

# MiniKube

[download](#)

```
paru -S kubectl minikube kompose
```

## Install Minikube

<https://minikube.sigs.k8s.io/docs/start/>

### Install minikube

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

### Install Kubectl

```
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
```

```
minikube start
```

## Run PostgreSQL server and Pgadmin on minikube

### Deploy Postgres

Create configuration file

```
apiVersion: v1  
kind: ConfigMap  
metadata:  
  name: postgres-config  
  labels:  
    app: postgres  
data:  
  POSTGRES_DB: postgresdb  
  POSTGRES_USER: admin  
  POSTGRES_PASSWORD: test123  
  ---  
  
apiVersion: apps/v1  
kind: Deployment  
metadata:
```

```
  name: postgres
spec:
  replicas: 1
  selector:
    matchLabels:
      app: postgres
  template:
    metadata:
      labels:
        app: postgres
    spec:
      volumes:
        - name: postgres-pv-storage
          persistentVolumeClaim:
            claimName: postgres-pv-claim
      containers:
        - name: postgres
          image: postgres:12
          imagePullPolicy: "IfNotPresent"
          ports:
            - containerPort: 5432
          envFrom:
            - configMapRef:
                name: postgres-config
          volumeMounts:
            - mountPath: /var/lib/postgresql/data
              name: postgres-pv-storage

---

apiVersion: v1
kind: Service
metadata:
  name: postgres
  labels:
    app: postgres
spec:
  type: NodePort
  ports:
    - port: 5432
  selector:
    app: postgres

---

apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: postgres-pv-claim
spec:
  accessModes:
    - ReadWriteOnce
```

```
resources:
  requests:
    storage: 100Mi
```

```
kubectl apply -f <namefile>
```

## Deploy Pgadmin

<https://www.enterprisedb.com/blog/how-deploy-pgadmin-kubernetes>

Create configuration file (.yaml)

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: postgres-config
  labels:
    app: postgres
data:
  POSTGRES_DB: postgresdb
  POSTGRES_USER: admin
  POSTGRES_PASSWORD: test123
---

apiVersion: apps/v1
kind: Deployment
metadata:
  name: postgres
spec:
  replicas: 1
  selector:
    matchLabels:
      app: postgres
  template:
    metadata:
      labels:
        app: postgres
    spec:
      volumes:
        - name: postgres-pv-storage
          persistentVolumeClaim:
            claimName: postgres-pv-claim
      containers:
        - name: postgres
          image: postgres:12
          imagePullPolicy: "IfNotPresent"
          ports:
            - containerPort: 5432
          envFrom:
            - configMapRef:
                name: postgres-config
```

```
    volumeMounts:
      - mountPath: /var/lib/postgresql/data
        name: postgres-pv-storage
  ---
apiVersion: v1
kind: Service
metadata:
  name: postgres
  labels:
    app: postgres
spec:
  type: NodePort
  ports:
    - port: 5432
  selector:
    app: postgres
  ---
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: postgres-pv-claim
spec:
  accessModes:
    - ReadWriteOnce
  resources:
    requests:
      storage: 100Mi
```

```
kubectl apply -f <filename.yaml>
```

## Connect pgadmin to server

```
minikube service <NamePgadminService>
```

1. Login Pgadmin
2. Server -> Properties
3. Change host name/address to Postgres service name -> postgres
4. Change username to one set in postgres config file -> admin
5. Change port (if not default) to ContainerPort (not Minikube service port) -> 5432
6. Connect to server

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<https://wiki.csgalileo.org/> - Galileo Labs

Permanent link:  
<https://wiki.csgalileo.org/tips/minikube?rev=1632748432>

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