Provision nodes

After creating the nodes in Proxmox run the following commands. In this example, I have 3 API controllers and 3 worker nodes. Each controller will have an etcd database.

```
talosctl gen config koryscluster https://<haproxy IP>:6443
```

Edit the worker.yaml that gets created by the last command. We will need to add longhorn support.

```
    kubelet:
        extraMounts:
          - destination: /var/lib/longhorn
            type: bind
            source: /var/lib/longhorn
            options:
              - bind
              - rshared
              - rw
```

Apply the config to the controlplanes.

```
talosctl apply-config --insecure -n <IP ctl-1> --file controlplane.yaml
talosctl apply-config --insecure -n <IP ctl-2> --file controlplane.yaml
talosctl apply-config --insecure -n <IP ctl-3> --file controlplane.yaml
```

Bootstrap the cluster. This will initialize etcd.

```
talosctl bootstrap -n <IP ctl-1> -e <IP ctl-1> --talosconfig=./talosconfig
```

Generate the k8s config file

```
talosctl kubeconfig ./kube -n <IP ctl-1> -e <IP ctl-1> --talosconfig=./talosconfig
```

Either you can copy the config to ~/.kube/config or export as an environment variable. Lets confirm the cluster is alive and we can talk to the API servers via HA proxy.

```
kubectl get nodes
```

After this is successful, we can get the workers setup. These will hold our longhorn data. Let add more space to these and we will need to have talos upgrade the config to add iscsi support.

```
talosctl apply-config --insecure -n <IP worker-1> --file worker.yaml
talosctl apply-config --insecure -n <IP worker-2> --file worker.yaml
talosctl apply-config --insecure -n <IP worker-3> --file worker.yaml
```

Lets start the upgrade process. We can use image factory to setup a new config. The hash needed for longhorn support is already setup with the following. Note the version number must be greater than or equal to the current talos version installed on the node.

```
talosctl upgrade --talosconfig=./talosconfig --nodes <IP worker-1> -e <IP worker-1> --image
factory.talos.dev/installer/613e1592b2da41ae5e265e8789429f22e121aab91cb4deb6bc3c0b6262961245:v
1.9.1
talosctl upgrade --talosconfig=./talosconfig --nodes <IP worker-2> -e <IP worker-2> --image
factory.talos.dev/installer/613e1592b2da41ae5e265e8789429f22e121aab91cb4deb6bc3c0b6262961245:v
1.9.1
talosctl upgrade --talosconfig=./talosconfig --nodes <IP worker-3> -e <IP worker-3> --image
factory.talos.dev/installer/613e1592b2da41ae5e265e8789429f22e121aab91cb4deb6bc3c0b6262961245:v
1.9.1
```

We now have a working cluster. Nothing besides the core k8s system is installed. We can refer to the Kubernetes section to continue setup.

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