How to Install Minikube on Ubuntu 18.04

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(Last Updated On: September 30, 2018)

In this tutorial, I'll take you through the steps to install minikube on Ubuntu new to minikube, let's start with an introduction before diving to the install

Minikube is an open source tool that was developed to enable developers administrators to run a single cluster of Kubernetes on their local machine single node kubernetes cluster locally with small resource utilization. This i development tests and POC purposes,

In a nutshell, Minikube packages and configures a Linux VM, then installs D Kubernetes components into it.

Minikube supports Kubernetes features such as:

- DNS
- NodePorts
- ConfigMaps and Secrets
- Dashboards

As of this writing, Minikube does not yet support Cloud Provider specific fe

- LoadBalancers
- PersistentVolumes
- Ingress

Hypervisor choice for Minikube:

Minikube supports both VirtualBox and KVM hypervisors. This guide will co hypervisors.

Step 1: Update system

Run the following commands to update all system packages to the latest re

```
sudo apt-get update
sudo apt-get install apt-transport-https
sudo apt-get upgrade
```

Step 2: Install KVM or VirtualBox Hypervisor

For VirtualBox users, install VirtualBox using:

```
sudo apt install virtualbox virtualbox-ext-pack
```

KVM Hypervisor Users

For those interested in using KVM hypervisor, check our guide on how to Ir CentOS 7 / Ubuntu 16.04 / Debian 9 / SLES 12 / Arch Linux.

Then follow How to run Minikube on KVM instead.

Step 3: Download minikube

You need to download the minikube binary. I will put the binary under /usr directory since it is inside **$PATH**.

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

Confirm version installed

```
$ minikube version
minikube version: v0.28.0
```

Step 4: Install kubectl on Ubuntu 18.04

We need kubectl which is a command line tool used to deploy and manage Kubernetes

```
curl -s https://packages.cloud.google.com/apt/doc/apt-key
```

Add Kubernetes apt repository:

```
echo "deb http://apt.kubernetes.io/ kubernetes-xenial mai
```

Update apt index and install kubectl

```
sudo apt update
sudo apt -y install kubectl
```

Check version:

```
# kubectl version -o json
{
  "clientVersion": {
    "major": "1",
    "minor": "10",
    "gitVersion": "v1.10.4",
    "gitCommit": "5ca598b4ba5abb89bb773071ce452e33fb6633
    "gitTreeState": "clean",
    "buildDate": "2018-06-06T08:13:03Z",
    "goVersion": "go1.9.3",
    "compiler": "gc",
    "platform": "linux/amd64"
  }
}
```

Step 5: Starting minikube

Now that components are installed, you can start minikube. VM image will and configure d for Kubernetes single node cluster.

```
$ minikube start
Starting local Kubernetes v1.10.0 cluster...
Starting VM...
Downloading Minikube ISO
150.53 MB / 150.53 MB [=================================
Getting VM IP address...
Moving files into cluster...
Downloading kubeadm v1.10.0
Downloading kubelet v1.10.0
Finished Downloading kubeadm v1.10.0
Finished Downloading kubelet v1.10.0
Setting up certs...
Connecting to cluster...
Setting up kubeconfig...
Starting cluster components...
Kubectl is now configured to use the cluster.
Loading cached images from config file.
```

Wait for the download and setup to finish then confirm that everything is w

Step 6: Minikube Basic operations

To check cluster status, run:

```
$ kubectl cluster-info
```

```
Kubernetes master is running at https://192.168.39.117:84
KubeDNS is running at https://192.168.39.117:8443/api/v1/

To further debug and diagnose cluster problems, use 'kube
```

Note that Minikube configuration file is located under

```
~/.minikube/machines/minikube/config.json
```

To View Config, use:

```
$ kubectl config view
```

```
apiVersion: v1
clusters:
- cluster:
    certificate-authority: /home/jmutai/.minikube/ca.crt
    server: https://192.168.39.117:8443
  name: minikube
contexts:
- context:
    cluster: minikube
    user: minikube
  name: minikube
current-context: minikube
kind: Config
preferences: {}
users:
- name: minikube
  user:
    client-certificate: /home/jmutai/.minikube/client.cr
    client-key: /home/jmutai/.minikube/client.key
```

To check running nodes:

```
$ kubectl get nodes

NAME       STATUS   ROLES    AGE      VERSION
minikube   Ready    master   13m      v1.10.0
```

Access minikube VM using ssh:

```
$ minikube ssh

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$ sudo su -
```

To stop a running local kubernetes cluster, run:

```
$ minikube stop
```

To delete a local kubernetes cluster, use:

```
$ minikube delete
```

Step 7: Enable Kubernetes Dashboard

Kubernete ships with a web dashboard which allows you to manage your c interacting with a command line. The dashboard addon is installed and ena minikube.

```
$ minikube addons list

- addon-manager: enabled
- coredns: disabled
- dashboard: enabled
- default-storageclass: enabled
- efk: disabled
- freshpod: disabled
- heapster: disabled
- ingress: disabled
- kube-dns: enabled
- metrics-server: disabled
- registry: disabled
- registry-creds: disabled
- storage-provisioner: enabled
```

To open directly on your default browser, use:

```
$ minikube dashboard
```

To get the URL of the dashboard

```
$ minikube dashboard --url
```

~~http://192.168.39.117:30000~~

Access Kubernetes Dashboard by opening the URL on your favorite browse
reading, check:

- Hello Minikube Series: https://kubernetes.io/docs/tutorials/stateless-application/h
- Minikube guides for newbies: https://kubernetes.io/docs/getting-started-guides/m

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