

# DEVOPS TASK – 3

## 1) Installation of kubectl :

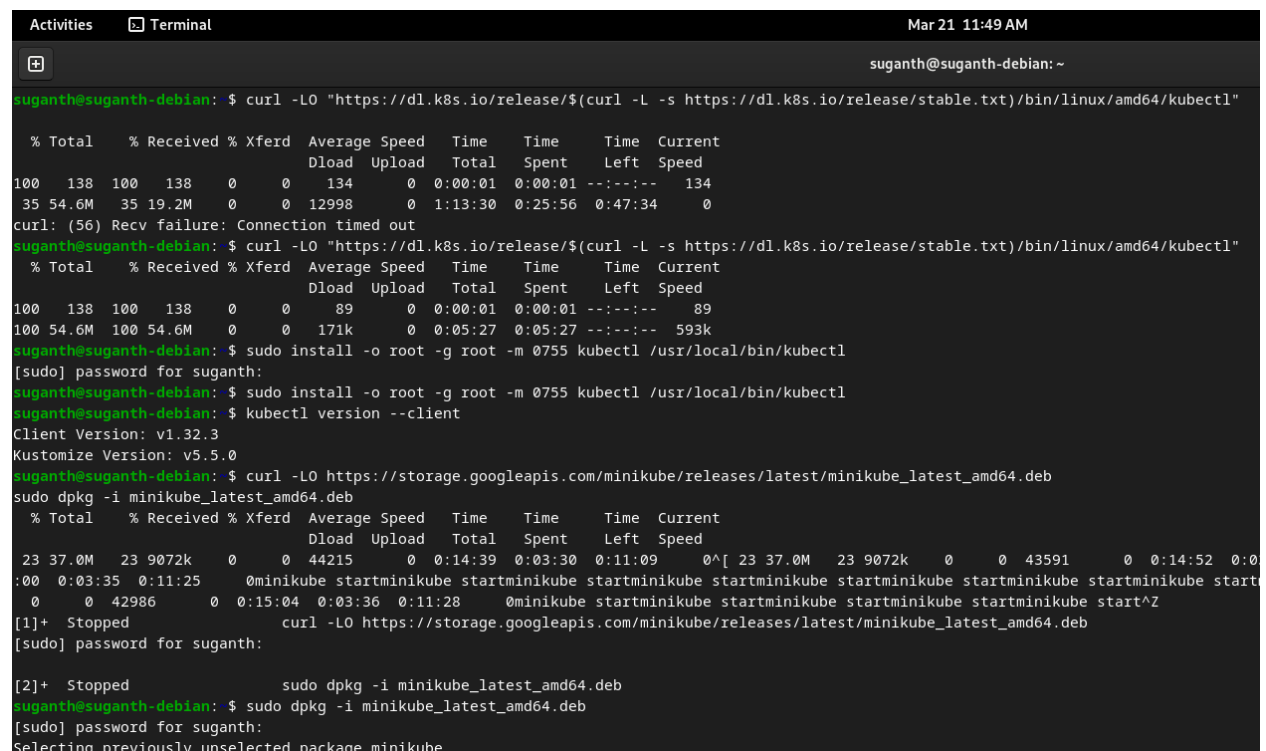
### COMMAND:

```
curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"
```

```
sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl
```

```
kubectl version --client
```

### SCREENSHOT :



```
Activities Terminal Mar 21 11:49 AM
suganth@suganth-debian: ~
suganth@suganth-debian: $ curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 138 100 138 0 0 134 0 0:00:01 0:00:01 --:--:-- 134
35 54.6M 35 19.2M 0 0 12998 0 1:13:30 0:25:56 0:47:34 0
curl: (56) Recv failure: Connection timed out
suganth@suganth-debian: $ curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 138 100 138 0 0 89 0 0:00:01 0:00:01 --:--:-- 89
100 54.6M 100 54.6M 0 0 171k 0 0:05:27 0:05:27 --:--:-- 593k
suganth@suganth-debian: $ sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl
[sudo] password for suganth:
suganth@suganth-debian: $ sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl
suganth@suganth-debian: $ kubectl version --client
Client Version: v1.32.3
Kustomize Version: v5.5.0
suganth@suganth-debian: $ curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube_latest_amd64.deb
sudo dpkg -i minikube_latest_amd64.deb
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
23 37.0M 23 9072k 0 0 44215 0 0:14:39 0:03:30 0:11:09 0^
[23 37.0M 23 9072k 0 0 43591 0 0:14:52 0:0
:00 0:03:35 0:11:25 0minikube startminikube startminikube startminikube startminikube startminikube startminikube startminikube start
0 0 42986 0 0:15:04 0:03:36 0:11:28 0minikube startminikube startminikube startminikube startminikube start^Z
[1]+ Stopped curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube_latest_amd64.deb
[sudo] password for suganth:
[2]+ Stopped sudo dpkg -i minikube_latest_amd64.deb
suganth@suganth-debian: $ sudo dpkg -i minikube_latest_amd64.deb
[sudo] password for suganth:
Selecting previously unselected package minikube.
```

