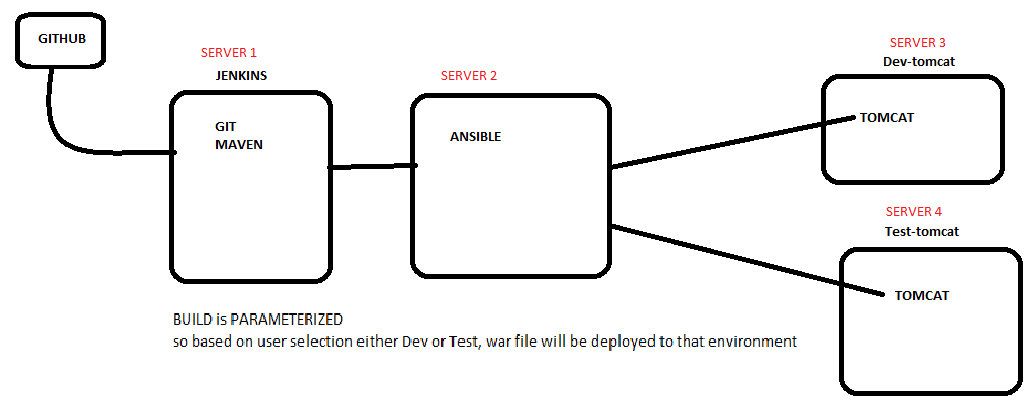
ANSIBLE DEPLOYMENT



STEPS:-

========

1.install jenkins,maven,git on server1

2.create a sample jenkins job to find the workspace of jenkins on linux

3.configure epel repo and install ansible,check python version on server 2

4.ansible communicates with nodes via SSH, so create a user and add him on sudoers file and also enable passwordless authentication from server2 to server3 with same user or nodes

5.communicate from server2 to server3 via ping

6.install ssh plugin on jenkins and create a job to copy binaries from jenkins to ansible server i.e server3

7.install java and tomcat on server3,server4

8.write a playbook to copy binaries from server2 to server3 or server4 by triggering a Parameterized jenkins job based on user selection

