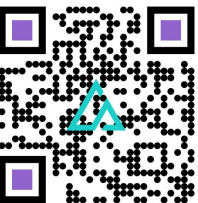


Akraino Blueprint Family

Kubernetes-Native Infrastructure (KNI) for Edge



More info:

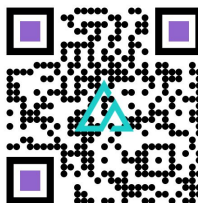


Why “Kubernetes-Native Infrastructure”?

Kubernetes-
managed infrastructure

built on the rich
tooling & best-practices
of Kubernetes
community & ecosystem

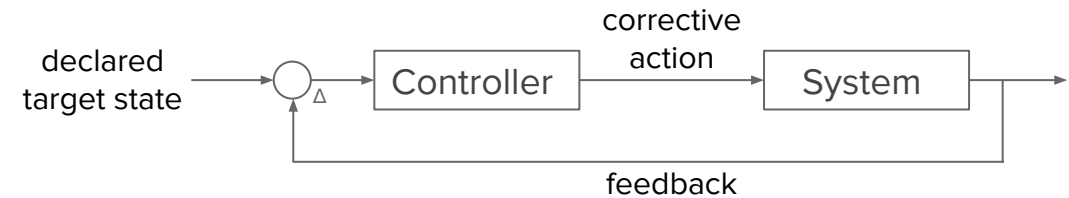
optimized for
Kubernetes-native workloads



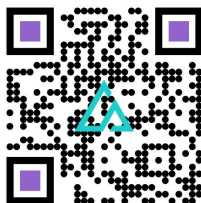
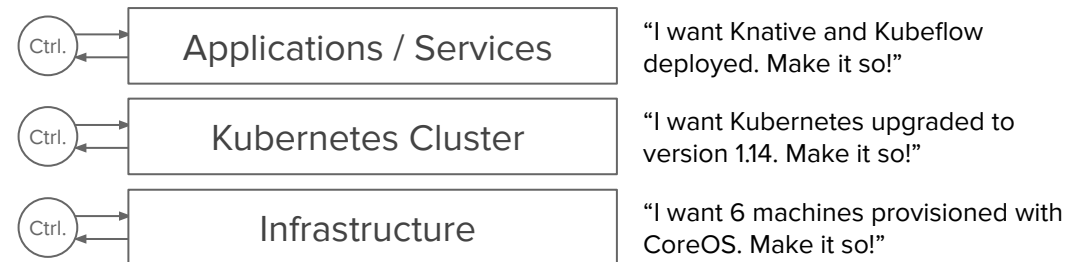
Declarative Edge Stacks with KNI-Edge

Kubernetes is built around the **controller pattern**:

- Controllers monitor a system for deviations between the *user-declared target state* and reality and take corrective actions to reconcile reality with the declared target state.



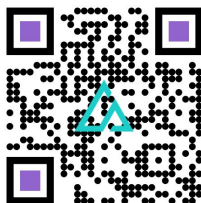
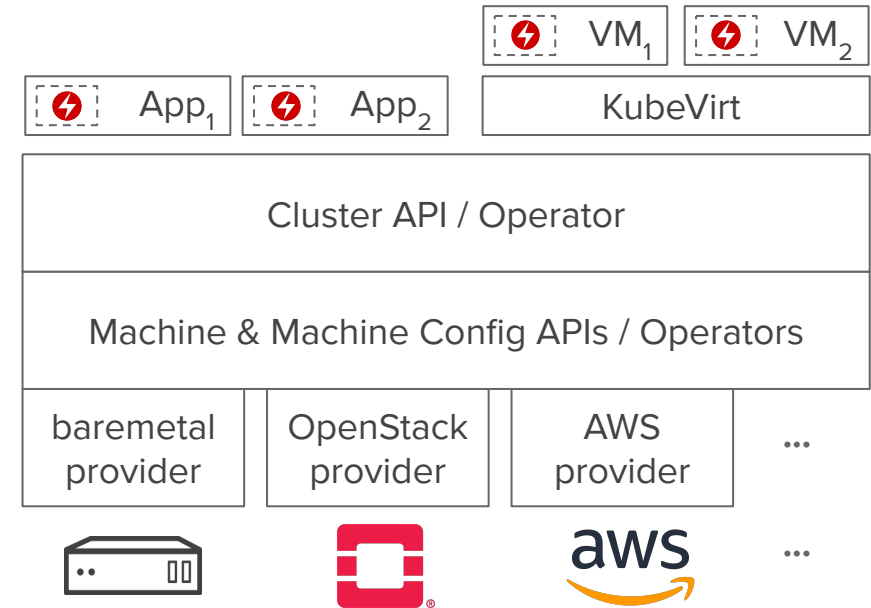
KNI-Edge applies this pattern **across the whole Edge Stack**:



