



KUBERNETES ARCHITECTURE

Kubernetes Architecture

Pod-to-Pod Communication

While a CNI plugin can be used to configure the network of a pod and provide a single IP per pod, CNI does not help you with pod-to-pod communication across nodes.

The requirement from Kubernetes is the following:

- All pods can communicate with each other across nodes.
- All nodes can communicate with all pods.
- No Network Address Translation (NAT).

Basically, all IPs involved (nodes and pods) are routable without NAT. This can be achieved at the physical network infrastructure if you have access to it (e.g. GKE). Or, this can be achieved with a software defined overlay with solutions like:

- Weave
- Flannel
- Calico
- Romana.

See this [documentation page](#) or the [list of networking add-ons](#) for a more complete list.