1) Install RKE cluster

- run rke config

```
$ rke config

[+] Cluster Level SSH Private Key Path [~/.ssh/id_rsa]:
[+] Number of Hosts [1]:
```

[+] SSH Address of host (1) [none]: vm01

```
[+] SSH Port of host (1) [22]:
[+] SSH Private Key Path of host () [none]:
[-] You have entered empty SSH key path, trying fetch from SSH key
parameter
[+] SSH Private Key of host () [none]:
[-] You have entered empty SSH key, defaulting to cluster level SSH key:
~/.ssh/id_rsa
```

[+] SSH User of host () [ubuntu]: k8sadm

[+] Is host () a Control Plane host (y/n)? [y]: y

[+] Is host () a Worker host (y/n)? [n]: y

[+] Is host () an etcd host (y/n)? [n]: y

```
[+] Override Hostname of host () [none]:
```

[+] Internal IP of host () [none]: %YOUR_INTERNAL_IP%

```
[+] Docker socket path on host () [/var/run/docker.sock]:
[+] Network Plugin Type (flannel, calico, weave, canal, aci) [canal]:
[+] Authentication Strategy [x509]:
[+] Authorization Mode (rbac, none) [rbac]:
[+] Kubernetes Docker image [rancher/hyperkube:v1.20.15-rancher2]:
[+] Cluster domain [cluster.local]:
[+] Service Cluster IP Range [10.43.0.0/16]:
[+] Enable PodSecurityPolicy [n]:
[+] Cluster Network CIDR [10.42.0.0/16]:
[+] Cluster DNS Service IP [10.43.0.10]:
[+] Add addon manifest URLs or YAML files [no]:
```

- rke up

- copy config
- add dns entry to coredns "YOUR_INTERNAL_IP vm01"

```
$ rke up

$ cp kube_config_cluster.yml ~/.kube/config-rke-vm01
$ sed -i 's/local/rke-vm01/g'  ~/.kube/config-rke-vm01
$ export KUBECONFIG=$HOME/.kube/config-rke-vm01:$HOME/.kube/config

$ kcg
$ kc rke-vm01

$ k get pods -A

$ k edit cm coredns -n kube-system

data:
  Corefile: |
    .:53 {
        errors
        health {
          lameduck 5s
        }
        hosts {
          10.136.0.3 vm01 # REPLACE WITH YOUR INTERNAL IP
          fallthrough
        }
- save & quit
```

2) Import RKE cluster to Rancher

- login rancher
- Menu > Cluster Management > Import Existing
- Generic > Cluster Name : rke-vm01 > Create
- Copy 2nd Command from registration : bypass certificate verification
- Paste and run at vm01

3) Add worker node vm02 to RKE cluster

- edit cluster.yml
- add node vm02 config
- rke up

```
$ vi cluster.yml

nodes:
- address: vm01
  port: "22"
  internal_address: 10.136.0.3
  role:
```

```
    - controlplane
    - worker
    - etcd
    hostname_override: ""
    user: k8sadm
    docker_socket: /var/run/docker.sock
    ssh_key: ""
    ssh_key_path: ~/.ssh/id_rsa
    ssh_cert: ""
    ssh_cert_path: ""
    labels: {}
    taints: []
  - address: vm02
    port: "22"
    internal_address: 10.136.0.2
    role:
    - worker
    hostname_override: ""
    user: k8sadm
    docker_socket: /var/run/docker.sock
    ssh_key: ""
    ssh_key_path: ~/.ssh/id_rsa
    ssh_cert: ""
    ssh_cert_path: ""
    labels: {}
    taints: []

  $ rke up
```