Lab Exercise 7- Install Minikube on Linux (Ubuntu /MacOS/Windows)

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B2 DevOps

Install Minikube on Linux (Ubuntu)

```
sudo apt install -y docker.io # Ubuntu
```

```
sudo systemctl start docker

sudo systemctl enable docker

sudo usermod -aG docker $USER

newgrp docker
```

Step 2: Install 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/
```

Verify:

```
kubectl version --client
```

Step 3: Install Minikube

```
curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
chmod +x minikube-linux-amd64
sudo mv minikube-linux-amd64 /usr/local/bin/minikube
```

Verify:

```
minikube version
```

Step 4: Start Minikube

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

Check status:

```
minikube status
```

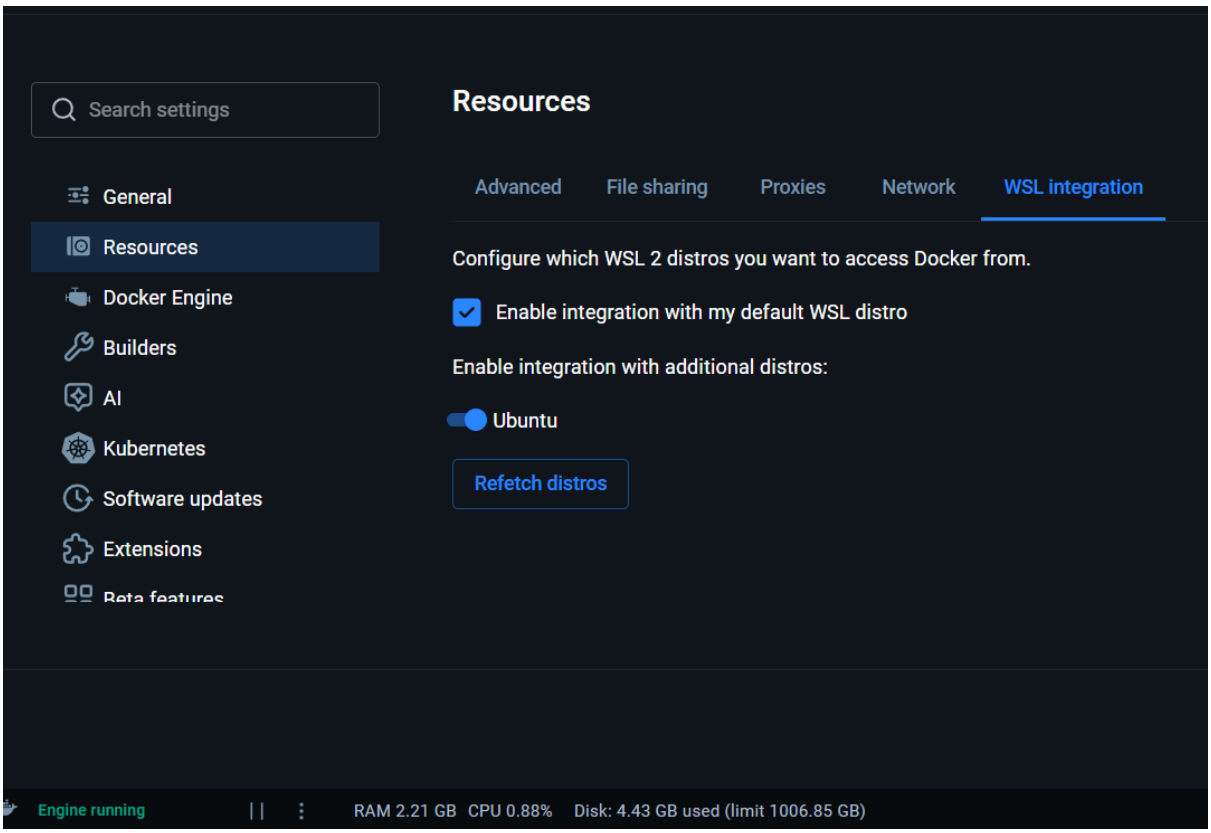
Install Minikube on Windows

Prerequisites

- Docker Desktop installed

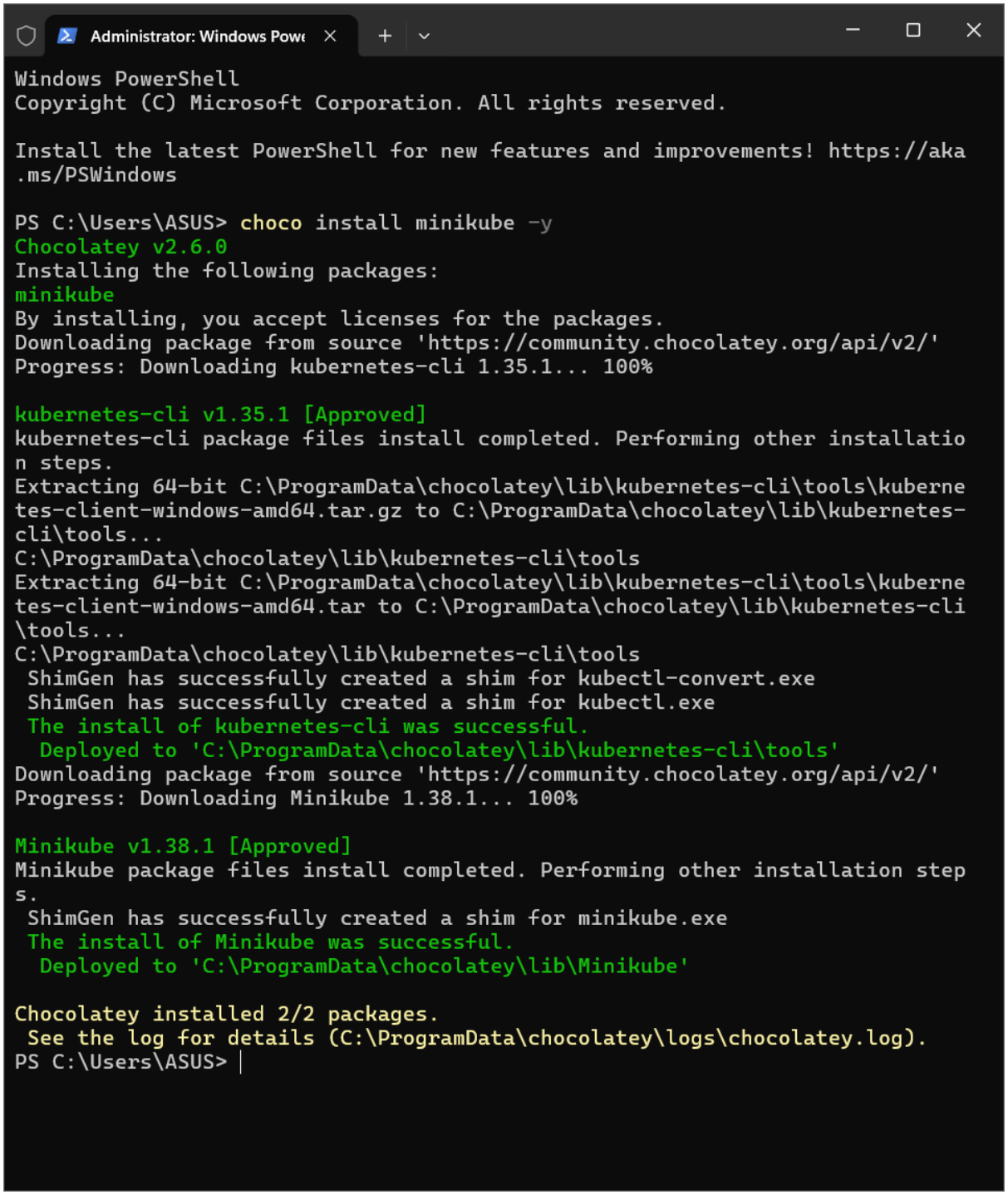
```
PS C:\Users\ASUS> docker --version
Docker version 29.2.0, build 0b9d198
PS C:\Users\ASUS> docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent
it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