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STEP 1

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In SERVER 1:-

==========

#!/bin/bash

sudo yum update -y

sudo yum -y install java-1.8.0-openjdk

sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key

cd /etc/yum.repos.d/

sudo curl -O https://pkg.jenkins.io/redhat-stable/jenkins.repo

sudo yum -y install jenkins

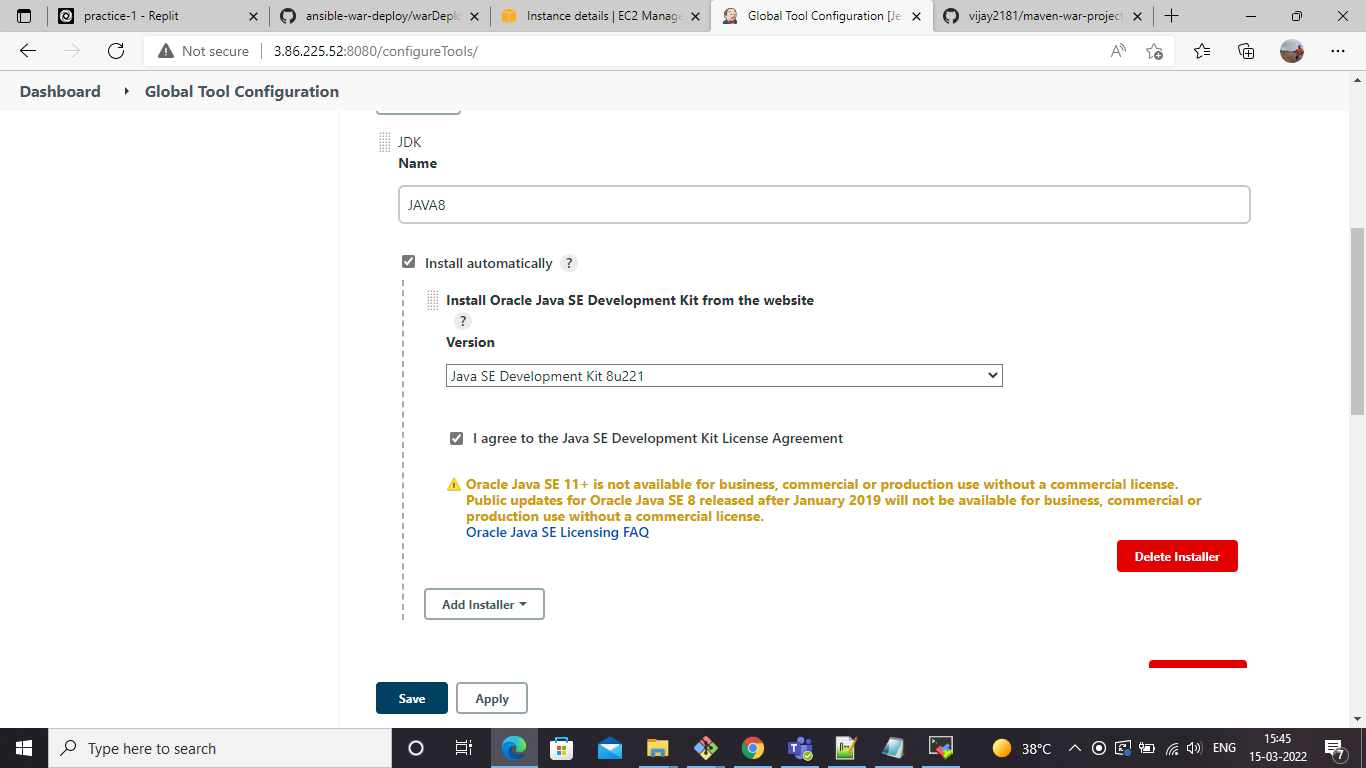
sudo yum install git -y

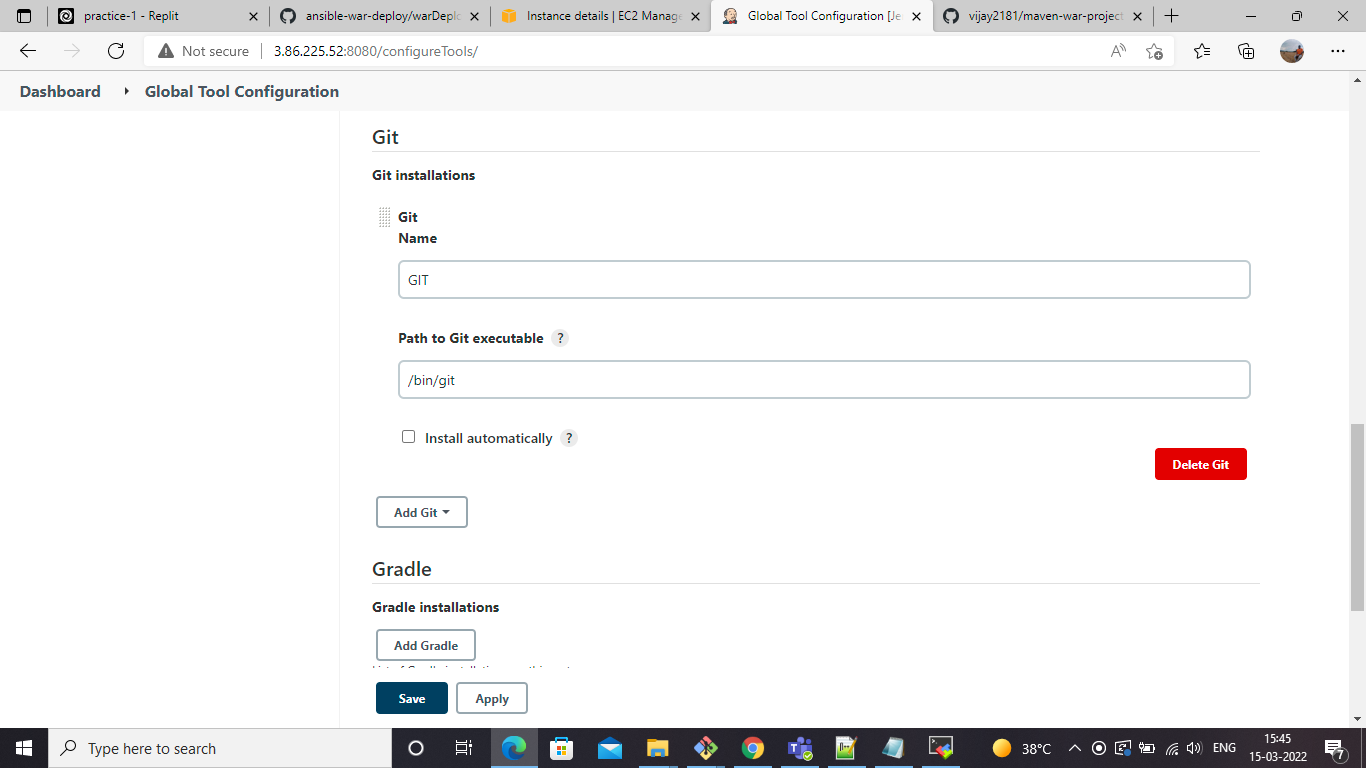
sudo systemctl start jenkins

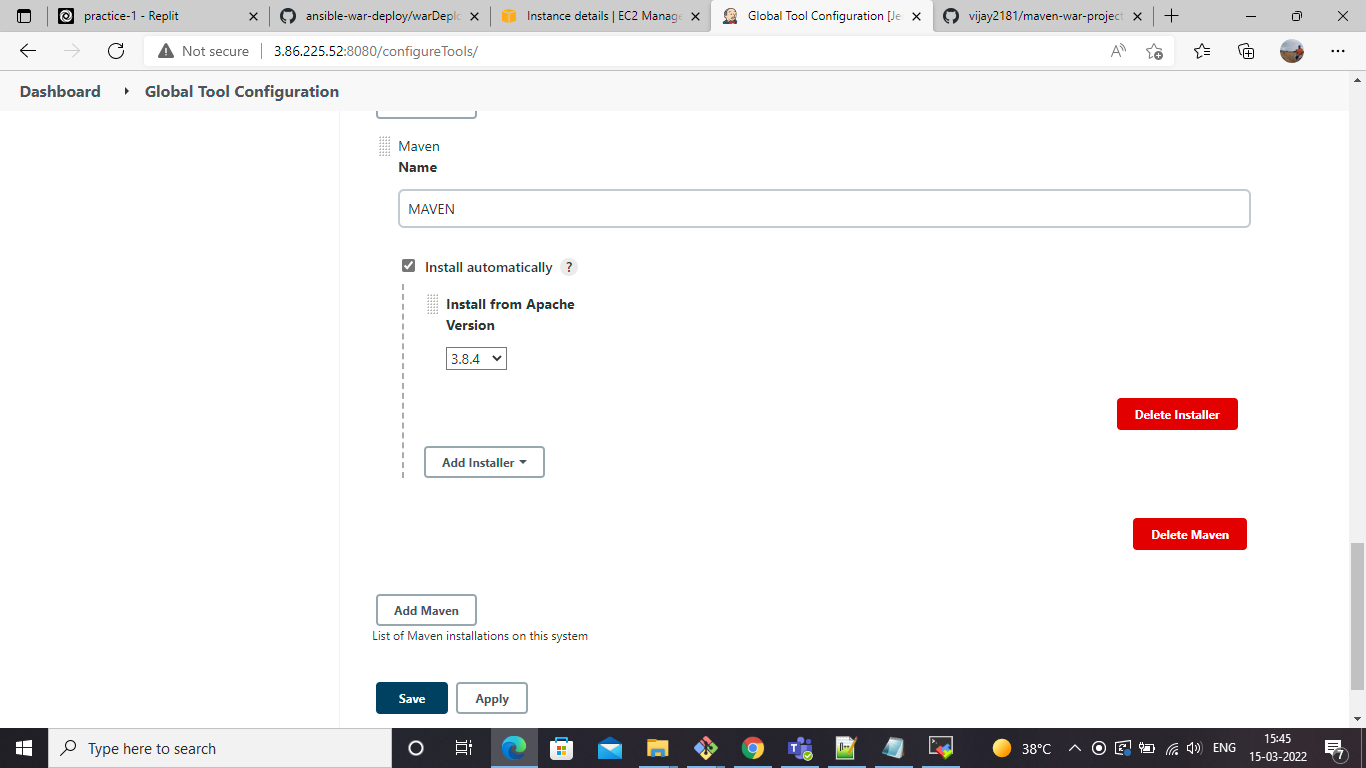
sudo systemctl enable jenkins

<ip-address:8080>

* In global tool configurations, jdk and maven install automatically







STEP 2

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In SERVER 3 and SERVER 4:-(AMAZON-LINUX-2)(Dev-tomcat, Test-tomcat)

================================================================

goto server3 NEXT

sudo yum update -y

sudo useradd vijay

sudo passwd vijay

- add password

visudo

## Allow root to run any commands anywhere

root ALL=(ALL) ALL

vijay ALL=(ALL) NOPASSWD: ALL

sudo vim /etc/ssh/sshd\_config

- change "PasswordAuthentication yes" in the file

sudo systemctl restart sshd

STEP 3

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In SERVER 2:-(amazon linux-2)(Ansible server)

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goto server2

sudo yum update -y

sudo useradd vijay

sudo passwd vijay

- add poassword

visudo

## Allow root to run any commands anywhere

root ALL=(ALL) ALL

vijay ALL=(ALL) NOPASSWD: ALL

sudo amazon-linux-extras install epel -y

sudo yum install ansible -y

su - vijay

ssh-keygen ---this command generates both public and private key, we need to copy the public key to atarget server

ssh-copy-id vijay@44.203.164.200 ----server3 ip address,public key will be copied to (/home/vijay/.ssh/authorized\_keys file) of server3

ssh-copy-id vijay@52.91.197.166 server4 ip address,public key will be copied to (/home/vijay/.ssh/authorized\_keys file) of server4