## 2) Installation of Minikube:

### COMMAND:

```
sudo apt install -y curl apt-transport-https contrack
```

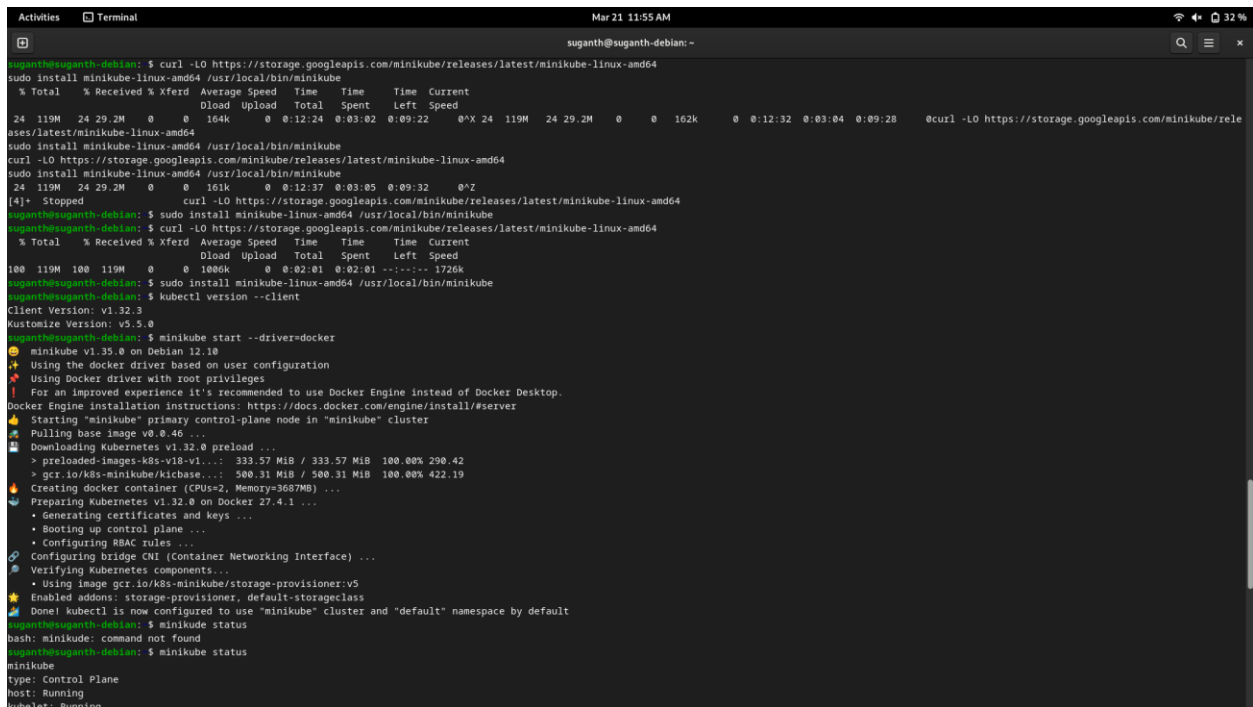
```
curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
```

```
sudo install minikube-linux-amd64 /usr/local/bin/minikube
```

```
minikube start --driver=docker
```

```
minikube status
```