- Enable WSL2



Install Minikube

```
choco install minikube -y
```

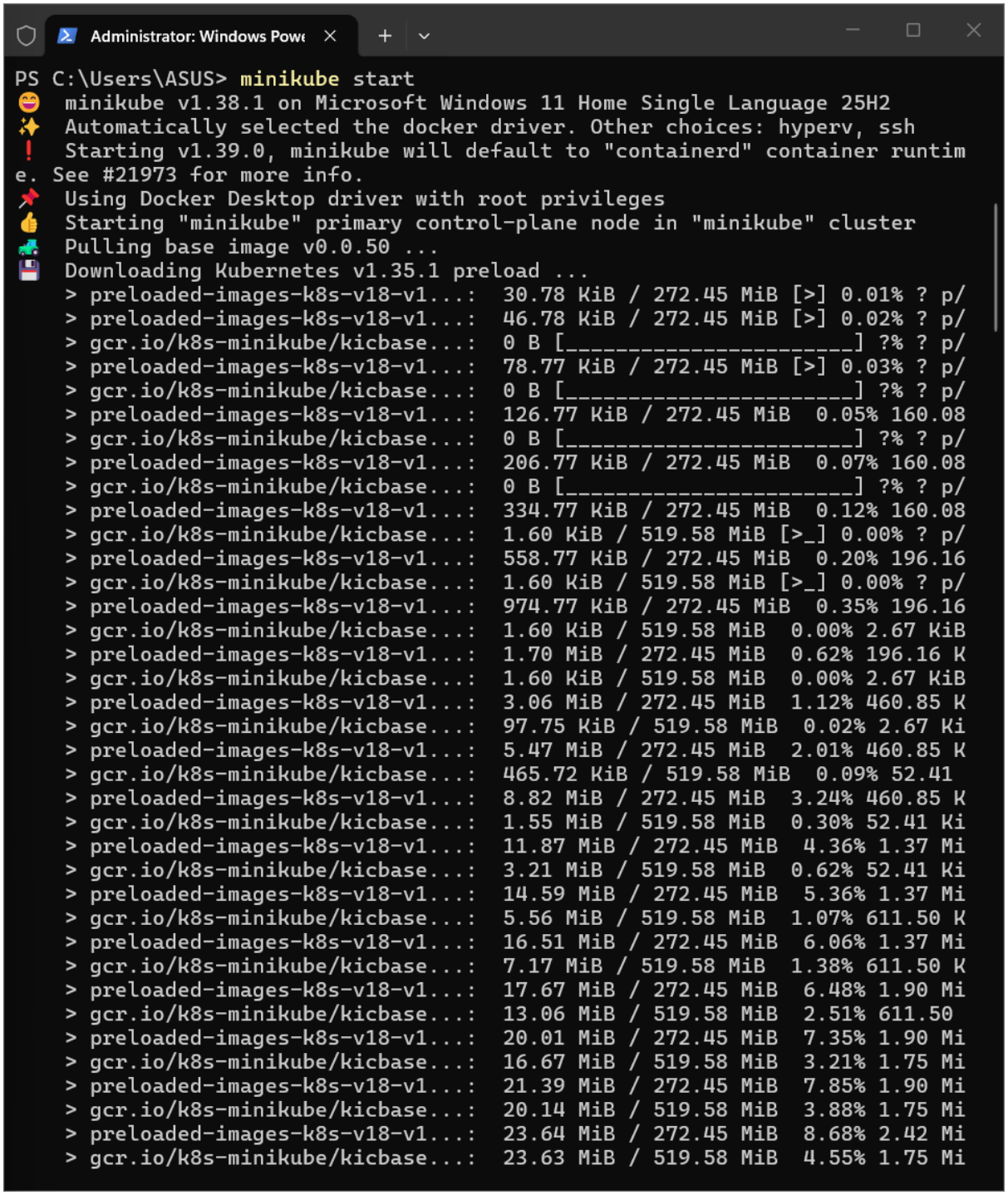


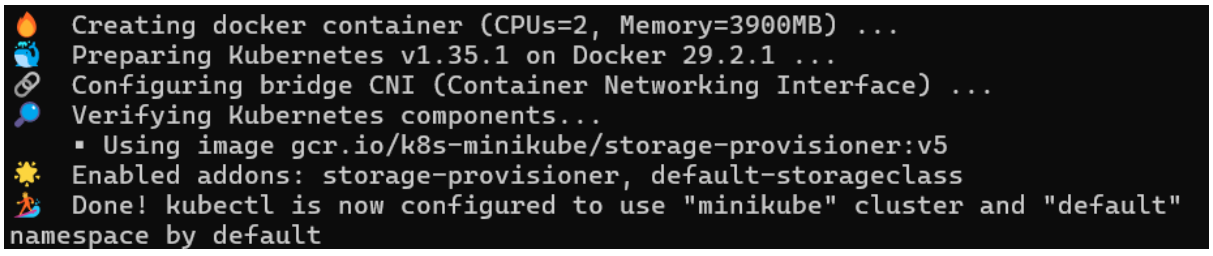
OR download exe:

```
https://github.com/kubernetes/minikube/releases/latest
```

Start:

```
minikube start
```


Administrator: Windows Powe
PS C:\Users\ASUS> minikube start
minikube v1.38.1 on Microsoft Windows 11 Home Single Language 25H2
Automatically selected the docker driver. Other choices: hyperv, ssh
Starting v1.39.0, minikube will default to "containerd" container runtim
e. See #21973 for more info.
Using Docker Desktop driver with root privileges
Starting "minikube" primary control-plane node in "minikube" cluster
Pulling base image v0.0.50 ...
Downloading Kubernetes v1.35.1 preload ...
> preloaded-images-k8s-v18-v1...: 30.78 KiB / 272.45 MiB [>] 0.01% ? p/
> preloaded-images-k8s-v18-v1...: 46.78 KiB / 272.45 MiB [>] 0.02% ? p/
> gcr.io/k8s-minikube/kicbase...: 0 B [_____] ?% ? p/
> preloaded-images-k8s-v18-v1...: 78.77 KiB / 272.45 MiB [>] 0.03% ? p/
> gcr.io/k8s-minikube/kicbase...: 0 B [_____] ?% ? p/
> preloaded-images-k8s-v18-v1...: 126.77 KiB / 272.45 MiB 0.05% 160.08
> gcr.io/k8s-minikube/kicbase...: 0 B [_____] ?% ? p/
> preloaded-images-k8s-v18-v1...: 206.77 KiB / 272.45 MiB 0.07% 160.08
> gcr.io/k8s-minikube/kicbase...: 0 B [_____] ?% ? p/
> preloaded-images-k8s-v18-v1...: 334.77 KiB / 272.45 MiB 0.12% 160.08
> gcr.io/k8s-minikube/kicbase...: 1.60 KiB / 519.58 MiB [>_] 0.00% ? p/
> preloaded-images-k8s-v18-v1...: 558.77 KiB / 272.45 MiB 0.20% 196.16
> gcr.io/k8s-minikube/kicbase...: 1.60 KiB / 519.58 MiB [>_] 0.00% ? p/
> preloaded-images-k8s-v18-v1...: 974.77 KiB / 272.45 MiB 0.35% 196.16
