

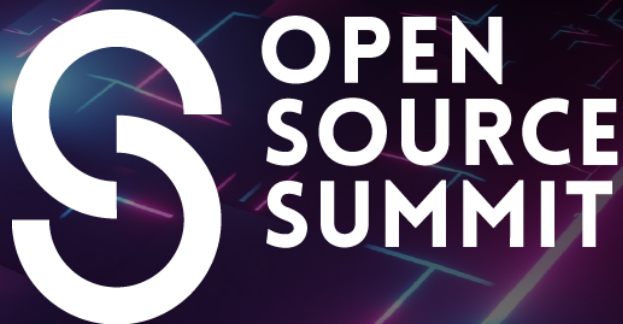


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THE LINUX FOUNDATION



AI_dev
Open Source GenAI & ML Summit

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A Decade of Cloud-Native Journey: The Evolution of Container Technology and the Kubernetes Ecosystem

Jintao Zhang @ Kong Inc.

About me



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- Jintao Zhang @ Kong Inc.
- Kubernetes Ingress Nginx maintainer
- Microsoft MVP
- CNCF Ambassador
- LFAPAC Open Source Evangelist
- GitHub: [tao12345666333](https://github.com/tao12345666333)
- Wechat Channel: MoeLove



About my journey



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- Starting from Docker v0.9 (released in 2014.03)
- Started using Kubernetes in production environment since 2016
- Starting from 2019, continuously update the k8s ecosystem weekly report
- 100+ technical sessions related to cloud native
- CalicoCon/DockerCon/IstioCon/KubeCon...



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The beginning of everything

Docker

2013





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Next Step

Kubernetes

2014



Open Container Initiative (2015)



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- image-spec
- runtime-spec
- distribution-spec

R.I.P.

- CoreOS: App Container Specification
- rkt

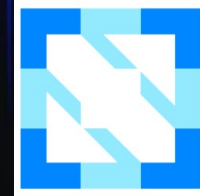


Cloud Native Computing Foundation (2015)



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- Kubernetes graduated (2018)
- Prometheus (2018)
- Envoy (2018)
- CoreDNS (2019)
- Containerd (2019)
- Fluentd (2019)



CLOUD NATIVE
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What happened to Kubernetes?



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- v1.0 released in 2015
- The battle of container orchestration
- 2017 RBAC
- 2017 v1.7 CRDs
- 2018 v1.13 CSI GA and CoreDNS as default
- 2019 v1.16 CRDs GA
- 2020 Dockershim is deprecated
- 2022 cgroup v2 GA, CEL beta
- 2023 VPA, NodeSwap beta, Sidecar Containers

Container Runtime Interface



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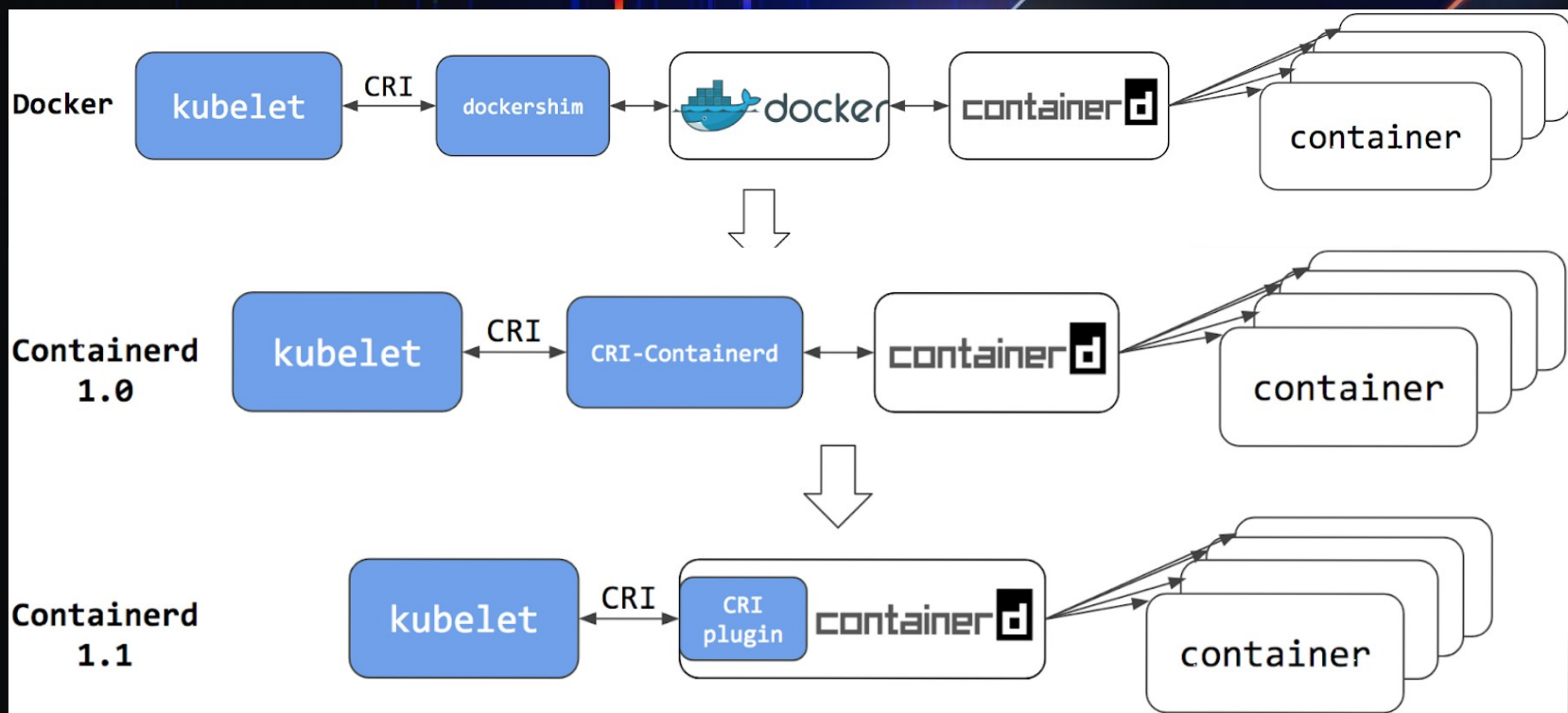
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- v1.5 in 2016
- containerd support in 2017
- 2018 GA
- 2019 rkt archived
- 2020 dockershim



