

Multinode cluster

Overview

Options

Requirements

- Site admin can deploy Kubernetes.
- Site admin can deploy NDS Labs Workbench (GUI, API) services.
- Single node-deploy:
 - We will continue to support the single-node deploy, as implemented in the ndslabs/system-shell or ndslabs-startup repositories.

Prototype steps

These are the steps used to create a 4-node cluster using the kubernetes/contrib/ansible playbook:

On Nebula

- Create 4 instances; r1.medium; CoreOSAlpha
- Associate key
- Enable ssh, k8 nodeport
- Associate floating IPs with all nodes

On local host:

- Local host must have git, ansible client
- ssh-keygen
- For each node
 - edit /etc/hosts, add localhost entry
 - scp key core@node:/tmp
 - ssh core@node update-ssh-keys -a name /tmp/key
- <https://github.com/kubernetes/contrib>
- cd contrib/ansible
- Edit inventory – by default, only works with a single master config due to limitation in ./roles/kubernetes/tasks/gen_certs.yml

```
[masters]
192.168.100.63
```

```
[etcd:children]
masters
```

```
[nodes]
192.168.100.64
192.168.100.65
192.168.100.66
```

- Edit group_vars/all.yml, change the following settings:
 - ansible_ssh_user: core
 - ansible_python_interpreter: "PATH=/opt/bin:\$PATH python"
 - kube-ui: true?
 - kube-dash: true?
 - Might need to change flannel network
- ./setup.sh
- git clone <https://github.com/craig-willis/ndslabs-startup>
- cd ndslabs-startup
- Edit ndslabs/apiserver.yaml
 - Change latest > dev (this build has token authentication support for API server)
 - Change etcd port to 2379
 - Change k8 port to 443
- ./ndslabs-startup.sh
 - Change prompted IP address to IP of one node (since we don't have LB)
- Open browser to
 - IP address of some node :30000