

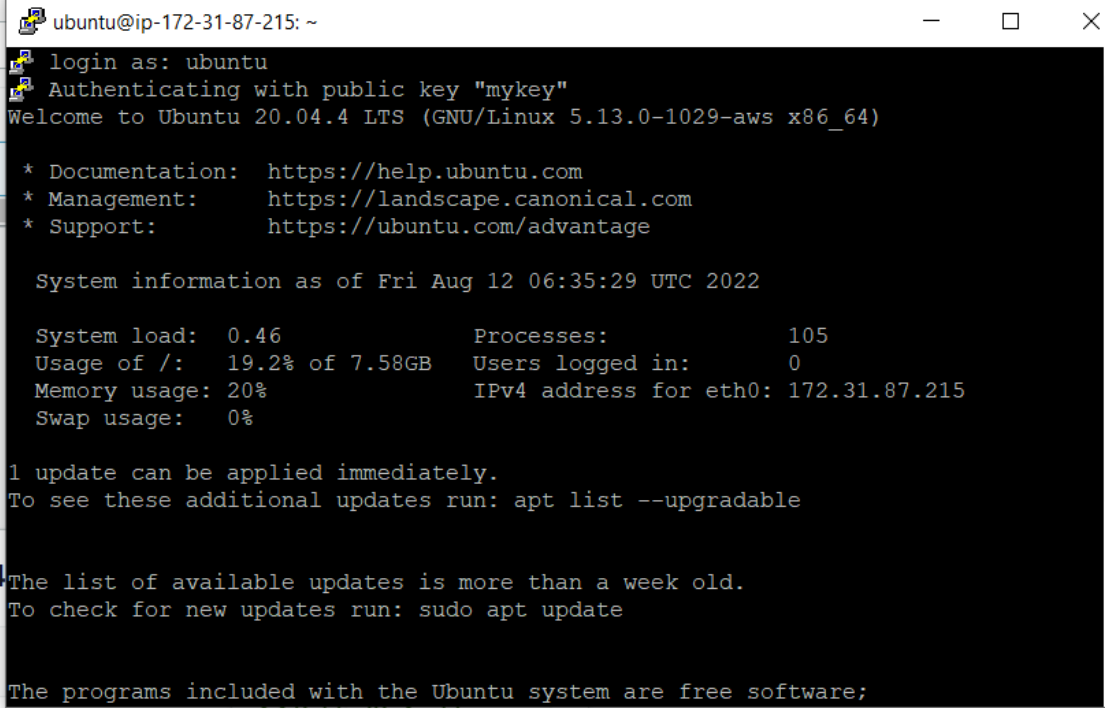
Installation of Kubernetes on Ubuntu instance

1. Create Ubuntu Instance on AWS
2. Open Putty application

Enter IP Address(Public IPV4 Address) from Ubuntu Instance

Click on SSH – Auth – Browser ppk file and click on OK Button

Login as Ubuntu



```
ubuntu@ip-172-31-87-215: ~  
login as: ubuntu  
Authenticating with public key "mykey"  
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.13.0-1029-aws x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
System information as of Fri Aug 12 06:35:29 UTC 2022  
  
System load:  0.46           Processes:            105  
Usage of /:   19.2% of 7.58GB Users logged in:       0  
Memory usage: 20%           IPv4 address for eth0: 172.31.87.215  
Swap usage:   0%  
  
1 update can be applied immediately.  
To see these additional updates run: apt list --upgradable  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
The programs included with the Ubuntu system are free software;
```

sudo su –

sudo apt-get update (*this is for updation if anything is needed to update*)

apt-> apt is nothing but package manager and by default it is there in Ubuntu Instance

sudo-> to access the user account with sudo if ubuntu the sudo command

```
root@ip-172-31-87-215: ~
ubuntu@ip-172-31-87-215:~$ sudo su -
root@ip-172-31-87-215:~# sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe amd64 Packages [8628 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe Translation-en [5124 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe amd64 c-n-f Metadata [265 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [144 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse Translation-en [104 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse amd64 c-n-f Metadata [9136 B]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2036 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [364 kB]
```