### SCREENSHOT :



```
Activities Terminal Mar 21 11:55 AM
suganth@suganth-debian: ~
suganth@suganth-debian: $ curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
sudo install minikube-linux-amd64 /usr/local/bin/minikube
% Total % Received % Xferd Average Speed Time Time Time Current
24 119M 24 29.2M 0 0 164k 0 0:12:24 0:03:02 0:09:22 0% 24 119M 24 29.2M 0 0 162k 0 0:12:32 0:03:04 0:09:28 @curl -LO https://storage.googleapis.com/minikube/rele
ases/latest/minikube-linux-amd64
suganth@suganth-debian: $ sudo install minikube-linux-amd64 /usr/local/bin/minikube
curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
sudo install minikube-linux-amd64 /usr/local/bin/minikube
24 119M 24 29.2M 0 0 161k 0 0:12:37 0:03:05 0:09:32 0%
[4]+ Stopped curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
suganth@suganth-debian: $ sudo install minikube-linux-amd64 /usr/local/bin/minikube
suganth@suganth-debian: $ curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
% Total % Received % Xferd Average Speed Time Time Time Current
100 119M 100 119M 0 0 1000k 0 0:02:01 0:02:01 --:--:-- 1726k
suganth@suganth-debian: $ sudo install minikube-linux-amd64 /usr/local/bin/minikube
suganth@suganth-debian: $ kubectl version --client
Client Version: v1.32.3
Kustomize Version: v5.5.0
suganth@suganth-debian: $ minikube start --driver=docker
minikube v1.35.0 on Debian 12.10
Using the docker driver based on user configuration
Using Docker driver with root privileges
! For an improved experience it's recommended to use Docker Engine instead of Docker Desktop.
Docker Engine installation instructions: https://docs.docker.com/engine/install/#server
Starting "minikube" primary control-plane node in "minikube" cluster
Pulling base image v0.0.46 ...
Downloading Kubernetes v1.32.0 preload ...
> preloaded-images-k8s-v18-v1...: 333.57 MiB / 333.57 MiB 100.00% 290.42
> gcr.io/k8s-minikube/kicbase...: 500.31 MiB / 500.31 MiB 100.00% 422.19
Creating docker container (CPUs=2, Memory=3687MB) ...
Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
• Generating certificates and keys ...
• Booting up control plane ...
• Configuring RBAC rules ...
Configuring bridge CNI (Container Networking Interface) ...
Verifying Kubernetes components...
• Using image gcr.io/k8s-minikube/storage-provisioner:v5
Enabled addons: storage-provisioner, default-storageclass
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
suganth@suganth-debian: $ minikube status
bash: minikude: command not found
suganth@suganth-debian: $ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
```

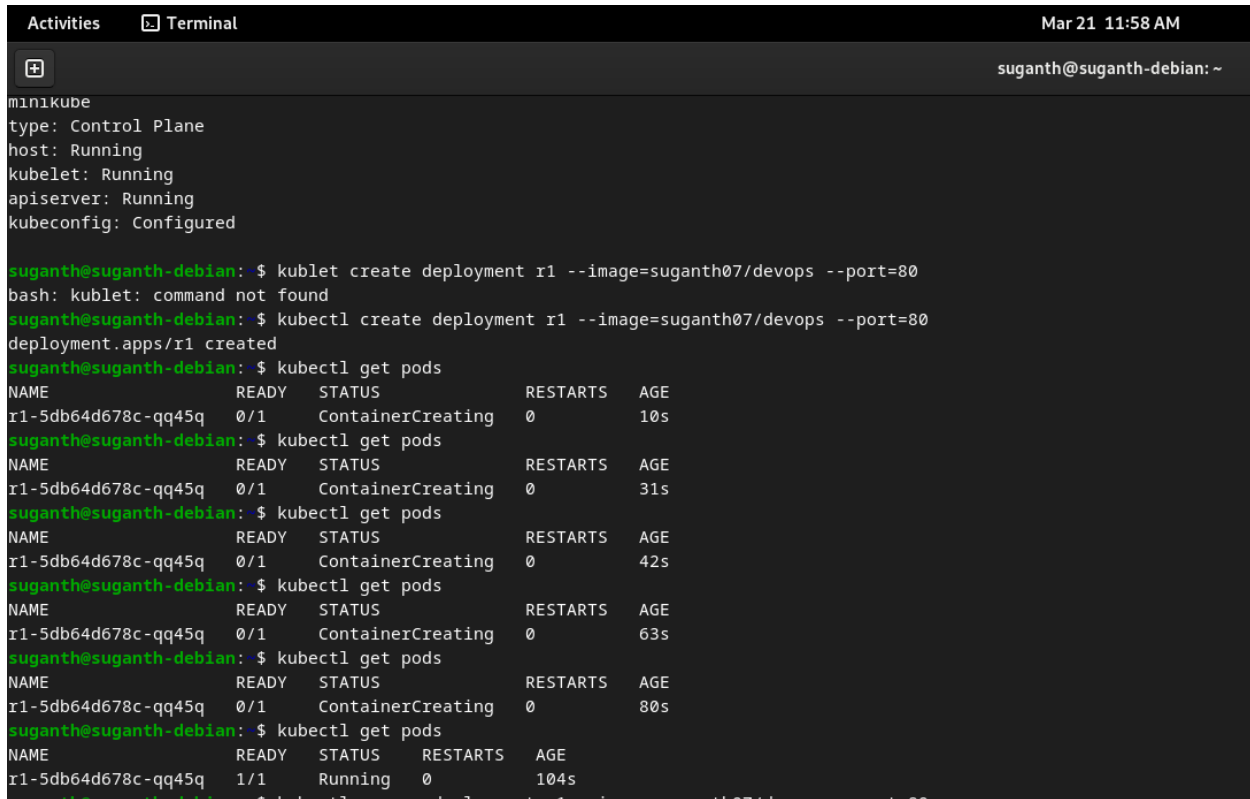
## 3) Then Create a deployment for the docker hub image using this command and get the pods.