Some experiences

- Standardization (CRI/CSI/CNI)
- Dynamic adjustment of release cycle
- Continuous evolution



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Ecosystem



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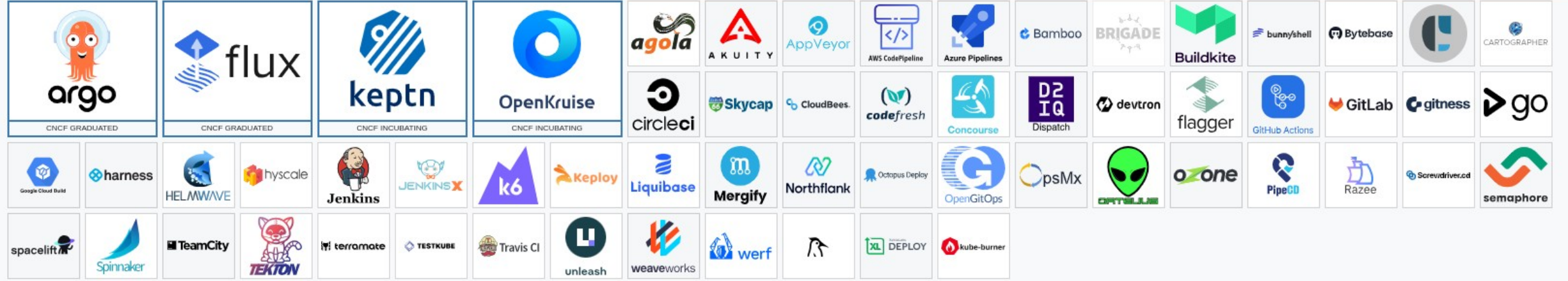
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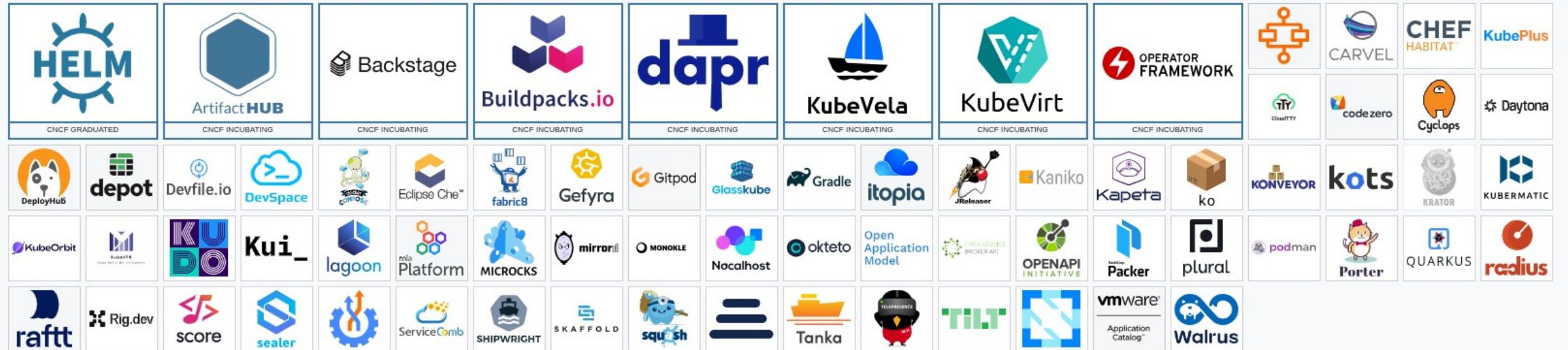
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Continuous Integration & Delivery



Application Definition & Image Build





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Thanks!