

Cloud Native in the Post-Pandemic Era

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<https://github.com/cncf/presentations>



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Hello - I'm Priyanka!

- GM, **CNCF**
 - [@pritianka](#) on Twitter
 - Advisor, **Heavybit Industries**
- Formerly,
 - Cloud Native Alliances and Evangelism, **GitLab**
 - CNCF Governing Board Member
 - Head of Marketing and Partnerships, **LightStep**
 - Early Contributor to the **OpenTracing** project
 - And many years ago, started my career at **Google**

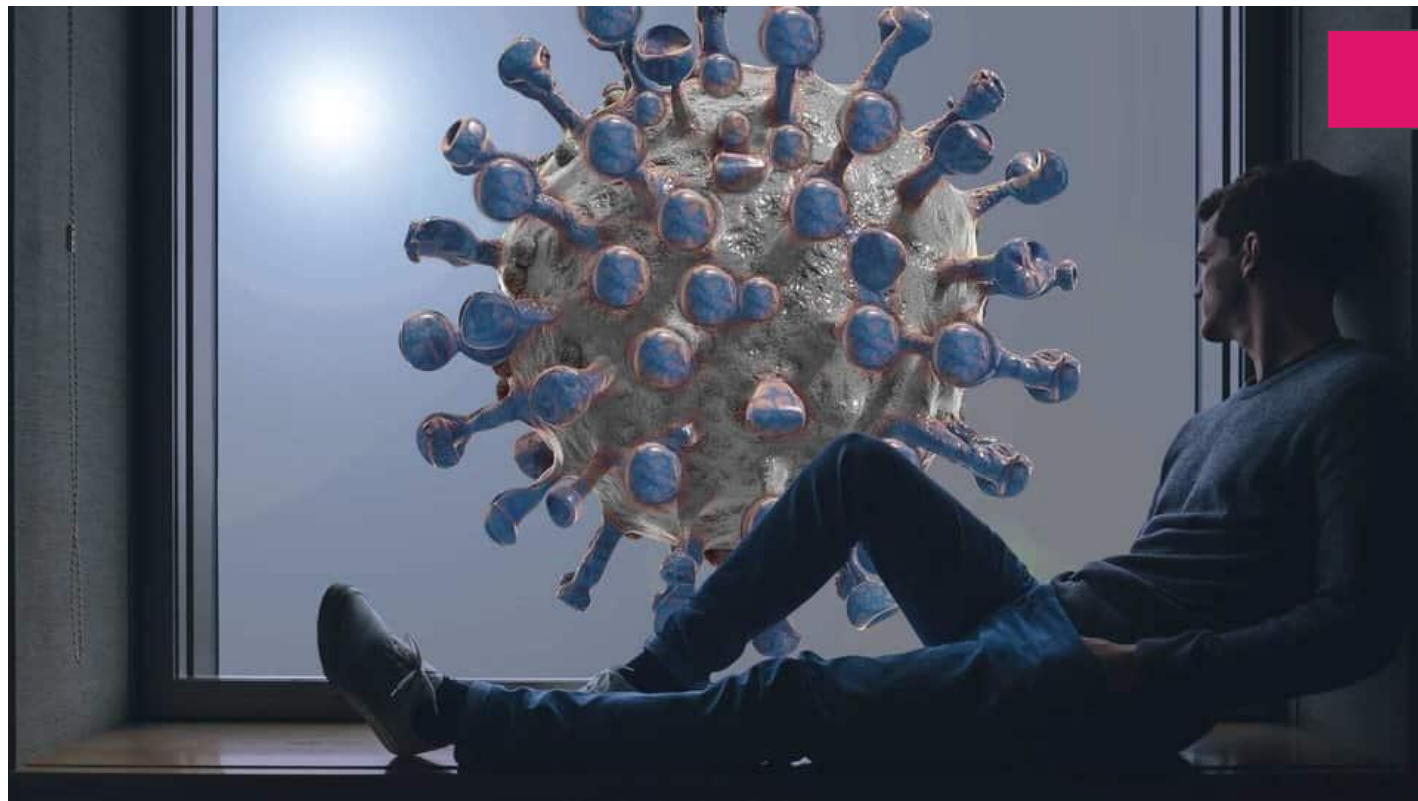




Building sustainable ecosystems for cloud native software

The Cloud Native Computing Foundation (CNCF) hosts critical components of the global technology infrastructure. CNCF brings together the world's top developers, end users, and vendors and runs the largest open source developer conferences. CNCF is part of the nonprofit Linux Foundation.

