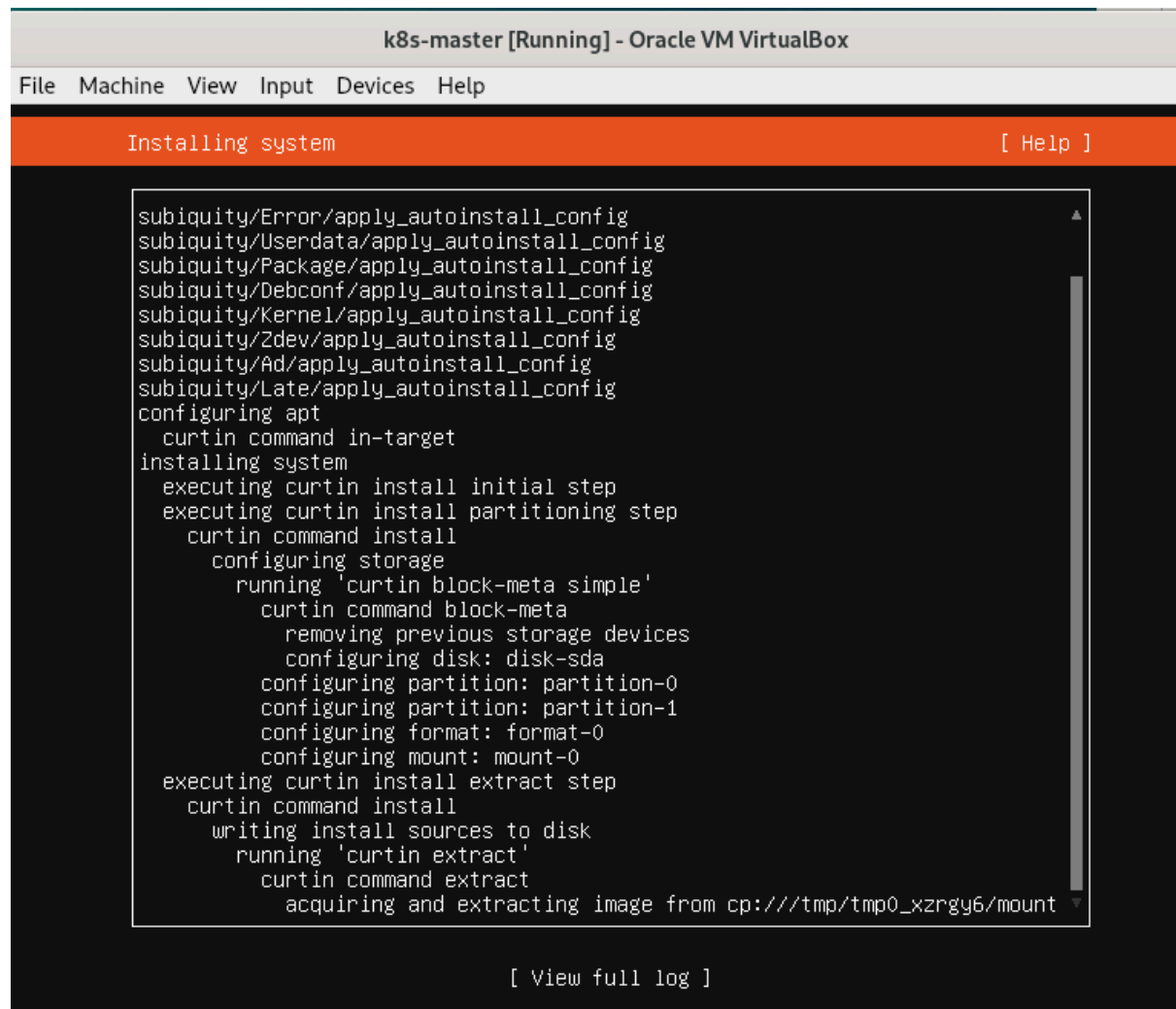


Install OS



```
k8s-master [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

Installing system [ Help ]

subiquity/Error/apply_autoinstall_config
subiquity/Userdata/apply_autoinstall_config
subiquity/Package/apply_autoinstall_config
subiquity/Debconf/apply_autoinstall_config
subiquity/Kernel/apply_autoinstall_config
subiquity/Zdev/apply_autoinstall_config
subiquity/Ad/apply_autoinstall_config
subiquity/Late/apply_autoinstall_config
configuring apt
  curtin command in-target
installing system
  executing curtin install initial step
  executing curtin install partitioning step
  curtin command install
    configuring storage
      running 'curtin block-meta simple'
      curtin command block-meta
        removing previous storage devices
        configuring disk: disk-sda
        configuring partition: partition-0
        configuring partition: partition-1
        configuring format: format-0
        configuring mount: mount-0
    executing curtin install extract step
    curtin command install
      writing install sources to disk
      running 'curtin extract'
      curtin command extract
        acquiring and extracting image from cp:///tmp/tmp0_xzrgy6/mount

[ View full log ]
```

