

Rancher allows you to import existing Harvester VMs in which you installed Kubernetes.

Deployment

Prerequisites

- The Kubernetes cluster is built on top of Harvester VMs.

Deploy Guest Clusters on Harvester VMs

1. Generate the csi-driver cloud-config file using the [generate_addon_csi.sh](#) script, which is available in the [harvester/harvester-csi-driver](#) repository.

Example:

```
./generate_addon_csi.sh <serviceaccount name> <namespace> RKE2
```

The generated output will be similar to the following one:

```
##### cloud-config #####
apiVersion: v1
clusters:
- cluster: <token>
  server: https://<YOUR HOST HARVESTER VIP>:6443
  name: default
contexts:
- context:
  cluster: default
  namespace: default
  user: rke2-guest-01-default-default
  name: rke2-guest-01-default-default
current-context: rke2-guest-01-default-default
kind: Config
preferences: {}
users:
- name: rke2-guest-01-default-default
  user:
    token: <token>

##### cloud-init user data #####
write_files:
- encoding: b64
  content:
YXBpVmVyc2lrbjogdjEKY2x1c3RlcnM6Ci0gY2x1c3RlcjoKICAgIGNlcnRpZmljYXRlLWF1dGhvcmlk
owner: root:root
path: /var/lib/rancher/rke2/etc/config-files/cloud-provider-config
permissions: '0644'
```

2. Generate the cloud-provider cloud-config using the [generate_addon.sh](#) script, which is available in the [harvester/cloud-provider-harvester](#) repository.

Example:

```
./generate_addon.sh <serviceaccount name> <namespace>
```

The generated output will be similar to the following one: The output will look as follows:

```
##### cloud config #####
apiVersion: v1
clusters:
- cluster:
  certificate-authority-data: <CACERT>
  server: https://HARVESTER-ENDPOINT/k8s/clusters/local
  name: local
contexts:
- context:
  cluster: local
  namespace: default
  user: harvester-cloud-provider-default-local
  name: harvester-cloud-provider-default-local
current-context: harvester-cloud-provider-default-local
kind: Config
preferences: {}
users:
- name: harvester-cloud-provider-default-local
  user:
    token: <TOKEN>

##### cloud-init user data #####
write_files:
- encoding: b64
  content: <CONTENT>
  owner: root:root
  path: /etc/kubernetes/cloud-config
  permissions: '0644'
```

3. Create VM with two cloud-config files.



VM with cloud-config

4. Install RKE2 in the VM.

```
sudo mkdir -p /etc/rancher/rke2
echo "cni: calico
disable-kube-proxy: false
etcd-expose-metrics: false" | sudo tee /etc/rancher/rke2/config.yaml
curl -sL https://get.rke2.io | sudo sh -
sudo systemctl enable rke2-server.service
sudo systemctl start rke2-server.service
```

5. Verify that RKE2 is running in the VM.

```
sudo /var/lib/rancher/rke2/bin/kubectl --kubeconfig  
/etc/rancher/rke2/rke2.yaml get nodes
```

6. Import the VM into Rancher.

On the Rancher UI, go to **Cluster Management > Clusters > Import Existing > Generic > Create**.

 Import Existing Cluster

```
# Run the command in the VM  
curl --insecure -sL  
https://192.168.0.181:6443/v3/import/g5p2g2gtwx4564nktdl4nr5cwvwtwqp9zxd6dmhm5nc  
m-mzf28skd.yaml | sudo /var/lib/rancher/rke2/bin/kubectl --kubeconfig  
/etc/rancher/rke2/rke2.yaml apply -f -
```

7. Install the Harvester Cloud Provider.

On the RKE2 Cluster Dashboard, go to **Apps > Charts > Harvester Cloud Provider > Install**.

8. Install the Harvester CSI Driver.

On the RKE2 Cluster Dashboard, go to **Apps > Charts > Harvester CSI Driver > Install**.