This talk is special to me because ...



2020 life

This talk is special to me because ...



Jan + Feb 2021 progress

This talk is special to me because ...



Soon! (Not yet, hang tight!)



“

... Just as the terms “prewar” and “postwar” are commonly used to describe the 20th century, generations to come will likely discuss the pre-COVID-19 and post-COVID-19 eras.

- McKinsey Report *The next normal arrives: Trends that will define 2021—and beyond* January 4, 2021



Pre-Pandemic Era: The Rise of Cloud and Cloud Native



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Pre-Pandemic: From Virtualization to Cloud Native

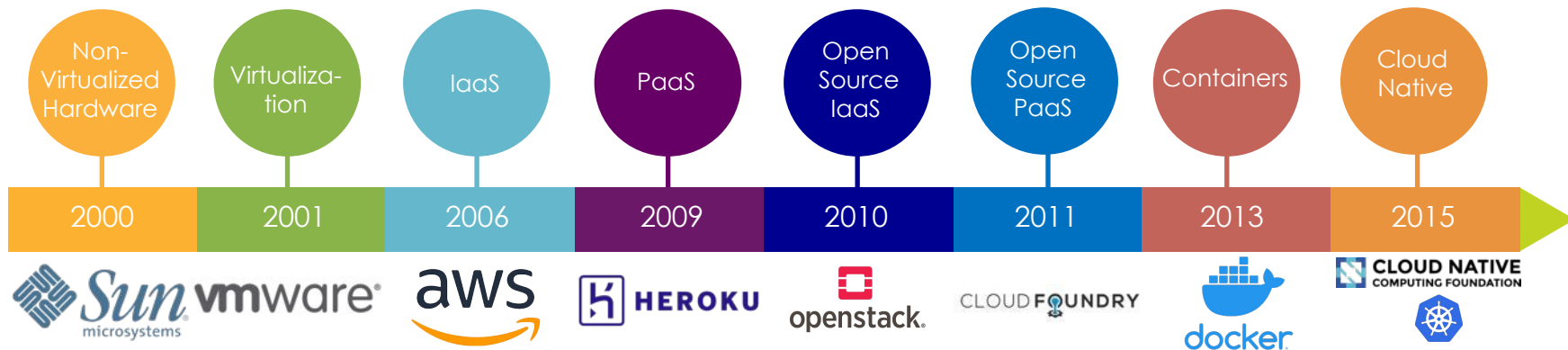


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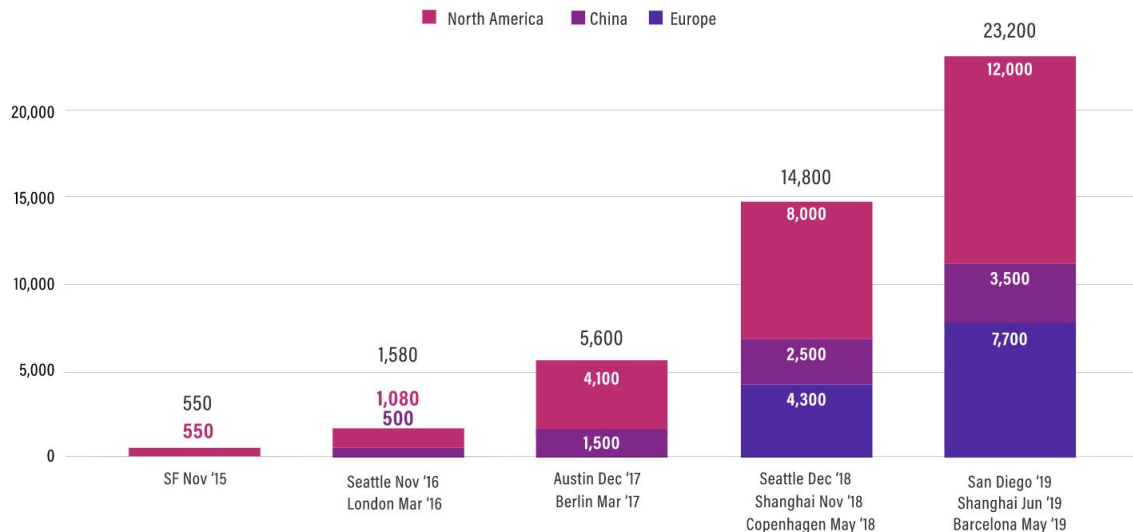
kubernetes

