

Microk8s

Mickrok8s

- MicroK8s is a powerful, lightweight, reliable production-ready Kubernetes distribution.
- Fastest multi-node Kubernetes.
- Enterprise-grade Kubernetes distribution that has a small disk and memory footprint.



MicroK8s

Why Microk8s ?

- Single-package fully conformant lightweight Kubernetes that works on Linux, Windows and Mac.
- Micro8s is small, simple, secure, current and comprehensive.
- Dozens of add-ons: DNS, dashboard, storage, RBAC, ingress, MetalLB, registry, GPU, Istio, Linkerd, Knative, fluentd, Prometheus, Jaeger, kubeflow.
- Made for developers, and great for edge, IoT and appliances.

Install Microk8s (Ubuntu)

- **Install Microk8s**

```
sudo snap install microk8s --classic
```

- **Join Microk8s group**

```
sudo usermod -a -G microk8s "$USER"
```

```
sudo chown -f -R "$USER" /.kube
```

- **Logout of the vm**

```
exit
```

- **ssh into the vm**

```
ssh -i "key.pem" ubuntu@.....
```

- **Enable Microk8s addons**

```
microk8s.enable dns dashboard storage metrics-server
```

Install Microk8s (Ubuntu)

- Check microk8s status

```
microk8s status
```

```
microk8s.kubectl get ns
```

- Enable kubeflow

```
microk8s.enable kubeflow
```

```
Congratulations, Kubeflow is now available.  
The dashboard is available at http://10.64.140.43.xip.io/
```

```
Username: admin  
Password: 8CNLX620FMBB47729DZT84VADZW61Q
```

```
To see these values again, run:
```

```
microk8s juju config dex-auth static-username  
microk8s juju config dex-auth static-password
```

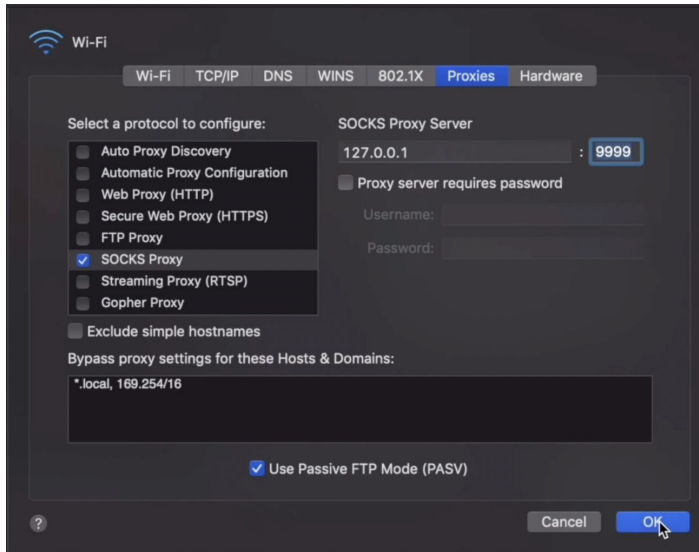
Install Microk8s (Ubuntu)

- Exit the vm and enable socks proxy

```
exit
```

```
ssh -i "key.pem" -D9999 ubuntu@<SERVER_IP_ADDRESS>
```

Enable SOCKS proxy in your network settings



Install Microk8s (Ubuntu)

- Run this ip address in your browser and fill in the dex-auth username and password given.

`http://10.64.140.43.xip.io/`

```
Congratulations, Kubeflow is now available.  
The dashboard is available at http://10.64.140.43.xip.io/
```

```
Username: admin  
Password: 8CNLX620FMBB47729DZT84VADZW61Q
```

To see these values again, run:

```
microk8s juju config dex-auth static-username  
microk8s juju config dex-auth static-password
```

Log in to Your Account

Email Address

Password

Login

Enabling Kubeflow on Microk8s

You should have access to the Kubeflow UI now.

The screenshot displays the Kubeflow user interface. On the left is a dark blue sidebar with navigation links: Home, Pipelines, Notebook Servers, Katib, Artifact Store, Manage Contributors, GitHub, and Documentation. The top header shows the user 'admin (Owner)' and a profile icon. The main content area has two tabs: 'Dashboard' (selected) and 'Activity'. The 'Dashboard' tab contains several sections: 'Quick shortcuts' with links to upload a pipeline, view all pipeline runs, create a new notebook server, view Katib studies, and view metadata artifacts; 'Recent Notebooks' showing 'No Notebooks in namespace admin'; 'Recent Pipelines' listing four tutorials and demos with their creation times; and 'Documentation' with links to 'Getting Started with Kubeflow', 'MiniKF', 'Microk8s for Kubeflow', 'Minikube for Kubeflow', 'Kubeflow on GCP', and 'Kubeflow on AWS'.

Kubeflow admin (Owner)

Dashboard Activity

Quick shortcuts

- ⚡ Upload a pipeline
Pipelines
- ⚡ View all pipeline runs
Pipelines
- ⚡ Create a new Notebook server
Notebook Servers
- ⚡ View Katib Studies
Katib
- ⚡ View Metadata Artifacts
Artifact Store

Recent Notebooks

No Notebooks in namespace admin

Recent Pipelines

- 🔧 [Tutorial] DSL - Control structures
Created 2/21/2021, 5:34:03 PM
- 🔧 [Tutorial] Data passing in python components
Created 2/21/2021, 5:34:02 PM
- 🔧 [Demo] TFX - Taxi Tip Prediction Model Trainer
Created 2/21/2021, 5:34:00 PM
- 🔧 [Demo] XGBoost - Training with Confusion Matrix
Created 2/21/2021, 5:33:58 PM

Documentation

- Getting Started with Kubeflow**
Get your machine-learning workflow up and running on Kubeflow
- MiniKF**
A fast and easy way to deploy Kubeflow locally
- Microk8s for Kubeflow**
Quickly get Kubeflow running locally on native hypervisors
- Minikube for Kubeflow**
Quickly get Kubeflow running locally
- Kubeflow on GCP**
Running Kubeflow on Kubernetes Engine and Google Cloud Platform
- Kubeflow on AWS**
Running Kubeflow on Elastic Container Service and Amazon Web Services