Kubernetes on OpenSuse Leap 15

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Version 1.0, 08.03.2019

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2.1. Docker installation

```
sudo zypper ar -cf \
http://download.opensuse.org/repositories/home:/janhebler:/kubi/openSUSE_Leap_15.0/ Docker


sudo zypper in docker
sudo zypper in docker-bash-completion
```

2.2. Start & check docker

```
sudo systemctl start  docker
sudo systemctl status docker

# Add the current user to the docker group
sudo usermod -aG docker $USER

# Log out from the session or restart the OS in case you're using a VM

docker run hello-world
```

2.3. Create an image

```
touch Dockerfile

# Add
FROM node:7
ADD app.js /app.js
ENTRYPOINT ["node", "app.js"]

touch app.js

# Add
const http = require('http');
const os = require('os');
console.log("Kubia server starting...");
var handler = function(request, response) {
console.log("Received request from " + request.connection.remoteAddress);
response.writeHead(200);
response.end("You've hit " + os.hostname() + "\n");
};
var www = http.createServer(handler);
www.listen(8080);
```

2.4. Build the image

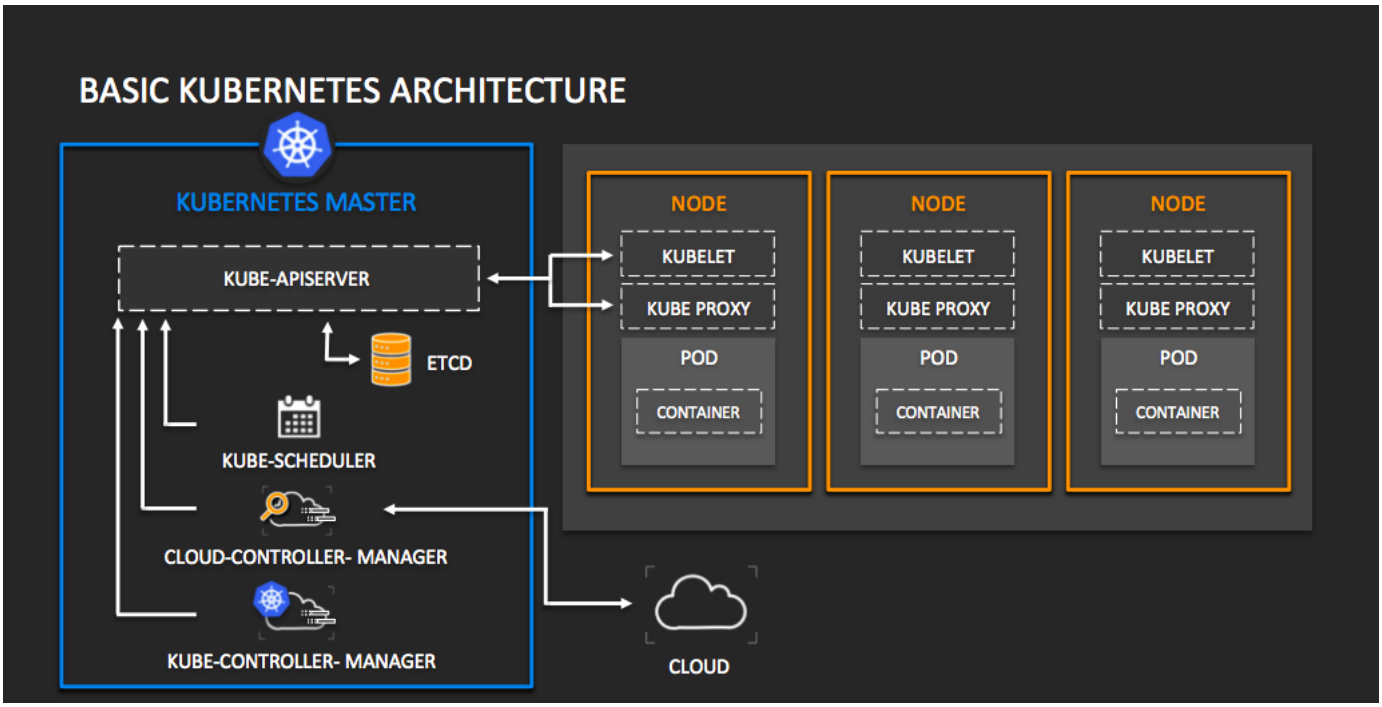
```
docker build -t image-name .
```

2.5. Run and test the buit image

```
docker run --name container-name -p 8080:8080 -d image-name
curl localhost:8080
```

3. Kubernetes

3.1. Basic Architecture



3.2. Requirement : Virtual Box installation

```
sudo zypper ar -cf  \
http://download.opensuse.org/update/leap/15.0/oss oss

sudo zypper in virtualbox
sudo usermod -aG vboxusers  $USER
# relog

sudo zypper install virtualbox-host-source kernel_devel
sudo /sbin/vboxconfig

sudo systemctl enable vboxdrv
sudo systemctl start  vboxdrv
sudo systemctl status vboxdrv
```

3.3. Minikube

The simplest and quickest path to a fully functioning Kubernetes cluster is by using Minikube. Minikube is a tool that sets up a single-node cluster that's great for both testing Kubernetes and developing apps locally. Although we can't show certain Kubernetes features related to managing apps on multiple nodes, the single-node cluster should be enough for exploring most topics discussed in this book.

```
curl -Lo minikube https://storage.googleapis.com/minikube/releases/v0.35.0/minikube-linux-amd64 && chmod +x minikube
&& sudo mv minikube /usr/local/bin/
```

3.4. Kubectl

```
curl -LO https://storage.googleapis.com/kubernetes-release/release/$(curl -s
https://storage.googleapis.com/kubernetes-release/release/stable.txt)/bin/linux/amd64/kubectl   && chmod +x kubectl &&
sudo mv kubectl /usr/local/bin/
```

3.5. Starting Minikube