Install Docker

sudo apt-get install docker.io

```
root@ip-172-31-87-215: ~
s [22.2 kB]
Get:41 http://security.ubuntu.com/ubuntu focal-security/multiverse Translation-en [5376 B]
Get:42 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 c-n-f Metadata [508 B]
Fetched 23.9 MB in 4s (5680 kB/s)
Reading package lists... Done
root@ip-172-31-87-215:~# sudo apt-get install docker.io
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base libidn11 pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io libidn11 pigz runc ubuntu-fan
0 upgraded, 9 newly installed, 0 to remove and 52 not upgraded.
Need to get 69.2 MB of archives.
After this operation, 334 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Check Version

docker --version

```
root@ip-172-31-87-215: ~
Setting up libidn11:amd64 (1.33-2ubuntu2) ...
Setting up bridge-utils (1.6-2ubuntu1) ...
Setting up pigz (2.4-1) ...
Setting up containerd (1.5.9-0ubuntu1~20.04.4) ...
Created symlink /etc/systemd/system/multi-user.target.wants/containerd.service →
/lib/systemd/system/containerd.service.
Setting up docker.io (20.10.12-0ubuntu2~20.04.1) ...
Adding group `docker' (GID 119) ...
Done.
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /li
b/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib/sy
stemd/system/docker.socket.
Setting up dnsmasq-base (2.80-1.1ubuntu1.5) ...
Setting up ubuntu-fan (0.12.13ubuntu0.1) ...
Created symlink /etc/systemd/system/multi-user.target.wants/ubuntu-fan.service →
/lib/systemd/system/ubuntu-fan.service.
Processing triggers for systemd (245.4-4ubuntu3.17) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for dbus (1.12.16-2ubuntu2.2) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
root@ip-172-31-87-215:~# docker --version
Docker version 20.10.12, build 20.10.12-0ubuntu2~20.04.1
root@ip-172-31-87-215:~#
```

Start Docker

sudo systemctl enable docker

Verify docker is running

sudo systemctl status docker

- *At end of the line type :q to come out of the status*

```
root@ip-172-31-87-215: ~
root@ip-172-31-87-215:~# sudo systemctl enable docker
root@ip-172-31-87-215:~# sudo systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset:
   Active: active (running) since Fri 2022-08-12 06:38:53 UTC; 1min 37s ago
   TriggeredBy: ● docker.socket
     Docs: https://docs.docker.com
    Main PID: 2094 (dockerd)
      Tasks: 7
     Memory: 32.9M
    CGroup: /system.slice/docker.service
            └─2094 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/cont
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72613>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72648>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72663>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72697>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.89391>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.97996>
Aug 12 06:38:53 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:53.06017>
Aug 12 06:38:53 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:53.06061>
Aug 12 06:38:53 ip-172-31-87-215 systemd[1]: Started Docker Application Contain>
Aug 12 06:38:53 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:53.10084>
lines 1-21/21 (END)
```

Install K8s(Kubernetes)

Add Kubernetes signing key(Just to ensure the software is authentic or not)

curl -s <https://packages.cloud.google.com/apt/doc/apt-key.gpg> | sudo apt-key add

```
root@ip-172-31-87-215: ~
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset>
   Active: active (running) since Fri 2022-08-12 06:38:53 UTC; 1min 37s ago
   TriggeredBy: ● docker.socket
     Docs: https://docs.docker.com
    Main PID: 2094 (dockerd)
      Tasks: 7
     Memory: 32.9M
    CGroup: /system.slice/docker.service
            └─2094 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/cont>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72613>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72648>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72663>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.72697>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.89391>
Aug 12 06:38:52 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:52.97996>
Aug 12 06:38:53 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:53.06017>
Aug 12 06:38:53 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:53.06061>
Aug 12 06:38:53 ip-172-31-87-215 systemd[1]: Started Docker Application Contain>
Aug 12 06:38:53 ip-172-31-87-215 dockerd[2094]: time="2022-08-12T06:38:53.10084>
root@ip-172-31-87-215:~# curl -s https://packages.cloud.google.com/apt/doc/apt-k
ey.gpg | sudo apt-key add
OK
root@ip-172-31-87-215:~#
```

Add Software Repositories(Kubernetes is not included in the default repository so to add it we enter this command)

sudo apt-add-repository "deb <http://apt.kubernetes.io/> kubernetes-xenial main"