The KNI-Edge Blueprint Family

Blueprints in the KNI for Edge family

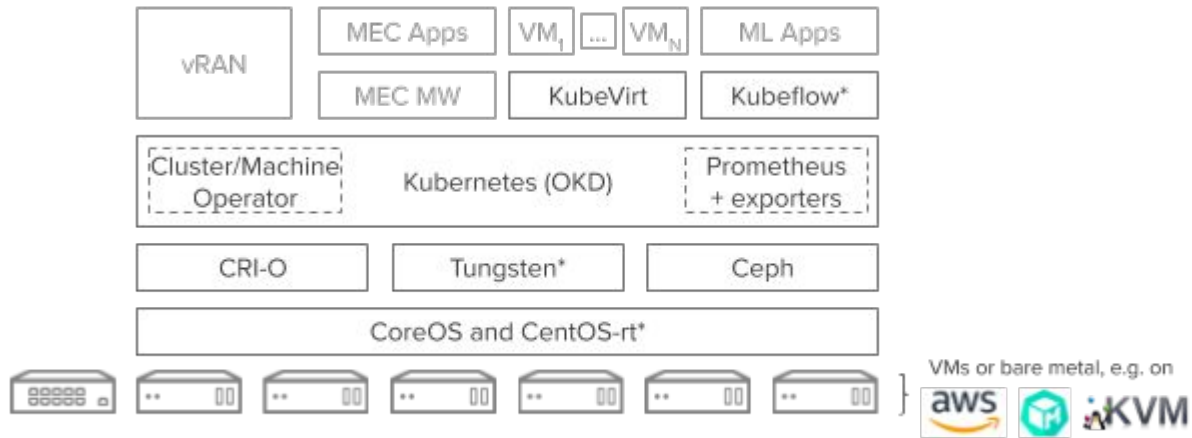
- **implement the Kubernetes Cluster and Machine APIs**
 - declarative, provider-agnostic cluster deployment and operation
- **leverage the Operator Framework**
 - automated and secure application deployment and operation
- **support VM workloads via KubeVirt**
 - manage VMs like containers (e.g. common resource management)



KNI-Edge Blueprints in Progress

Provider Access Edge (PAE)

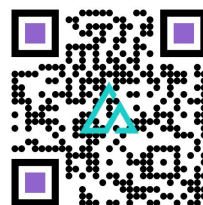
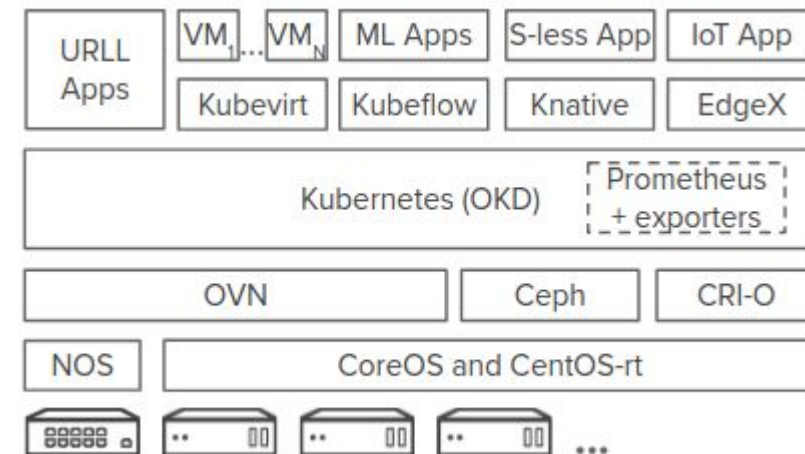
Optimized for real-time and networking performance for vCRAN and MEC workloads.



