```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\AKASH> wsl.exe -d Ubuntu
Provisioning the new WSL instance Ubuntu
This might take a while...
Create a default Unix user account: Akash
Invalid username. A valid username must start with a lowercase letter or underscore, and can contain lowercase letters, digits, underscores, and dashes.
Create a default Unix user account: akash
New password:
Retype new password:
passwd: password updated successfully
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 5.15.167.4-microsoft-standard-WSL2 x86_64)
 * Documentation: https://help.ubuntu.com
                   https://landscape.canonical.com
 * Management:
 * Support:
                   https://ubuntu.com/pro
 System information as of Wed Mar 19 05:21:55 UTC 2025
  System load:
               0.04
                                                           31
                                    Processes:
  Usage of /:
               0.1% of 1006.85GB
                                   Users logged in:
  Memory usage: 11%
                                    IPv4 address for eth0: 172.26.208.246
  Swap usage:
 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.
   https://ubuntu.com/engage/secure-kubernetes-at-the-edge
This message is shown once a day. To disable it please create the
/home/akash/.hushlogin file.
akash@MSI:/mnt/c/Users/AKASH$ sudo apt update -y
[sudo] password for akash:
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
```

akash@MSI: ~ Get:52 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 c-n-f Metadata [116 B] Get:53 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B] Get:54 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 c-n-f Metadata [116 B] Fetched 32.8 MB in 40s (811 kB/s) Reading package lists... Done Building dependency tree... Done Reading state information... Done 56 packages can be upgraded. Run 'apt list --upgradable' to see them. akash@MSI:/mnt/c/Users/AKASH\$ sudo apt install fontconfig openidk-17-ire -v Reading package lists... Done Building dependency tree... Done Reading state information... Done fontconfig is already the newest version (2.15.0-1.1ubuntu2). fontconfig set to manually installed. The following additional packages will be installed: alsa-topology-conf alsa-ucm-conf ca-certificates-java fonts-dejavu-extra java-common libasound2-data libasound2t64 libatk-wrapper-java libatk-wrapper-java-jni libgif7 libice6 libnspr4 libnss3 libpcsclite1 libsm6 libxaw7 libxcb-shape0 libxft2 libxkbfile1 libxmu6 libxpm4 libxt6t64 libxv1 libxxf86dga1 openidk-17-jre-headless x11-utils Suggested packages: default-jre alsa-utils libasound2-plugins pcscd libnss-mdns fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei fonts-indic mesa-utils Recommended packages: luit The following NEW packages will be installed: alsa-topology-conf alsa-ucm-conf ca-certificates-iava fonts-deiavu-extra iava-common libasound2-data libasound2t64 libatk-wrapper-java libatk-wrapper-java-jni libgif7 libice6 libnspr4 libnss3 libpcsclite1 libsm6 libxaw7 libxcb-shape0 libxft2 libxkbfile1 libxmu6 libxpm4 libxt6t64 libxv1 libxxf86dga1 openidk-17-ire openidk-17-jre-headless x11-utils 0 upgraded, 27 newly installed, 0 to remove and 56 not upgraded. Need to get 53.2 MB of archives. After this operation, 210 MB of additional disk space will be used. Get:1 http://archive.ubuntu.com/ubuntu noble/main amd64 alsa-topology-conf all 1.2.5.1-2 [15.5 kB] Get:2 http://archive.ubuntu.com/ubuntu noble/main amd64 libasound2-data all 1.2.11-1build2 [21.0 kB] Get:3 http://archive.ubuntu.com/ubuntu noble/main amd64 libasound2t64 amd64 1.2.11-1build2 [399 kB] Get:4 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 alsa-ucm-conf all 1.2.10-1ubuntu5.4 [64.8 kB] Get:5 http://archive.ubuntu.com/ubuntu noble/main amd64 ca-certificates-java all 20240118 [11.6 kB] Get:6 http://archive.ubuntu.com/ubuntu noble/main amd64 fonts-dejavu-extra all 2.37-8 [1947 kB] Get:7 http://archive.ubuntu.com/ubuntu noble/main amd64 java-common all 0.75+exp1 [6798 B] Get:8 http://archive.ubuntu.com/ubuntu noble/main amd64 libice6 amd64 2:1.0.10-1build3 [41.4 kB] Get:9 http://archive.ubuntu.com/ubuntu noble/main amd64 libsm6 amd64 2:1.2.3-1build3 [15.7 kB] Get:10 http://archive.ubuntu.com/ubuntu noble/main amd64 libxt6t64 amd64 1:1.2.1-1.2build1 [171 kB]

