

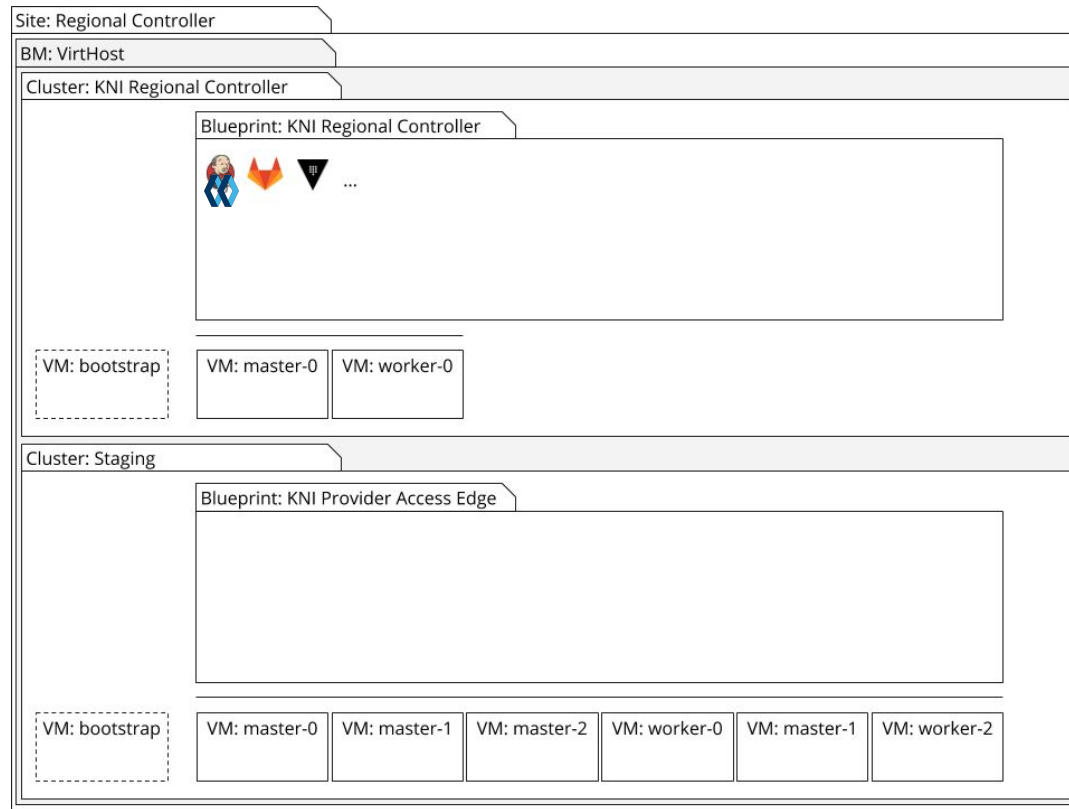
Akraino KNI Blueprint Family (PAE and IE Blueprints)

CI and Topology requirements for
Community Lab



Deployment Overview

Regional Controller / Dev&Staging POD:



KNI Blueprint Validation POD (both PAE and IE BPs):



POD overview

Regional Controller / Dev&Staging POD:

- 1 bare metal host with CentOS7 + libvirt

KNI Blueprint Validation POD:

- 1 bare metal host with CentOS7 + libvirt
 - as jumphost + virthost (for running bootstrap VM)
- 3 bare metal hosts for masters
- 3 bare metal hosts for workers

Questions

- Will we have access to the POD network switch and be able to change configuration?

BoM (physical and virtual)