- Cloud native computing uses an open source software stack to:
 - segment applications into *microservices*,
 - package each part into its own *container*
 - and dynamically *orchestrate* those containers to optimize resource utilization



We Grew a Global Community for Cloud Native

- To reach critical mass, we built a global community through events
- Our strategy has paid dividends for our community!



50 MEMBERS IN CHINA

**MORE THAN 10% OF CNCF
TOTAL MEMBERSHIP**

3 PLATINUM

6 GOLD

37 SILVER

**3RD LARGEST CONTRIBUTOR
TO CNCF PROJECTS**



55,837 CONTRIBUTIONS



49,645 CONTRIBUTIONS



Growth all around!

- Within four years, cloud native became **the fastest growing open source community** in the world
- **All major cloud providers** became platinum members
- We hosted the **largest open source conferences** in the world



Dan Kohn -
the man in
the arena 🙏



During-Pandemic: Acceleration of
cloud and cloud native



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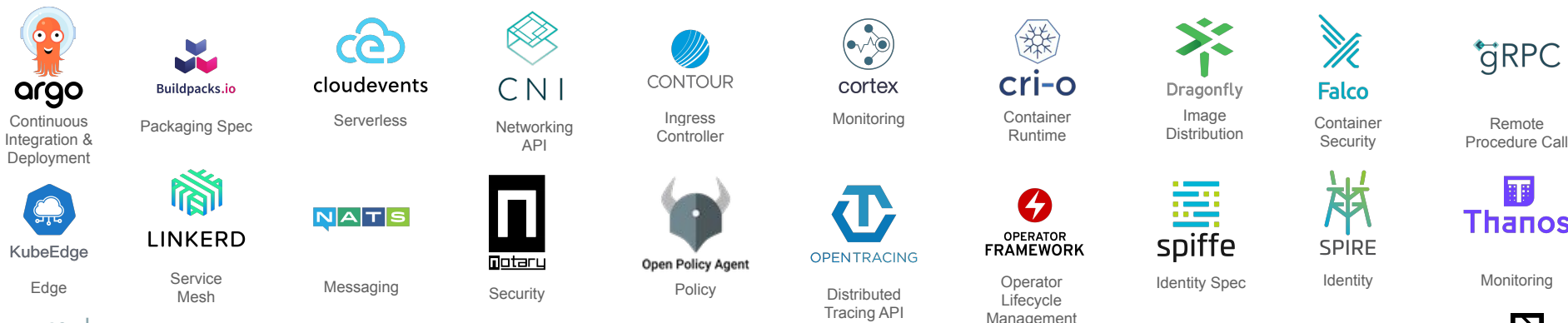
Cloud Native Computing Foundation