Adding debian:emSign_Root_CA_-_G1.pem

Adding debian:vTrus_FCC_Root_CA_pem

```
Adding debian:vTrus_ECC_Root_CA.pem
Adding debian:vTrus_Root_CA.pem
done.
Setting up openidk-17-jre:amd64 (17.0.14+7-1~24.04) ...
akash@MSI:/mnt/c/Users/AKASH$ git --version
git version 2.43.0
akash@MSI:/mnt/c/Users/AKASH$ java --version
openidk 17.0.14 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-124.04)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-124.04, mixed mode, sharing)
akash@MSI:/mnt/c/Users/AKASH$ cd
akash@MSI:~$ sudo apt install fontconfig openjdk-17-jre -v
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
fontconfig is already the newest version (2.15.0-1.1ubuntu2).
openidk-17-ire is already the newest version (17.0.14+7-1~24.04).
0 upgraded, 0 newly installed, 0 to remove and 56 not upgraded.
akash@MSI:~$ sudo apt install maven -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
 libaopalliance-java libapache-pom-java libatinject-jsr330-api-java libcdi-api-java libcommons-cli-java
  libcommons-io-java libcommons-lang3-java libcommons-parent-java liberror-prone-java
  libgeronimo-annotation-1.3-spec-java libgeronimo-interceptor-3.0-spec-java libguava-java libguice-java libjansi-java
  libjsr305-java libmaven-parent-java libmaven-resolver-java libmaven-shared-utils-java libmaven3-core-java
  libplexus-cipher-java libplexus-classworlds-java libplexus-component-annotations-java libplexus-interpolation-java
  libplexus-sec-dispatcher-java libplexus-utils2-java libsisu-inject-java libsisu-plexus-java libslf4j-java
  libwagon-file-java libwagon-http-shaded-java libwagon-provider-api-java
Suggested packages:
  libatinject-isr330-api-java-doc libel-api-java libcommons-io-java-doc libasm-java libcglib-java libisr305-java-doc
  libmaven-shared-utils-java-doc liblogback-java libplexus-utils2-java-doc junit4 testng libcommons-logging-java
  liblog4i1.2-java
The following NEW packages will be installed:
  libaopalliance-java libapache-pom-java libatinject-jsr330-api-java libcdi-api-java libcommons-cli-java
  libcommons-io-java libcommons-lang3-java libcommons-parent-java liberror-prone-java
  libgeronimo-annotation-1.3-spec-java libgeronimo-interceptor-3.0-spec-java libguava-java libguice-java libjansi-java
  libjsr305-java libmaven-parent-java libmaven-resolver-java libmaven-shared-utils-java libmaven3-core-java
  libplexus-cipher-java libplexus-classworlds-java libplexus-component-annotations-java libplexus-interpolation-java
```

```
akash@MSI: ~
Setting up libmaven3-core-java (3.8.7-2) ...
Setting up maven (3.8.7-2) ...
update-alternatives: using /usr/share/maven/bin/mvn to provide /usr/bin/mvn (mvn) in auto mode
akash@MSI:~$ mvn --version
Apache Maven 3.8.7
Maven home: /usr/share/maven
Java version: 17.0.14, vendor: Ubuntu, runtime: /usr/lib/jvm/java-17-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "5.15.167.4-microsoft-standard-wsl2", arch: "amd64", family: "unix"
akash@MSI:~$ sudo wget -0 /usr/share/keyrings/jenkins-keyring.asc \
 https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc]" \
 https://pkg.jenkins.io/debian-stable binary/ | sudo tee \
 /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install jenkins
--2025-03-19 05:36:54-- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.158.133, 2a04:4e42:25::645
Connecting to pkg.jenkins.io (pkg.jenkins.io) 151.101.158.133:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3175 (3.1K) [application/pgp-keys]
Saving to: '/usr/share/keyrings/jenkins-keyring.asc'
3.10K --.-KB/s
                                                                                                        in 0s
2025-03-19 05:36:54 (20.7 MB/s) - '/usr/share/keyrings/jenkins-keyring.asc' saved [3175/3175]
Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease
Get:2 https://pkg.jenkins.io/debian-stable binary/ Release [2044 B]
Get:3 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Get:4 https://pkg.jenkins.io/debian-stable binary/ Packages [28.7 kB]
Hit:5 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:7 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:8 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Fetched 158 kB in 2s (69.9 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

The following additional packages will be installed:

```
Setting up net-tools (2.10-0.1ubuntu4) ...
Setting up jenkins (2.492.2) ...
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
Processing triggers for man-db (2.12.0-4build2) ...
akash@MSI:~$ sudo service jenkins restart
akash@MSI:~$ sudo service jenkins status
jenkins.service - Jenkins Continuous Integration Server
    Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
    Active: active (running) since Wed 2025-03-19 05:39:40 UTC: 22s ago
  Main PID: 2632 (java)
     Tasks: 65 (limit: 4593)
    Memory: 660.6M ()
    CGroup: /system.slice/jenkins.service
            └─2632 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkin>
Mar 19 05:39:33 MSI jenkins[2632]: Jenkins initial setup is required. An admin user has been created and a password gen>
Mar 19 05:39:33 MSI jenkins[2632]: Please use the following password to proceed to installation:
Mar 19 05:39:33 MSI jenkins[2632]: 98462e53b7904f9295cd39abfdc46da0
Mar 19 05:39:33 MSI jenkins[2632]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Mar 19 05:39:40 MSI jenkins[2632]: 2025-03-19 05:39:40.205+0000 [id=66]
                                                                      INFO
                                                                                 jenkins.InitReactorRunner$1#>
Mar 19 05:39:40 MSI jenkins[2632]: 2025-03-19 05:39:40.230+0000 [id=33]
                                                                      INFO
                                                                                 hudson.lifecycle.Lifecycle#o>
Mar 19 05:39:40 MSI systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
lines 1-19/19 (END)
akash@MSI:~$ ienkins --version
2.492.2
akash@MSI:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
98462e53b7904f9295cd39abfdc46da0
akash@MSI:~$ sudo apt install docker.io -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
 bridge-utils containerd dns-root-data dnsmasg-base iptables libip4tc2 libip6tc2 libnetfilter-conntrack3
 libnfnetlinkO libnftables1 libnftnl11 nftables pigz runc ubuntu-fan
Suggested packages:
 ifupdown aufs-tools btrfs-progs cgroupfs-mount | cgroup-lite debootstrap docker-buildx docker-compose-v2 docker-doc
 rinse zfs-fuse | zfsutils firewalld
The following NEW packages will be installed:
```

```
Created symlink /etc/systemd/system/multi-user.target.wants/ubuntu-fan.service → /usr/lib/sys<u>temd/system/ubuntu-fan.service.</u>
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for dbus (1.14.10-4ubuntu4.1) ...
Processing triggers for libc-bin (2.39-Oubuntu8.4) ...
akash@MSI:~$ sudo service docker restart
akash@MSI:~$ sudo service docker status

    docker.service - Docker Application Container Engine

    Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
     Active: active (running) since Wed 2025-03-19 05:55:07 UTC: 14s ago
TriggeredBy: • docker.socket
       Docs: https://docs.docker.com
   Main PID: 3863 (dockerd)
     Tasks: 19
     Memory: 38.1M ()
    CGroup: /system.slice/docker.service
             └─3863 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.664438762Z" level=info msg="Default bridge (docker0) is as
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.807389469Z" level=info msg="Loading containers: done."
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.834174105Z" level=warning msg="WARNING: No blkio throttle.
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.834222168Z" level=warning msg="WARNING: No blkio throttle.>
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.834269579Z" level=warning msg="WARNING: No blkio throttle.
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.834273065Z" level=warning msg="WARNING: No blkio throttle.
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.834286374Z" level=info msg="Docker daemon" commit="26.1.3-
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.834313624Z" level=info msg="Daemon has completed initializ>
Mar 19 05:55:07 MSI dockerd[3863]: time="2025-03-19T05:55:07.883548888Z" level=info msg="API listen on /run/docker.sock"
Mar 19 05:55:07 MSI systemd[1]: Started docker.service - Docker Application Container Engine.
lines 1-21/21 (END)
akash@MSI:~$ sudo usermod -aG docker $USER
akash@MSI:~$ sudo usermod -aG docker admin
usermod: user 'admin' does not exist
akash@MSI:~$ docker images
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Head "http://%2Fvar%2Frun%2Fdocker.sock/_ping": dial u
nix /var/run/docker.sock: connect: permission denied
akash@MSI:~$ sudo usermod -aG docker $USER
akash@MSI:~$ docker images
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Head "http://%2Fvar%2Frun%2Fdocker.sock/_ping": dial u
nix /var/run/docker.sock: connect: permission denied
akash@MSI:~$ sudo chmod 666/var/run/docker.sock
chmod: missing operand after '666/var/run/docker.sock'
Try 'chmod --help' for more information.
```

akash@MSI: ~ nix /var/run/docker.sock: connect: permission denied akash@MSI:~\$ sudo chmod 666/var/run/docker.sock chmod: missing operand after '666/var/run/docker.sock' Try 'chmod --help' for more information. akash@MSI:~\$ sudo chmod 666 /var/run/docker.sock akash@MSI:~\$ docker images REPOSITORY TAG IMAGE ID CREATED akash@MSI:~\$ docker ps CONTAINER ID IMAGE COMMAND CREATED STATUS **PORTS** NAMES akash@MSI:~\$ curl -LO https://dl.k8s.io/release/v1.32.0/bin/linux/amd64/kubectl % Total % Received % Xferd Average Speed Time Time Time Current Dload Upload Total Spent Left Speed 138 100 138 0 0 318 0 --:--:--0 0:00:24 0:00:24 --:-- 1045k 100 54.6M 100 54.6M 0 0 2280k akash@MSI:~\$ sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl akash@MSI:~\$ chmod +x kubectl mkdir -p ~/.local/bin mv ./kubectl ~/.local/bin/kubectl akash@MSI:~\$ kubectl version --client Client Version: v1.32.0 Kustomize Version: v5.5.0 akash@MSI:~\$ curl -LO https://github.com/kubernetes/minikube/releases/latest/download/minikube-linux-amd64 sudo install minikube-linux-amd64 /usr/local/bin/minikube && rm minikube-linux-amd64 % Total % Received % Xferd Average Speed Time Time Time Current Dload Upload Total Spent Left Speed 0 0 0 --:--:-- --:--:--0 0 0 0 0 0 0 0 --:--:--0

0 0:01:00 0:01:00 --:-- 2086k

0

minikube v1.35.0 on Ubuntu 24.04 (amd64)

Automatically selected the docker driver. Other choices: ssh, none

2020k

0

🖈 Using Docker driver with root privileges

Starting "minikube" primary control-plane node in "minikube" cluster

Pulling base image v0.0.46 ...

100 119M

akash@MSI:~\$ minikube start

100 119M

Downloading Kubernetes v1.32.0 preload ...

> gcr.io/k8s-minikube/kicbase...: 500.31 MiB / 500.31 MiB 100.00% 1.04 Mi
> preloaded-images-k8s-v18-v1...: 333.57 MiB / 333.57 MiB 100.00% 690.30

Creating docker container (CPUs=2, Memory=2200MB) ...

Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...

Generating certificates and keys ...

• Booting up control plane ...