Preparing cluster

Install Docker

Please refer to official document to install docker. In this examination i am using APT method to install. If possible use build from source method to ensure flexibility and meets the requirements needs.

```
# Add Docker's official GPG key:
sudo apt-get update
sudo apt-get install ca-certificates curl
sudo install -m 0755 -d /etc/apt/keyrings
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o
/etc/apt/keyrings/docker.asc
sudo chmod a+r /etc/apt/keyrings/docker.asc
```

```
# Add the repository to Apt sources:
echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc]
https://download.docker.com/linux/ubuntu \
$(. /etc/os-release && echo "$VERSION_CODENAME") stable" | \
sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
```

```
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin
docker-compose-plugin
```

```
administrator@k8s-master:~$ sudo apt-get install docker-ce docker-ce-cli contain
erd.io docker-buildx-plugin docker-compose-plugin
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  docker-ce-rootless-extras libltdl7 libslirp0 pigz slirp4netns
Suggested packages:
  aufs-tools cgroupfs-mount | cgroup-lite
The following NEW packages will be installed:
  containerd.io docker-buildx-plugin docker-ce docker-ce-cli
  docker-ce-rootless-extras docker-compose-plugin libltdl7 libslirp0 pigz
  slirp4netns
0 upgraded, 10 newly installed, 0 to remove and 17 not upgraded.
Need to get 120 MB of archives.
After this operation, 430 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://id.archive.ubuntu.com/ubuntu jammy/universe amd64 pigz amd64 2.6-1
[63.6 kB]
Get:2 http://id.archive.ubuntu.com/ubuntu jammy/main amd64 libltdl7 amd64 2.4.6-
15build2 [39.6 kB]
```

Install etcd

I am using binary release for this purpose and copy binary to /usr/local/bin. Send command etcd --version to check it's release version.

```

administrator@k8s-master:~$ curl -L -O https://github.com/etcd-io/etcd/releases/
download/v3.5.13/etcd-v3.5.13-linux-amd64.tar.gz
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
  0     0    0     0    0     0      0      0  --:--:-- --:--:-- --:--:--    0
100 19.1M 100 19.1M    0     0 1001k      0  0:00:19 0:00:19 --:--:-- 1154k
administrator@k8s-master:~$ ls
etcd-v3.5.13-linux-amd64.tar.gz
administrator@k8s-master:~$ ls -l
total 19612
-rw-rw-r-- 1 administrator administrator 20080057 Apr 21 16:47 etcd-v3.5.13-linu
x-amd64.tar.gz
administrator@k8s-master:~$ █

```

Install kubectl

```

administrator@k8s-master:~$ sudo apt install -y kubectl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  kubectl
0 upgraded, 1 newly installed, 0 to remove and 17 not upgraded.
Need to get 10.8 MB of archives.
After this operation, 51.5 MB of additional disk space will be used.
Get:1 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:/v1.30/deb kubectl 1.30.0-1.1 [10.8 MB]
Fetched 10.8 MB in 11s (1,022 kB/s)
Selecting previously unselected package kubectl.
(Reading database ... 74552 files and directories currently installed.)
Preparing to unpack .../kubectl_1.30.0-1.1_amd64.deb ...
Unpacking kubectl (1.30.0-1.1) ...
Setting up kubectl (1.30.0-1.1) ...
Scanning processes...
Scanning linux images...

```

Please refer to official document to install kubectl. In this examination i am using native package manager method to install.

```
administrator@k8s-master: ~/swarm-microservice-demo-v1
Last State: Terminated
Reason: Error
Exit Code: 8
Started: Tue, 23 Apr 2024 10:41:53 +0000
Finished: Tue, 23 Apr 2024 10:41:54 +0000
Ready: False
Restart Count: 3
Environment: <none>
Mounts:
  /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-7kkl1 (ro)
Conditions:
  Type          Status
  Initialized    True
  Ready          False
  ContainersReady False
  PodScheduled   True
Volumes:
  kube-api-access-7kkl1:
    Type: Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName: kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI: true
QoS Class: BestEffort
Node-Selectors: <none>
Tolerations: node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
              node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Type      Reason      Age          From          Message
  ----      -
  Normal    Scheduled   72s          default-scheduler Successfully assigned default/results-app-86657f45d7-bnmc7 to node2
  Normal    Pulled      69s          kubelet       Successfully pulled image "okayonotnahirp404/results-app:latest" in 3.042631844s
  Normal    Pulled      62s          kubelet       Successfully pulled image "okayonotnahirp404/results-app:latest" in 5.168962583s
  Normal    Pulled      42s          kubelet       Successfully pulled image "okayonotnahirp404/results-app:latest" in 4.511093868s
  Normal    Pulling     18s (x4 over 72s) kubelet       Pulling image "okayonotnahirp404/results-app:latest"
  Normal    Created     14s (x4 over 69s) kubelet       Created container results-app
  Normal    Pulled      14s          kubelet       Successfully pulled image "okayonotnahirp404/results-app:latest" in 3.901311863s
  Normal    Started     13s (x4 over 69s) kubelet       Started container results-app
  Warning   BackOff     2s (x6 over 61s) kubelet       Back-off restarting failed container
administrator@k8s-master:~/swarm-microservice-demo-v1$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
redis01-6559646ddd-vz7v5            1/1     Running   0           109s
results-app-86657f45d7-bnmc7        0/1     CrashLoopBackOff   3 (48s ago)    100s
store-79c5c4568-fmrv               1/1     Running   0           98s
vote-worker-8494bff879-s6br5       1/1     Running   0          117s
web-vote-app-6fbc898568-zm6dx      1/1     Running   0           2m3s
administrator@k8s-master:~/swarm-microservice-demo-v1$
```

Successfully deployed but got error at results-app. Problem cause might be a bug.