> gcr.io/k8s-minikube/kicbase...: 1.60 KiB / 519.58 MiB 0.00% 2.67 KiB
> preloaded-images-k8s-v18-v1...: 1.70 MiB / 272.45 MiB 0.62% 196.16 K
> gcr.io/k8s-minikube/kicbase...: 1.60 KiB / 519.58 MiB 0.00% 2.67 KiB
> preloaded-images-k8s-v18-v1...: 3.06 MiB / 272.45 MiB 1.12% 460.85 K
> gcr.io/k8s-minikube/kicbase...: 97.75 KiB / 519.58 MiB 0.02% 2.67 Ki
> preloaded-images-k8s-v18-v1...: 5.47 MiB / 272.45 MiB 2.01% 460.85 K
> gcr.io/k8s-minikube/kicbase...: 465.72 KiB / 519.58 MiB 0.09% 52.41
> preloaded-images-k8s-v18-v1...: 8.82 MiB / 272.45 MiB 3.24% 460.85 K
> gcr.io/k8s-minikube/kicbase...: 1.55 MiB / 519.58 MiB 0.30% 52.41 Ki
> preloaded-images-k8s-v18-v1...: 11.87 MiB / 272.45 MiB 4.36% 1.37 Mi
> gcr.io/k8s-minikube/kicbase...: 3.21 MiB / 519.58 MiB 0.62% 52.41 Ki
> preloaded-images-k8s-v18-v1...: 14.59 MiB / 272.45 MiB 5.36% 1.37 Mi
> gcr.io/k8s-minikube/kicbase...: 5.56 MiB / 519.58 MiB 1.07% 611.50 K
> preloaded-images-k8s-v18-v1...: 16.51 MiB / 272.45 MiB 6.06% 1.37 Mi
> gcr.io/k8s-minikube/kicbase...: 7.17 MiB / 519.58 MiB 1.38% 611.50 K
> preloaded-images-k8s-v18-v1...: 17.67 MiB / 272.45 MiB 6.48% 1.90 Mi
> gcr.io/k8s-minikube/kicbase...: 13.06 MiB / 519.58 MiB 2.51% 611.50
> preloaded-images-k8s-v18-v1...: 20.01 MiB / 272.45 MiB 7.35% 1.90 Mi
> gcr.io/k8s-minikube/kicbase...: 16.67 MiB / 519.58 MiB 3.21% 1.75 Mi
> preloaded-images-k8s-v18-v1...: 21.39 MiB / 272.45 MiB 7.85% 1.90 Mi
> gcr.io/k8s-minikube/kicbase...: 20.14 MiB / 519.58 MiB 3.88% 1.75 Mi
> preloaded-images-k8s-v18-v1...: 23.64 MiB / 272.45 MiB 8.68% 2.42 Mi
> gcr.io/k8s-minikube/kicbase...: 23.63 MiB / 519.58 MiB 4.55% 1.75 Mi