```
root@ip-172-31-20-84: ~  
root@ip-172-31-20-84:~# sudo apt-add-repository "deb http://apt.kubernetes.io/ k  
ubernetes-xenial main"  
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease  
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease [11  
4 kB]  
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [1  
108 kB]  
Get:4 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]  
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe amd64 Packag  
es [8628 kB]  
Get:5 https://packages.cloud.google.com/apt kubernetes-xenial InRelease [9383 B]  
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe Translation-  
en [5124 kB]  
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/universe amd64 c-n-f  
Metadata [265 kB]  
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse amd64 Pack  
ages [144 kB]  
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse Translati  
on-en [104 kB]  
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal/multiverse amd64 c-n  
-f Metadata [9136 B]  
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 P  
ackages [2036 kB]  
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main Transla
```

Install K8s tools

sudo apt-get install kubeadm kubelet kubect1

```
root@ip-172-31-20-84: ~  
etadata [508 B]  
Reading package lists... Done  
W: GPG error: https://packages.cloud.google.com/apt kubernetes-xenial InRelease:  
The following signatures couldn't be verified because the public key is not ava  
ilable: NO_PUBKEY FEEA9169307EA071 NO_PUBKEY 8B57C5C2836F4BEB  
E: The repository 'http://apt.kubernetes.io kubernetes-xenial InRelease' is not  
signed.  
N: Updating from such a repository can't be done securely, and is therefore disa  
bled by default.  
N: See apt-secure(8) manpage for repository creation and user configuration deta  
ils.  
root@ip-172-31-20-84:~# sudo apt-get install kubeadm kubelet kubect1  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
E: Unable to locate package kubeadm  
E: Unable to locate package kubelet  
E: Unable to locate package kubect1  
root@ip-172-31-20-84:~# sudo apt-mark hold kubeadm kubelet kubect1  
E: Unable to locate package kubeadm  
E: Unable to locate package kubelet  
E: Unable to locate package kubect1  
E: No packages found  
root@ip-172-31-20-84:~#
```

sudo apt-mark hold kubeadm kubelet kubect1

```
root@ip-172-31-20-84: ~  
etadata [508 B]  
Reading package lists... Done  
W: GPG error: https://packages.cloud.google.com/apt kubernetes-xenial InRelease:  
The following signatures couldn't be verified because the public key is not available:  
NO_PUBKEY FEEA9169307EA071 NO_PUBKEY 8B57C5C2836F4BEB  
E: The repository 'http://apt.kubernetes.io kubernetes-xenial InRelease' is not signed.  
N: Updating from such a repository can't be done securely, and is therefore disabled by default.  
N: See apt-secure(8) manpage for repository creation and user configuration details.  
root@ip-172-31-20-84:~# sudo apt-get install kubeadm kubelet kubectl  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
E: Unable to locate package kubeadm  
E: Unable to locate package kubelet  
E: Unable to locate package kubectl  
root@ip-172-31-20-84:~# sudo apt-mark hold kubeadm kubelet kubectl  
E: Unable to locate package kubeadm  
E: Unable to locate package kubelet  
E: Unable to locate package kubectl  
E: No packages found  
root@ip-172-31-20-84:~#
```

Check Version

kubeadm version

Installing Kubernetes on AWS using Kops

[\(19\) Kubernetes On AWS | Kubernetes On AWS On AWS EC2 | Kubernetes Architecture | Kubernetes | Simplilearn - YouTube](#)

Install Kubernetes

[\(19\) Install Kubernetes | Setup Kubernetes Step by Step | Kubernetes Training | Intellipaat - YouTube](#)

Install Kubernetes and Minikube on Windows 8, 10, or 11

[\(19\) Install Kubernetes and Minikube on Windows 8, 10, or 11 | Kubernetes Tutorial for beginners 2022 #1 - YouTube](#)

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