

Microk8s

Microk8s

- MicroK8s is a powerful, lightweight, reliable production-ready Kubernetes distribution.
- Zero-ops highly-available 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.

Visit [MicroK8s.io](https://microk8s.io) for more information

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
```

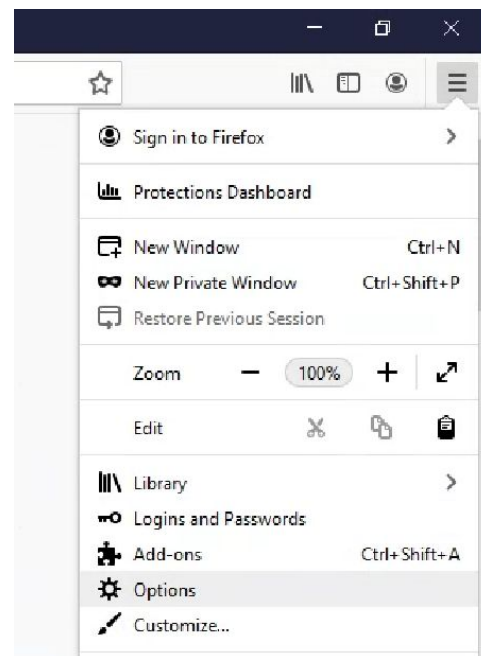
Install Microk8s (Ubuntu)

- Exit the vm and configure socks proxy

```
exit
```

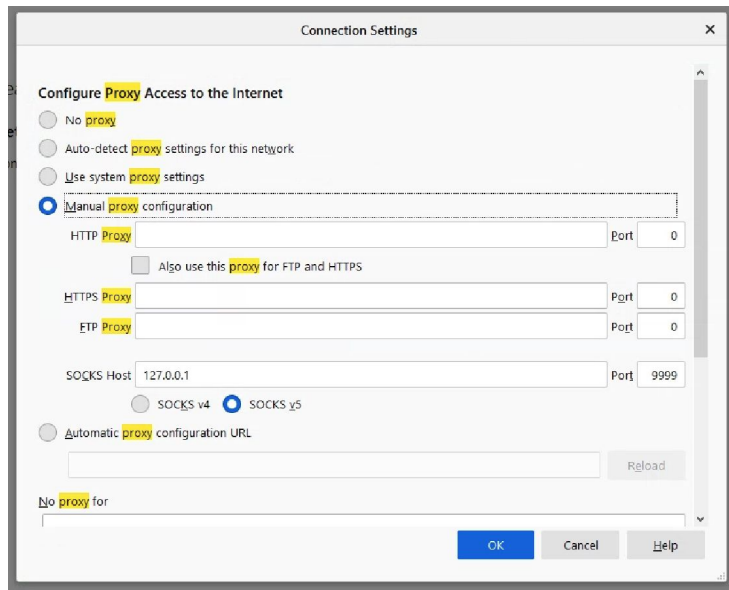
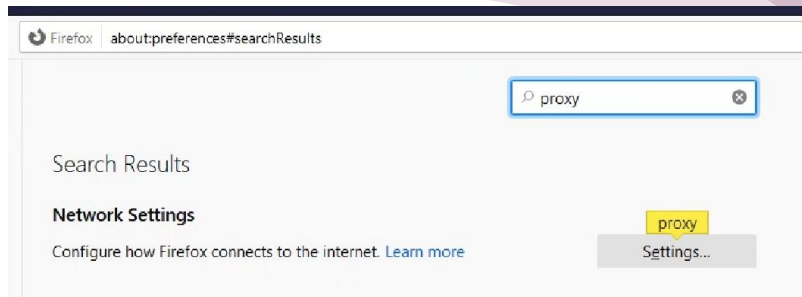
```
ssh -i "key.pem" -D9999 ubuntu@<SERVER_IP_ADDRESS>
```

- Configure SOCKS proxy in browser
 - Select options at the top right corner of your browser



Install Microk8s (Ubuntu)

- Type proxy in search box, click "Settings" button
- In the "Connection Settings" window, select "Manual proxy configuration" and configure SOCKS Host "127.0.0.1" and Port "9999". When done, click "OK" button.



Install Microk8s (Ubuntu)

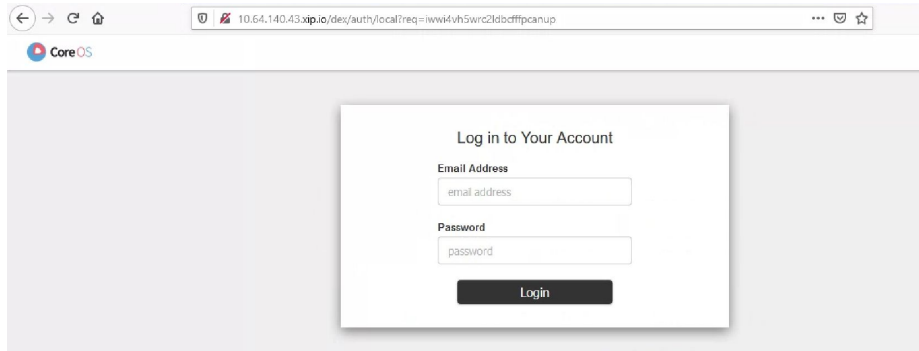
- Now copy the Kubeflow GUI address from your terminal (e.g. `http://10.64.140.43.xip.io`) and paste it into Firefox URL bar.

```
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:

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



Install Microk8s (Ubuntu)

- Fill in login details

```
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

admin

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' view is divided into three columns. The first column, 'Quick shortcuts', lists actions like 'Upload a pipeline', 'View all pipeline runs', 'Create a new Notebook server', 'View Katib Studies', and 'View Metadata Artifacts'. The second column, 'Recent Notebooks', shows a message 'No Notebooks in namespace admin'. The third column, 'Recent Pipelines', lists several pipeline runs with titles like '[Tutorial] DSL - Control structures' and '[Demo] TFX - Taxi Tip Prediction Model Trainer'. A fourth column on the right, 'Documentation', provides links to guides such as '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