The process of java installation in Linux :

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#Login as a root user

sudo su -

##Change dir to /opt

cd /opt

yum install wget -y

yum install java-1.8.0-openjdk -y

java -version

java -version

Process to install the maven in the servers

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Step1) Login as a root user and change the directory to /opt/

sudo su -

cd /opt/

yum install wget unzip -y

Step2) Download the Maven Software

wget https://dlcdn.apache.org/maven/maven-3/3.9.0/binaries/apache-maven-3.9.0-bin.zip

unzip apache-maven-3.9.0-bin.zip

Step3) Set the class path/Environmental Variable

For Specific User

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vi ~/.bash\_profile

export M2\_HOME=/opt/apache-maven-3.9.0

export PATH=$PATH:$M2\_HOME/bin

source ~/.bash\_profile

For All Users

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vi /etc/profile

export M2\_HOME=/opt/apache-maven-3.8.6

export PATH=$PATH:$M2\_HOME/bin

source /etc/profile

Step4) Check the Maven version

mvn -version

sonar Qube installation

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#Hardware Requirements for SonarQube

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#The SonarQube server requires at least 2GB of RAM to run efficiently and 1GB of free RAM for the OS.(for practicing)

#Login as a root user.

sudo su -

Install Java ( Java is the Pre Requisite Software)

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yum install java-11-openjdk-devel -y

#Download the SonarqQube Server software.

cd /opt

yum install wget unzip -y

wget https://binaries.sonarsource.com/Distribution/sonarqube/sonarqube-9.8.0.63668.zip

unzip sonarqube-9.8.0.63668.zip

mv sonarqube-9.8.0.63668.zip sonarqube

#As a good security practice, SonarQuber Server is not advised to run sonar service as a root user, so create a new user called sonar user and grant sudo access to manage nexus services as follows.

useradd sonar

Give the sudo access to sonar user

visudo

sonar ALL=(ALL) NOPASSWD: ALL

Change the owner and group permissions to /opt/sonarqube/ directory.

chown -R sonar:sonar /opt/sonarqube/

chmod -R 775 /opt/sonarqube/

su - sonar

cd /opt/sonarqube/bin/linux-x86-64/

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Troubleshooting

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sonar service is not starting?

a)make sure you need to change the ownership and group to /opt/sonarqube/ directory for sonar user.

b)make sure you are trying to start sonar service with sonar user.

c)check java is installed or not using java -version command.

Unable to access SonarQube server URL in browser?

a)make sure port 9000 is opened in security groups - AWS ec2 instance.

Create SonarQube server as a sonar service

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ln /opt/sonarqube/bin/linux-x86-64/sonar.sh /etc/init.d/sonar

vi /etc/init.d/sonar

#add below lines in /etc/init.d/sonar

SONAR\_HOME=/opt/sonarqube

PLATFORM=linux-x86-64

WRAPPER\_CMD="${SONAR\_HOME}/bin/${PLATFORM}/wrapper"

WRAPPER\_CONF="${SONAR\_HOME}/conf/wrapper.conf"

PIDDIR="/opt/sonarqube/"

#Enable the sonar service

sudo systemctl enable sonar

#Start the sonar service

sudo systemctl start sonar

#Check the status of the sonar service

sudo systemctl status sonar

tomcat installation process

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#Login as a root user

sudo su -

yum install wget unzip -y

cd /opt

wget https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.68/bin/apache-tomcat-9.0.68.zip

unzip apache-tomcat-9.0.68.zip

cd /opt/apache-tomcat-9.0.68/bin

chmod u+x \*.sh

ln -s /opt/apache-tomcat-9.0.68/bin/startup.sh /usr/bin/startTomcat

ln -s /opt/apache-tomcat-9.0.68/bin/shutdown.sh /usr/bin/stopTomcat

#ps -fax | grep tomcat

#netstat -tunlap

#vi /opt/apache-tomcat-9.0.65/webapps/manager/META-INF/context.xml

#Comment the below lines

#<!-- <Valve className="org.apache.catalina.valves.RemoteAddrValve"

# allow="127\.\d+\.\d+\.\d+|::1|0:0:0:0:0:0:0:1" /> -->

startTomcat

#stopTomcat

#Create a user

#vi /opt/apache-tomcat-9.0.44/conf/tomcat-users.xml

Troubleshooting

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tomcat server is not starting?

a)Check the catalina.out file which is available in conf dir.

b)check java is installed or not using java -version command.

Unable to access Tomcat server URL in browser?

a)make sure port 8080 is opened in security groups - AWS ec2 instance.

nexus installation

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login as a root user

sudo su -

cd /opt

yum install tar wget -y

wget https://download.sonatype.com/nexus/3/nexus-3.48.0-01-unix.tar.gz

tar -zxvf nexus-3.48.0-01-unix.tar.gz

mv /opt/nexus-3.48.0-01 /opt/nexus

#As a good security practice, Nexus is not advised to run nexus service as a root user, so create a new user called nexus and grant sudo access to manage nexus services as follows.

useradd nexus

#Give the sudo access to nexus user

visudo

nexus ALL=(ALL) NOPASSWD: ALL

#Change the owner and group permissions to /opt/nexus and /opt/sonatype-work directories.

chown -R nexus:nexus /opt/nexus

chown -R nexus:nexus /opt/sonatype-work

chmod -R 775 /opt/nexus

chmod -R 775 /opt/sonatype-work

#Open /opt/nexus/bin/nexus.rc file and uncomment run\_as\_user parameter and set as nexus user.

vi /opt/nexus/bin/nexus.rc

run\_as\_user="nexus"

#Create nexus as a service

ln -s /opt/nexus/bin/nexus /etc/init.d/nexus

#Switch as a nexus user and start the nexus service as follows.

sudo su - nexus

#Enable the nexus services

sudo systemctl enable nexus

#Start the nexus service

sudo systemctl start nexus

#Access the Nexus server from Laptop/Desktop browser.

http://IPAddess/Hostname:8081/

#Default Credentials

User Name:

Password:

Troubleshooting

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nexus service is not starting?

a)make sure need to change the ownership and group to /opt/nexus and /opt/sonatype-work directories and permissions (775) for nexus user.

b)make sure you are trying to start nexus service with nexus user.

c)check java is installed or not using java -version command.

d) check the nexus.log file which is availabe in /opt/sonatype-work/nexus3/log directory.

Unable to access nexus URL?

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a)make sure port 8081 is opened in security groups in AWS ec2 instance.