INSTALLATION AND CONFIGURATION

Installation and Configuration

Installing with kubeadm

Once you become familiar with Kubernetes using Minikube, you may want to start building a real cluster. Currently, the most straightforward method is to use **kubeadm**, which appeared in Kubernetes v1.4.0, and can be used to bootstrap a cluster quickly. As the community has focused on **kubeadm**, it has moved from beta to stable and added high availability with v1.15.0.

The Kubernetes website provides documentation on how to use kubeadm to create a cluster.

Package repositories are available for current versions of Ubuntu and CentOS, among others. We will work with Ubuntu in our lab exercises.

To join other nodes to the cluster, you will need at least one token and an SHA256 hash. This information is returned by the command **`kubeadm init`**. Once the cp has initialized, you would apply a network plugin. Main steps:

- Run **`kubeadm init`** on the control plane node.
- Create a network for IP-per-Pod criteria.
- Run **`kubeadm join`** on workers or secondary cp nodes.

You can also create the network with **kubectl** by using a resource manifest of the network plugin to be used. Each plugin may have a different method of installation.

For example, to use the Weave network, you would run the following command:

```
$ kubectl create -f https://git.io/weave-kube
```

Once all the steps are completed, workers and other cp nodes joined, you will have a functional multi-node Kubernetes cluster and you will be able to use **kubectl** to interact with it.