있도록 Support, Consulting, Profession Service 및 Training 등의 지원 가능한지를 사전 검증하여 Kubernetes 전문 Service 기업임을 증명

- 혜택
  - Website 상단에 노출 https://kubernetes.io/partners/
  - CNCF 의 Cloud 기반 Project Leader, TOC Member, 및 Governing Board 대표와 Monthly Meeting 참여
  - Website를 통해 Supporter를 찾는 End User Lead에 대한 Access 제공
- 요구 사항
  - 3명 이상의 Certified Engineer 보유
  - Kubernetes Community에서 적극적인 공헌 및 활동 기록 증명
  - Enterprise End User를 Support 가능한 Business Model 보유

kubernetes CERTIFIED SERVICE PROVIDER

https://www.cncf.io/certification/kcsp/

30

93 Kubernetes Certified Service Providers

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CNCF Membership 가치

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Technology Leadership

- CNCF 기술에 공헌 및 방향성에 의견 반영
- Member사의 Business에 중요한 기술 개발 전략 의견 반영과 추가 Extension 개발 주도
- 요구사항 문서에 추가 기능에 대한 Guideline 제시 및 미래 기술의 방향성 결정

Learning and Engaging

- Member사로 구성된 Community에 참여 및 협업을 통해 Member사의 Cloud Roadmap 강화
- 기업과 산업간 교차 협업(Cross Collaboration)
- Orchestration된 Container들을 Microservice Architecture 의 중요 요소로, Application과 Service를 Cloud향 Platform 기반하에 개발
- Member의 Product 및 Application의 상호 운용성 (Interoperability) 보장
- CNCF Ambassador로써 활동

November 18-21, 2019

San Diego

KubeCon | CloudNativeCon

North America 2019

March 30 - April 2, 2020

Amsterdam

KubeCon | CloudNativeCon

Europe 2020

kubecon.io

Kubernetes Forums

Two-day events

Target Audience 1,500+

서울: 2019년 12월 9일-10일

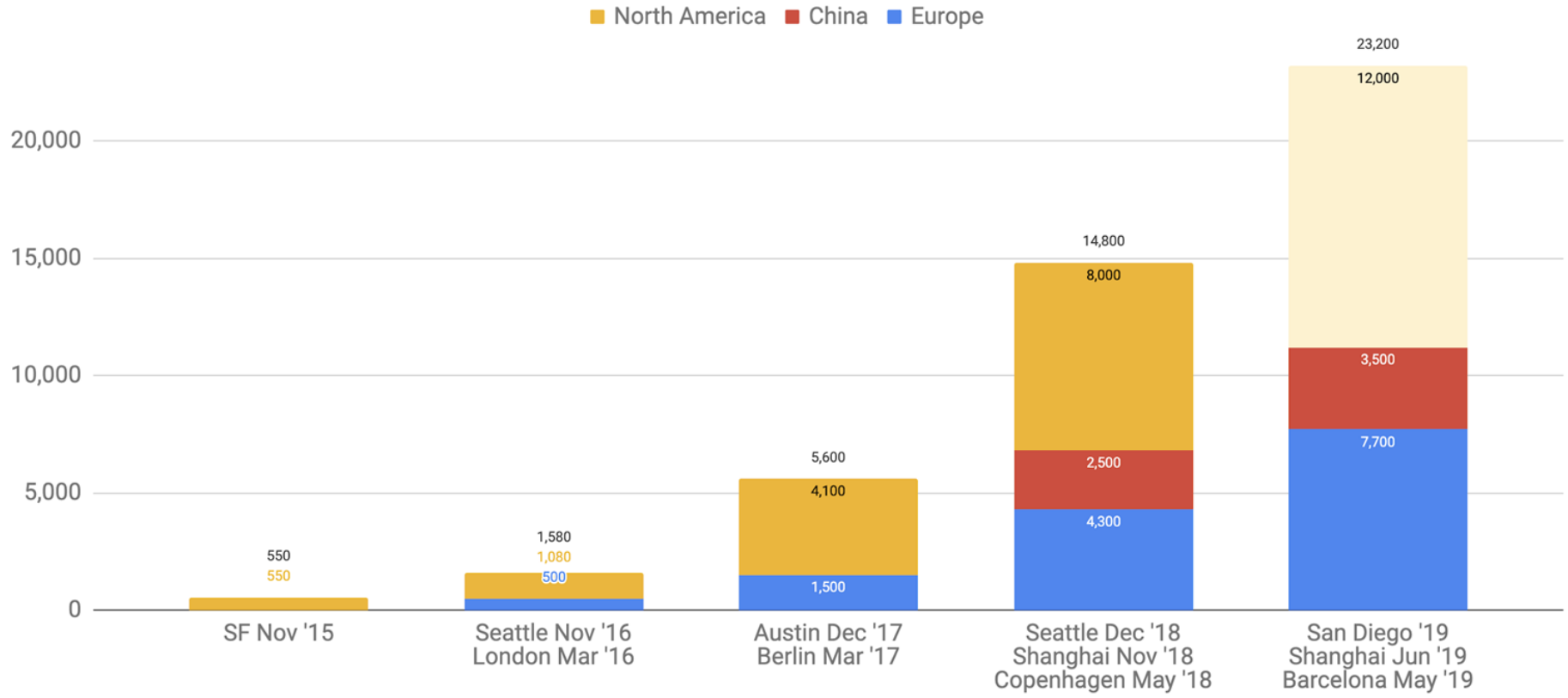
호주 시드니: 2019년 12월 12일-13일

상파울로 및 멕시코시티: 2020년 1월

Sponsor

Download Prospectus

KubeCon + CloudNativeCon Attendance



감사합니다.

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