- CNCF hosts **80+ projects**

Graduated Projects



Incubating Projects



Cloud Native Computing Foundation

Sandbox Projects



Artifact **HUB**

Hub



Backstage

App Delivery



BFE
Load
Balancing



BRIGADE

Scripting



Chaos Mesh

Chaos
Engineering



ChubaoFS

Storage



Cloud Custodian

Rules
Engine



CNI-Genie

Orchestrator
Deployment



Crossplane

Infrastructure
Management



dex

OpenID
Connect



flux

GitOps



in-toto

Security



K3S
Kubernetes
Distribution



Event-driven
Autoscaling



keptn

Control Plane



Keylime



KubeVirt

VM Operator



Workload
Orchestration



Kuma

Control Plane



Litmus

Chaos
Engineering



LONGHORN

Storage



Bare Metal Host
Mgmt for K8s



Network Service Mesh

Networking



Open
Service
Mesh

Service
Mesh



OpenEBS

Storage



OPENMETRICS

Metrics Spec



OpenTelemetry

Telemetry Spec

OpenYurt

Edge
Computing



PARSEC

Platform
Abstraction
for SECURITY



Porter

Package
Bundler



Serverless
Workflow
Specification



SMI
Service Mesh



STRIMZI

Kafka
Operator



TELEPRESENCE

Tooling



Tremor

Event
Processing



Virtual Kubelet

Nodeless



High
Performance
Workloads



The world's largest cloud and software companies ...

- We have **610+ member companies**

Platinum Members



Gold Members

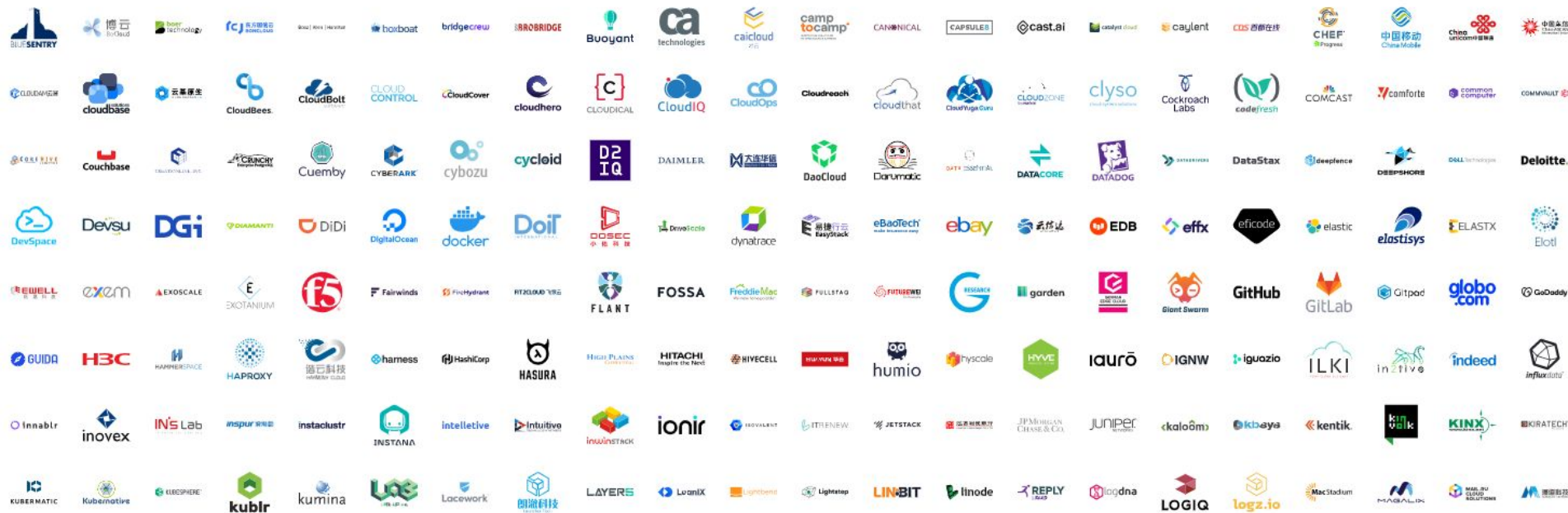


Academic/Nonprofit Members



and innovative startups - 610+ members

Silver Members



[See all Silver members in the member landscape!](#)
[Check out all cloud native acquisitions here!](#)