Creating docker container (CPUs=2, Memory=3900MB) ...
Preparing Kubernetes v1.35.1 on Docker 29.2.1 ...
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

Install Minikube on macOS

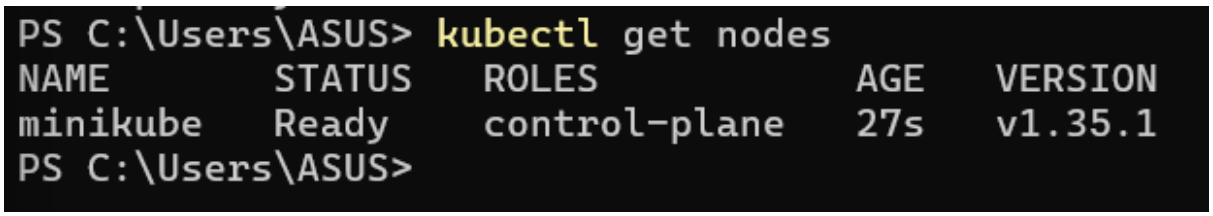
```
brew install minikube

brew install kubectl
```

Start:

```
minikube start
```

Verify Kubernetes Cluster

```
kubectl get nodes

Expected output:

NAME      STATUS   ROLES        AGE   VERSION

minikube   Ready    control-plane   xx    v1.xx
```



Useful Minikube Commands (Lab Ready)

Command	Purpose
minikube dashboard	Open K8s UI
minikube stop	Stop cluster
minikube delete	Delete cluster
minikube ssh	Access node

Command	Purpose
kubectl get pods -A	View all pods