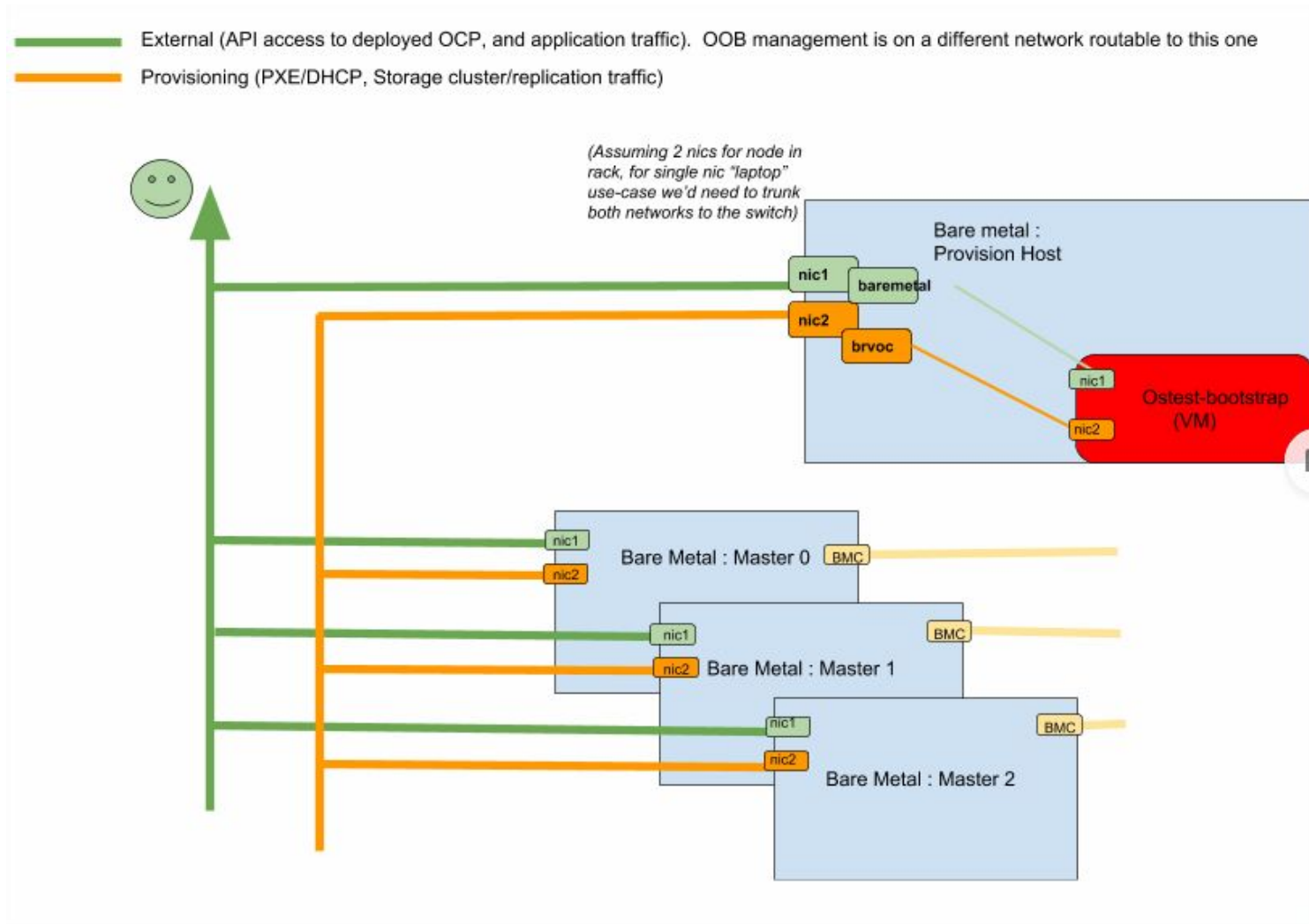
Regional Controller / Dev&Staging POD:

- 1 bare metal machine, min 64GB RAM and min 250GB disk

KNI Blueprint Validation POD:

- 1 bare metal machine as provisioning host + virthost for bootstrap
 - min 32GB RAM, min 250GB disk
- 6 bare metal machines for masters and workers
 - min 128GB RAM, min 500GB disk + second disk (for Ceph)
 - two 25GB/s NICs (provisioning+storage and cluster, respectively)
 - PXE boot enabled on first NIC for masters
 - at least second NIC SR/IOV-capable
 - ideally with NW acceleration (e.g. Intel QAT)
 - one 1GB/s NIC for BMC/IPMI network

Physical and logical connectivity



CI or CD business logic

- Common kni/installer for Industrial Edge and Provider Access Edge blueprints
- Individual templates per blueprints, for different use cases
- Multi-stage testing:
 - check: every time a change arrives for kni/installer or for kni/blueprint-ie and kni/blueprint-pae
 - go-lint, go build tests for sanity in kni/installer
 - yaml syntax check for kni/blueprint-ie and kni/blueprint-pae
 - deployment with libvirt for the modified code and templates
 - gate: when a change is going to be merged
 - same tests as check
 - + baremetal deploy for the affected use cases
 - stable: when some version wants to be cut for a blueprint
 - functional testing (baremetal deploy + functest)
 - stress test
 - any other?

Detailed communication flows and ports

Regional Controller / Dev&Staging POD:

- all communication happens internally, just need internet access

KNI Blueprint Validation POD:

1. Provisioning host spins containers for provisioning + bootstrap VM
2. Master servers are powered on via IPMI
3. Masters get DHCP and are PXE-booted through provisioning containers on provisioning host
4. Masters read configuration from bootstrap VM and start deployment process
5. Masters form an etcd cluster and start configuration of Kubernetes
6. Bootstrap VM is destroyed, provisioning host could be decommissioned / reused at this stage
7. Masters are ready, can start adding workloads on top
8. Masters can deploy new baremetal nodes as workers

Dependencies with LF services

- Jenkins: setup check, gate, release jobs
- Is there possibility to add an external dependency, such as an OpenShift cluster?

Key contacts

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Backup Material (insert after this section)