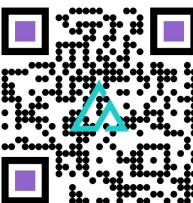
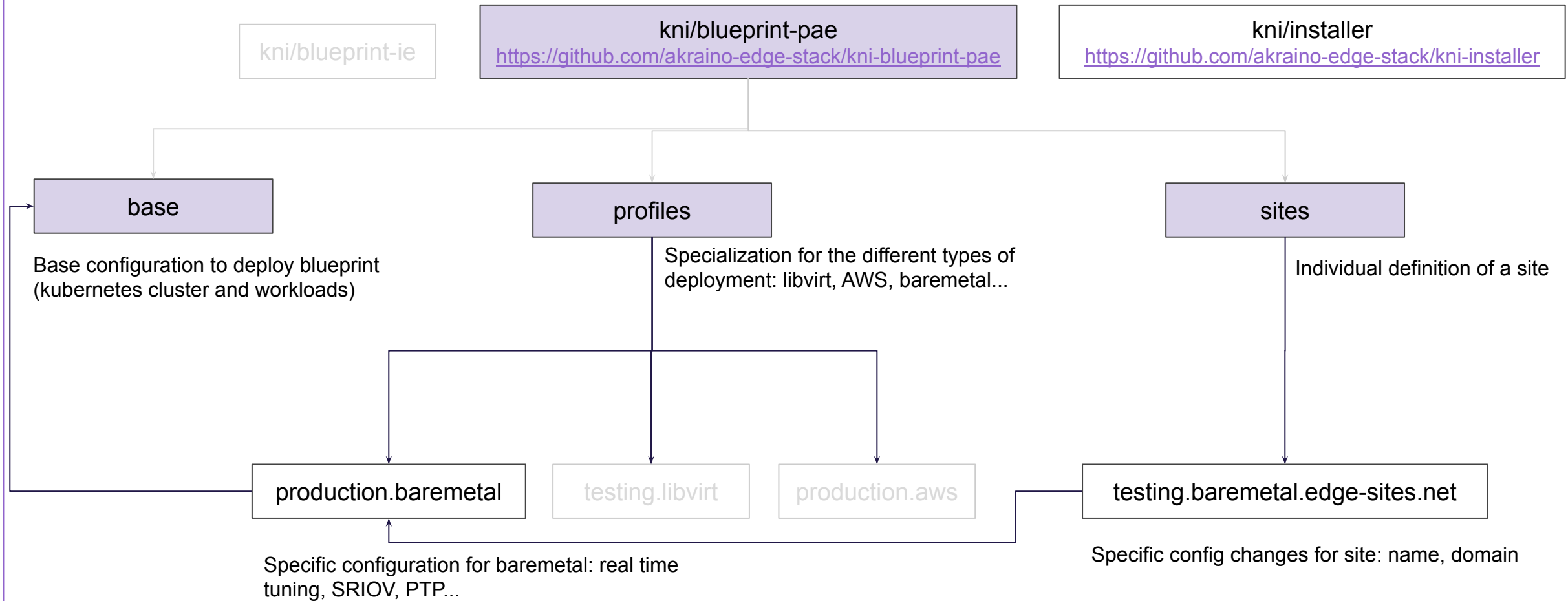
*) part of next point-release

Industrial Edge (IE)

Optimized for small footprint and low-latency for IoT, serverless, and machine learning workloads.

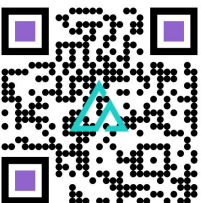


KNI-Edge blueprint components



Features for Akraino R2

- Integrate fully automated deployment on baremetal
- Add support for real time worker nodes
- Add support for hugepages, CPU allocation, realtime tuning
- Integrate Tungsten Fabric as SDN
- Deploy Open Air Interface workload
- Start working on Industrial Edge blueprint



Demo of Declarative Infrastructure Management

<https://youtu.be/WEU46u2qA7U>



More info:

