

Lab 1 - Installing Jenkins Server

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Pre-requisites

Ubuntu VM with SSH Key

Install Jenkins

```
1 sudo apt update
2 sudo apt-get remove needrestart -y
3 sudo apt upgrade -y
4 sudo apt install default-jdk -y
5 sudo sed -i '3iexport JAVA_HOME=/usr/lib/jvm/java-1.11.0-openjdk-amd64' /etc/profile
6 sudo sed -i '4iexport PATH=$JAVA_HOME/bin:$PATH' /etc/profile
7 source /etc/profile
8
9 curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key \
10 | sudo tee /usr/share/keyrings/jenkins-keyring.asc > /dev/null
11
12 echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] https://pkg.jenkins.io/debian-stable binary/ \
13 | sudo tee /etc/apt/sources.list.d/jenkins.list > /dev/null
14
15 sudo apt-get update
16 sudo apt-get install jenkins -y
17 sudo systemctl enable --now jenkins
```

Install Docker

```
1 sudo apt-get remove needrestart -y
2 sudo apt-get update
3 sudo apt-get install -y \
4     ca-certificates \
5     curl \
6     gnupg \
7     lsb-release
8
```

```
9  sudo mkdir -m 0755 -p /etc/apt/keyrings
10
11  curl -fsSL https://download.docker.com/linux/ubuntu/gpg \
12  | sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg
13
14  echo "deb [arch=$(dpkg --print-architecture) \
15  signed-by=/etc/apt/keyrings/docker.gpg] \
16  https://download.docker.com/linux/ubuntu $(lsb_release -cs) stable" \
17  | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
18
19  sudo apt-get update
20
21  sudo apt-get install -y \
22  docker-ce docker-ce-cli containerd.io \
23  docker-buildx-plugin docker-compose-plugin
```

Install Git

```
1  sudo add-apt-repository ppa:git-core/ppa -y
2  sudo apt update
3  sudo apt install git -y
```

Install Maven

```
1  wget https://dlcdn.apache.org/maven/maven-3/3.9.4/binaries/apache-maven-3.9.4-bin.tar.gz
2  sudo tar xf apache-maven-*.tar.gz -C /opt
3  sudo ln -s /opt/apache-maven-3.9.4 /opt/maven
4  sudo touch /etc/profile.d/maven.sh
5  sudo sed -i '1iexport M2_HOME=/opt/maven' /etc/profile.d/maven.sh
6  sudo sed -i '2iexport MAVEN_HOME=/opt/maven' /etc/profile.d/maven.sh
7  sudo sed -i '3iexport PATH=${M2_HOME}/bin:${PATH}' /etc/profile.d/maven.sh
8  sudo chmod +x /etc/profile.d/maven.sh
9  source /etc/profile.d/maven.sh
10 sudo ln -s /opt/maven/bin/mvn /usr/bin
11 sudo ln -s /opt/maven/bin/mvn /usr/sbin
```

Installing kubectl

```
1  curl -fsSL https://dl.k8s.io/apt/doc/apt-key.gpg | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-archive-key
2
3  echo "deb [signed-by=/etc/apt/keyrings/kubernetes-archive-keyring.gpg] https://apt.kubernetes.io/ kubernetes-xeni
4  | sudo tee /etc/apt/sources.list.d/kubernetes.list
5
6  sudo apt update
7  sudo apt install -y kubectl
8  sudo apt-mark hold kubectl
```