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LAB EXERCISE 7- INSTALL MINIKUBE ON LINUX (UBUNTU /MACOS/WINDOWS)

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
- ENABLE WSL2

INSTALL MINIKUBE

```
choco install minikube -y
```

OR DOWNLOAD EXE:

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

START:

```
minikube start
```

INSTALL MINIKUBE ON MACOS

```
brew install minikube
```

```
brew install kubectl
```

```
✓ JSON API cask.json
✓ JSON API version.json
└─ Fetching download for: minikube
    ✓ Bottle Manifest minikube (1.38.0)
    ✓ Bottle Manifest kubernetes-cli (1.35.0)
    ✓ Bottle Kubernetes-cli (1.35.0)
    ✓ Bottle Kubernetes (1.38.0)
    └─ Installing minikube dependency: kubernetes-cli
      └─ Pouring kubernetes-cli-1.35.0-arm64_tahoe.bottle.1.tar.gz
brew install kubectl
↳ /opt/homebrew/Cellar/kubernetes-cli/1.35.0: 261 files, 62.0MB
↳ Pouring minikube-1.38.0-arm64_tahoe.bottle.tar.gz
↳ /opt/homebrew/Cellar/minikube/1.38.0: 11 files, 135.5MB
└─ Running 'brew cleanup minikube'...
Disable this behaviour by setting 'HOMEBREW_NO_INSTALL_CLEANUP=1'.
Hide these hints with 'HOMEBREW_NO_ENV_HINTS=1' (see 'man brew').
  Caveats
  Bash completion has been installed to:
    /opt/homebrew/etc/bash_completion.d
Downloaded 15.3MB/ 15.3MB
Downloaded 32.0MB/ 32.0MB
Downloaded 8.4KB/ 8.4KB
Downloaded 7.5KB/ 7.5KB
Downloaded 17.9MB/ 17.9MB
Downloaded 51.8MB/ 51.8MB
```

START:

```
minikube start
```

```
🏃 minikube v1.38.0 on Darwin 26.2 (arm64)
💡 Automatically selected the docker driver
❗ Starting v1.39.0, minikube will default to "containerd" container runtime. See #21973 for more info.
🔧 Using Docker Desktop driver with root privileges
👍 Starting "minikube" primary control-plane node in "minikube" cluster
_PULLING_ Pulling base image v0.0.49 ...
⬇️ Downloading Kubernetes v1.35.0 preload ...
  > preloaded-images-k8s-v18-v1...: 243.03 MiB / 243.03 MiB 100.00% 7.95 Mi
  > gcr.io/k8s-minikube/kicbase...: 478.49 MiB / 478.49 MiB 100.00% 3.79 Mi
🔥 Creating docker container (CPUs=2, Memory=4000MB) ...
🌐 Preparing Kubernetes v1.35.0 on Docker 29.2.0 ...
🔗 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
```

VERIFY KUBERNETES CLUSTER

```
kubectl get nodes
```

Expected output:

NAME	STATUS	ROLES	AGE	VERSION
minikube	Ready	control-plane	xx	v1.xx

NAME	STATUS	ROLES	AGE	VERSION
minikube	Ready	control-plane	113s	v1.35.0

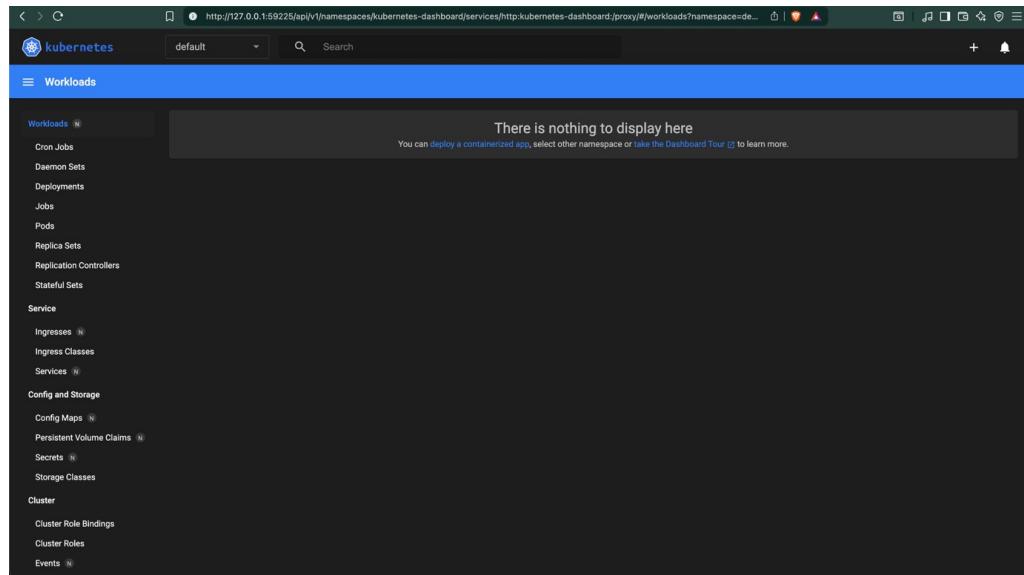
USEFUL MINIKUBE COMMANDS (LAB READY)

Command	Purpose
minikube dashboard	Open K8s UI
minikube stop	Stop cluster
minikube delete	Delete cluster
minikube ssh	Access node
kubectl get pods -A	View all pods

```

    Enabling dashboard ...
    • Using image docker.io/kubernetesui/dashboard:v2.7.0
    • Using image docker.io/kubernetesui/metrics-scraper:v1.0.8
    ↴ Some dashboard features require the metrics-server addon. To enable all features please run:
      minikube addons enable metrics-server

    🟢 Verifying dashboard health ...
    🟢 Launching proxy ...
    🟢 Verifying proxy health ...
    🎉 Opening http://127.0.0.1:59225/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser...
  
```



```
Linux minikube 6.12.65-linuxkit #1 SMP Thu Jan 15 14:58:53 UTC 2026 aarch64
```

```
The programs included with the Debian GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*copyright.
```

```
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.
```

```
docker@minikube:~$ ls  
docker@minikube:~$ ls -a  
. . . . .bash_history .bash_logout .bashrc .profile .ssh .sudo_as_admin_successful  
docker@minikube:~$ █
```

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE
kube-system	coredns-7d764666f9-7x6vh	1/1	Running	1 (3m58s ago)	4m33s
kube-system	etcd-minikube	1/1	Running	1 (3m56s ago)	4m39s
kube-system	kube-apiserver-minikube	1/1	Running	1 (3m53s ago)	4m39s
kube-system	kube-controller-manager-minikube	1/1	Running	1 (4m3s ago)	4m39s
kube-system	kube-proxy-4njn	1/1	Running	1 (4m3s ago)	4m33s
kube-system	kube-scheduler-minikube	1/1	Running	1 (4m3s ago)	4m39s
kube-system	storage-provisioner	1/1	Running	1 (4m3s ago)	4m38s
kubernetes-dashboard	dashboard-metrics-scraper-5565989548-9slf7	1/1	Running	0	2m21s
kubernetes-dashboard	kubernetes-dashboard-b84665fb8-w8tnh	1/1	Running	0	2m21s

```
✋ Stopping node "minikube" ...  
🔴 Powering off "minikube" via SSH ...  
🔴 1 node stopped.
```

```
🔥 Deleting "minikube" in docker ...  
🔥 Deleting container "minikube" ...  
🔥 Removing /Users/akshchauhan/.minikube/machines/minikube ...  
💀 Removed all traces of the "minikube" cluster.
```