### COMMAND:

```
kubectrl create deployment r1 --image=suganth07/devops --port=80
```

```
kubectrl get pods
```

## SCREENSHOT :



The screenshot shows a terminal window with the following content:

```
Activities Terminal Mar 21 11:58 AM
suganth@suganth-debian: ~
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

suganth@suganth-debian: $ kublet create deployment r1 --image=suganth07/devops --port=80
bash: kublet: command not found
suganth@suganth-debian: $ kubectrl create deployment r1 --image=suganth07/devops --port=80
deployment.apps/r1 created
suganth@suganth-debian: $ kubectrl get pods
NAME                READY   STATUS             RESTARTS   AGE
r1-5db64d678c-qq45q  0/1     ContainerCreating  0          10s
suganth@suganth-debian: $ kubectrl get pods
NAME                READY   STATUS             RESTARTS   AGE
r1-5db64d678c-qq45q  0/1     ContainerCreating  0          31s
suganth@suganth-debian: $ kubectrl get pods
NAME                READY   STATUS             RESTARTS   AGE
r1-5db64d678c-qq45q  0/1     ContainerCreating  0          42s
suganth@suganth-debian: $ kubectrl get pods
NAME                READY   STATUS             RESTARTS   AGE
r1-5db64d678c-qq45q  0/1     ContainerCreating  0          63s
suganth@suganth-debian: $ kubectrl get pods
NAME                READY   STATUS             RESTARTS   AGE
r1-5db64d678c-qq45q  0/1     ContainerCreating  0          80s
suganth@suganth-debian: $ kubectrl get pods
NAME                READY   STATUS             RESTARTS   AGE
r1-5db64d678c-qq45q  1/1     Running            0          104s
suganth@suganth-debian: $ kubectrl expose deployment r1 --image=suganth07/devops --port=80
```

4) Then expose the deployment in that same port and run the service using minikube.

## COMMAND:

```
kubectrl expose deployment r1 --port=80 --type=NodePort
```













```
minikube service r1
```

## SCREENSHOT:

```
suganth@suganth-debian:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
r1-5db64d678c-qq45q                0/1     ContainerCreating   0           18s
suganth@suganth-debian:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
r1-5db64d678c-qq45q                0/1     ContainerCreating   0           31s
suganth@suganth-debian:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
r1-5db64d678c-qq45q                0/1     ContainerCreating   0           42s
suganth@suganth-debian:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
r1-5db64d678c-qq45q                0/1     ContainerCreating   0           63s
suganth@suganth-debian:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
r1-5db64d678c-qq45q                0/1     ContainerCreating   0           88s
suganth@suganth-debian:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
r1-5db64d678c-qq45q                1/1     Running        0           104s
suganth@suganth-debian:~$ kubectl expose deployment r1 --image=suganth07/devops --port=80
error: unknown flag: --image
See 'kubectl expose --help' for usage.
suganth@suganth-debian:~$ kubectl expose deployment r1 --port=80 --type=NodePort
service/r1 exposed
suganth@suganth-debian:~$ minikube service r1
bash: minikube: command not found
suganth@suganth-debian:~$ minikube service r1
|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|
| default | r1 | 80 | http://192.168.49.2:32396 |
|-----|
$ Starting tunnel for service r1.
|-----|
| NAMESPACE | NAME | TARGET PORT | URL |
|-----|
| default | r1 | | http://127.0.0.1:36565 |
|-----|
🔗 Opening service default/r1 in default browser...
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.
Opening in existing browser session.
^[[1;20minikube status
```

- 5) Now our image will be hosted locally on the given url . Go to the browser and search for it.

## SCREENSHOT :

<p>OnePlus 9 5G</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>Iphone 13 mini</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>Samsung s21 ultra</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>xiomi mi 11</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>OnePlus 9 5G</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>Iphone 13 mini</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>
<p>Samsung s21 ultra</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>xiomi mi 11</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>OnePlus 9 5G</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>Iphone 13 mini</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>Samsung s21 ultra</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>	<p>xiomi mi 11</p>  <p>5.4 inch display 399</p> <p>Add to Cart</p>