```
akash@MSI: ~
                                                                                                                                                        0

    Using image gcr.io/k8s-minikube/storage-provisioner:v5

   Enabled addons: storage-provisioner, default-storageclass
🏂 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
akash@MSI:~$ docker ps
CONTAINER ID
              IMAGE
                                                     COMMAND
                                                                               CREATED
                                                                                                STATUS
                                                                                                                PORTS
      NAMES
e5e627e1c790
              gcr.io/k8s-minikube/kicbase:v0.0.46
                                                     "/usr/local/bin/entr…"
                                                                              37 seconds ago
                                                                                               Up 36 seconds
                                                                                                                127.0.0.1:32772->22/tcp, 127.0.0.1:32771->237
6/tcp, 127.0.0.1:32770->5000/tcp, 127.0.0.1:32769->8443/tcp, 127.0.0.1:32768->32443/tcp
                                                                                          minikube
akash@MSI:~$ docker images
REPOSITORY
                              TAG
                                        IMAGE ID
                                                       CREATED
                                                                      SIZE
gcr.io/k8s-minikube/kicbase
                              v0.0.46
                                        e72c4cbe9b29
                                                       2 months ago
                                                                      1.31GB
akash@MSI:~$ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured
akash@MSI:~$ minikube start
   minikube v1.35.0 on Ubuntu 24.04 (amd64)
   Using the docker driver based on existing profile
   Starting "minikube" primary control-plane node in "minikube" cluster
   Pulling base image v0.0.46 ...
   Updating the running docker "minikube" container ...
   Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
   Verifying Kubernetes components...
    Using image gcr.io/k8s-minikube/storage-provisioner:v5
   Enabled addons: storage-provisioner, default-storageclass
b Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
akash@MSI:~$ kubectl get pod
No resources found in default namespace.
akash@MSI:~$ kubectl get pod
No resources found in default namespace.
akash@MSI:~$ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
```

kubeconfig: Configured

python3-compose python3-docker python3-dockerpty python3-docopt python3-doteny python3-packaging python3-texttable

docker-compose python3-compose python3-docker python3-dockerpty python3-docopt python3-dotenv python3-packaging

akash@MSI: ~

Reading state information... Done

pvthon3-websocket

The following additional packages will be installed:

The following NEW packages will be installed:

```
akash@MSI:~$ docker-compose.vml up -d
docker-compose.yml: command not found
akash@MSI:~$ sudo nano docker-compose.vaml
akash@MSI:~$ ls
docker-compose.vaml
akash@MSI:~$ docker-compose up -d
Creating network "akash_default" with the default driver
Pulling web (nginx:latest)...
latest: Pulling from library/nginx
6e909acdb790: Pull complete
5eaa34f5b9c2: Pull complete
417c4bccf534: Pull complete
e7e0ca015e55: Pull complete
373fe654e984: Pull complete
97f5c0f51d43: Pull complete
c22eb46e871a: Pull complete
Digest: sha256:124b44bfc9ccd1f3cedf4b592d4d1e8bddb78b51ec2ed5056c52d3692baebc19
Status: Downloaded newer image for nginx:latest
Pulling db (mysgl:latest)...
latest: Pulling from library/mysql
804bb8ae89de: Pull complete
1b515e7ceb69: Pull complete
eaa11c0a9f08: Pull complete
8d18181893b8: Pull complete
e0a910cc8604: Pull complete
bc0c792ca096: Pull complete
8d73d2a73425: Pull complete
4a7e00d873b9: Pull complete
27a2553d6a80: Pull complete
69e76254f502: Pull complete
Digest: sha256:9b9d0aab4860798acff13d2a0ece3bc26639fe18b83fa5cd3e3d0e16b3ed05dd
Status: Downloaded newer image for mysgl:latest
Creating akash_web_1 ... done
Creating akash_db_1 ... done
akash@MSI:~$ docker-compose images
 Container
              Repository
                            Tag
                                      Image Id
                                                    Size
                                                   797 MB
akash_db_1
                           latest
                                    fa262c3a6564
              mysql
                                    53a18edff809
                                                   192 MB
akash_web_1
              nginx
                           latest
akash@MSI:~$ docker-compose ps
                         Command
   Name
                                               State
                                                                     Ports
```

0