Pandemic Era vs Pre-Pandemic: Solid Growth

Members

- 2019: **518**
- Today: **612**

20% Growth

Contributors

- 2019: **81,298**
- Today: **118,326**

46% Growth

Projects

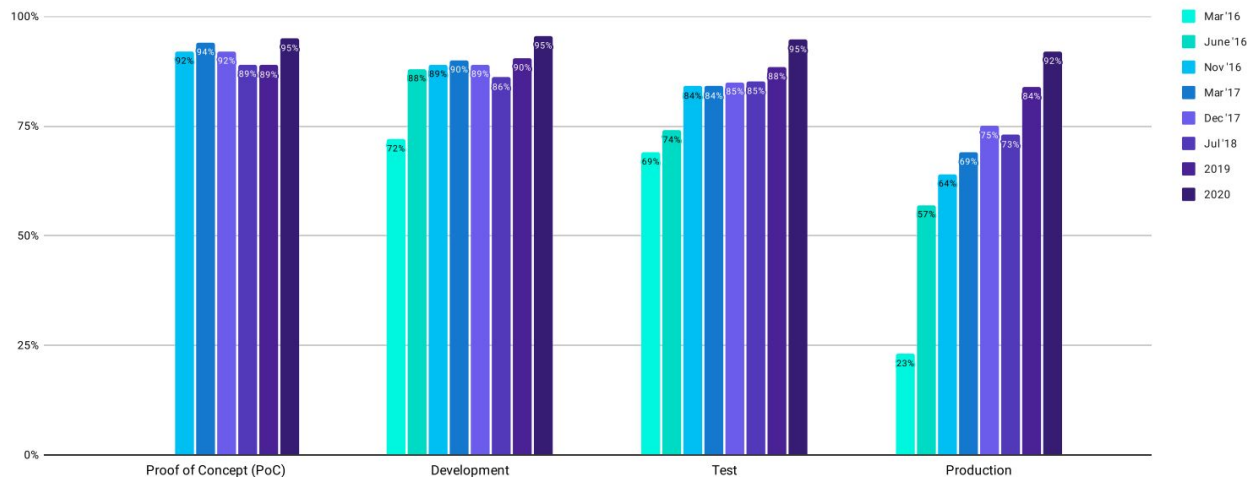
- 2019: **44**
- Today: **85**

93% Growth



Containers and Kubernetes are the norm today

- The use of **containers** in production has increased to **92%**, up from 84% last year, and up **300%** from our first survey in 2016.
- Kubernetes** use in production has increased to **83%**, up from 78% last year.



CNCF Cloud Native Survey 2020



You may wonder ...

SO HOW DID THIS HAPPEN?!



Diversity-Powered Resilience of #teamCloudNative

6.5 million

Cloud Native Developers



+1.8 million

from Q2 2019

2.7
million



using Kubernetes

4
million



using serverless architectures
and cloud functions

60%

of backend developers
now using containers



Consumption + Creation + COVID-19

- **Market shift in innovation** — from legacy IT vendors to cloud providers and open-source communities.
 - 92% of CNCF survey respondents are using containers in production [1]
- **By 2025**, nearly **two-thirds of enterprises will be prolific software producers** with code deployed daily
 - Over 90% of new apps cloud native, 80% of code externally sourced, & 1.6 x more developers". [2]
 - Expansion and verticalization
- **The coronavirus outbreak** is expected to accelerate shifts to the cloud. ~60% of respondents to the State of the Cloud report said cloud usage would exceed prior plans owing to the COVID-19 pandemic. [3]

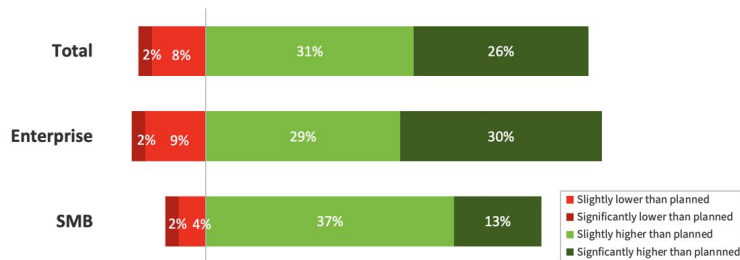
[1] See [2020 CNCF Survey results](#)

[2] See [IDC FutureScape: Worldwide IT Industry 2020 Predictions](#)

[3] See [State of the Cloud Report 2020](#)

Change from Planned Cloud Usage Due to COVID-19

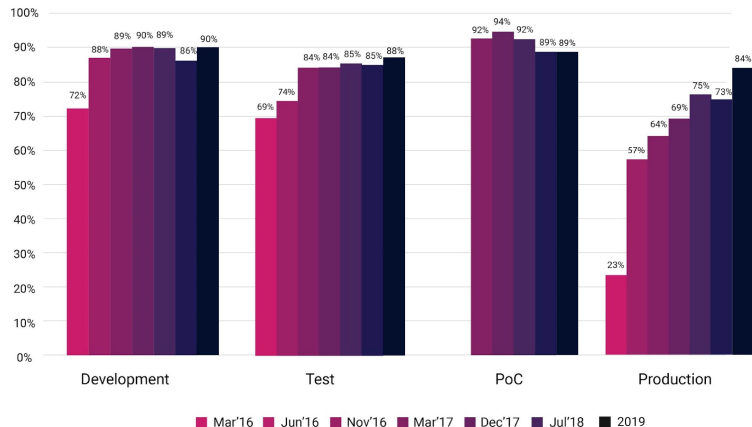
% of respondents



N=187, asked only of later respondents

Source: Flexera 2020 State of the Cloud Report

Use of Containers since 2016




Post-Pandemic Era: The building blocks for the Intelligence Age



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The future is bright


- #teamCloudNative is a **community of doers**
- We are expanding into various technology and industry verticals
- End users are thriving and growing and contributing back



CLOUD NATIVE **Rust DAY**

May 3, 2021
Virtual, Europe


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PromCon Online 2021

May 3, 2021
Virtual, Europe


[LEARN MORE](#)



ServiceMeshCon
EUROPE

May 4, 2021
Virtual, Europe

[LEARN MORE](#)



KubeCon | CloudNativeCon
Europe 2021

Virtual

May 4-7, 2021
Virtual, Europe

[LEARN MORE](#)



CLOUD NATIVE
Wasm DAY

May 4, 2021
Virtual, Europe

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**Cloud Native
SECURITY DAY**
EUROPE

May 4, 2021
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fluentcon
Cloud Native Logging day with Fluent Bit and Fluentd

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**Kubernetes
AI DAY**

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**Kubernetes
on EDGE DAY**

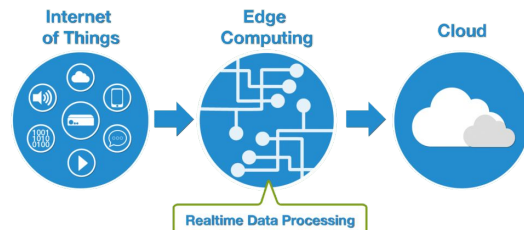
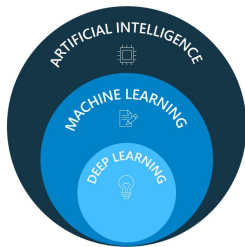
May 4, 2021
Virtual, Europe

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The Building Block of the Intelligence Age

- The Intelligence Age will develop from our plethora of data, modern compute at the Edge, ever-smarter neural networks, and decentralization
- All these technologies can come together only when they are backed by cloud native principles



Want to know more?

Learn more about my thoughts on the coming Information Age and the cloud native community's role in it imminently at KubeCon + CloudNativeCon EU May 4-7th, 2021

Special code: **KCEUVLFM50**

Registration link:

<https://events.linuxfoundation.org/kubecon-cloudnativecon-europe/>



Thank you!

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GM, CNCF

<https://cncf.io>



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