- provide vijay password --- for the first time it asks password

- ssh -i vijay@44.203.164.200 -- can able to login to server3 from server2 without password

- exit

cd /etc/ansible --- ansible communicates with nodes by using this hosts file

sudo vi hosts

[webserver1]

44.203.164.200 ---server 3

[webserver2]

52.91.197.166 ----server 4

ansible all -m ping --- test whether we get response from server3

sudo vim /etc/ssh/sshd\_config

- change "PasswordAuthentication yes" in the file

sudo systemctl restart sshd

cd /opt

sudo mkdir artifact

sudo chown -R vijay:vijay /opt/artifact

STEP 4

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In SERVER 1:-

===========

- in jenkins we need to install a plugin(publish over ssh), such that whenever we trigger any job, it has to pull code from github, build should happen and war/jar file needs to be copied to Ansible server(server 2)

- for example by this plugin war file needs to be copied to /opt/artifact folder in Ansible(server 2)

On jenkins server

- goto manage jenkins

- manage plugins

- available

- Publish Over SSH

- install without restart

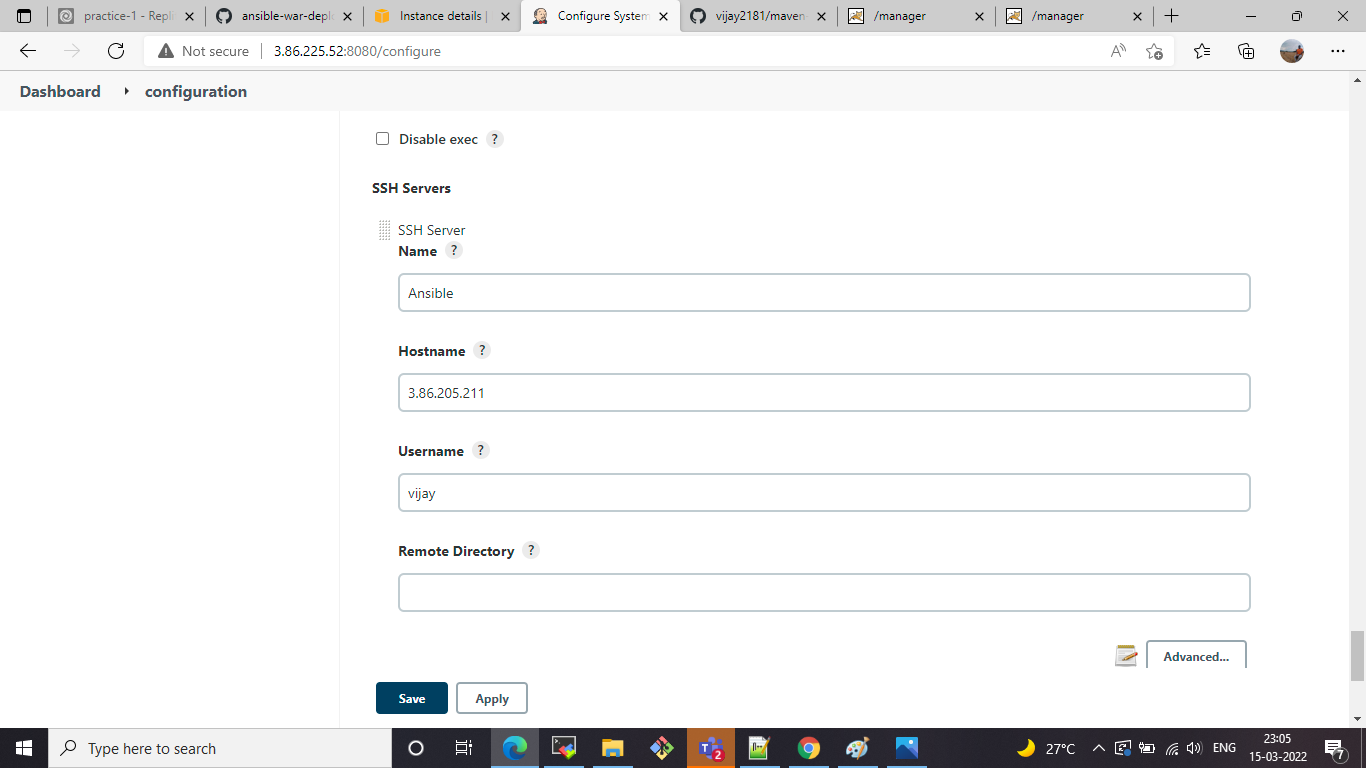
we have installed the plugin, now we need to configure, so that jenkins will know the details of Ansible(server 2) server

- goto manage jenkins

- configure systems

- look for "Publish over SSH" configurations

- click on "SSH Servers" add tab



- Name = Ansible

- Hostname = ansible server ip address

- Username = vijay

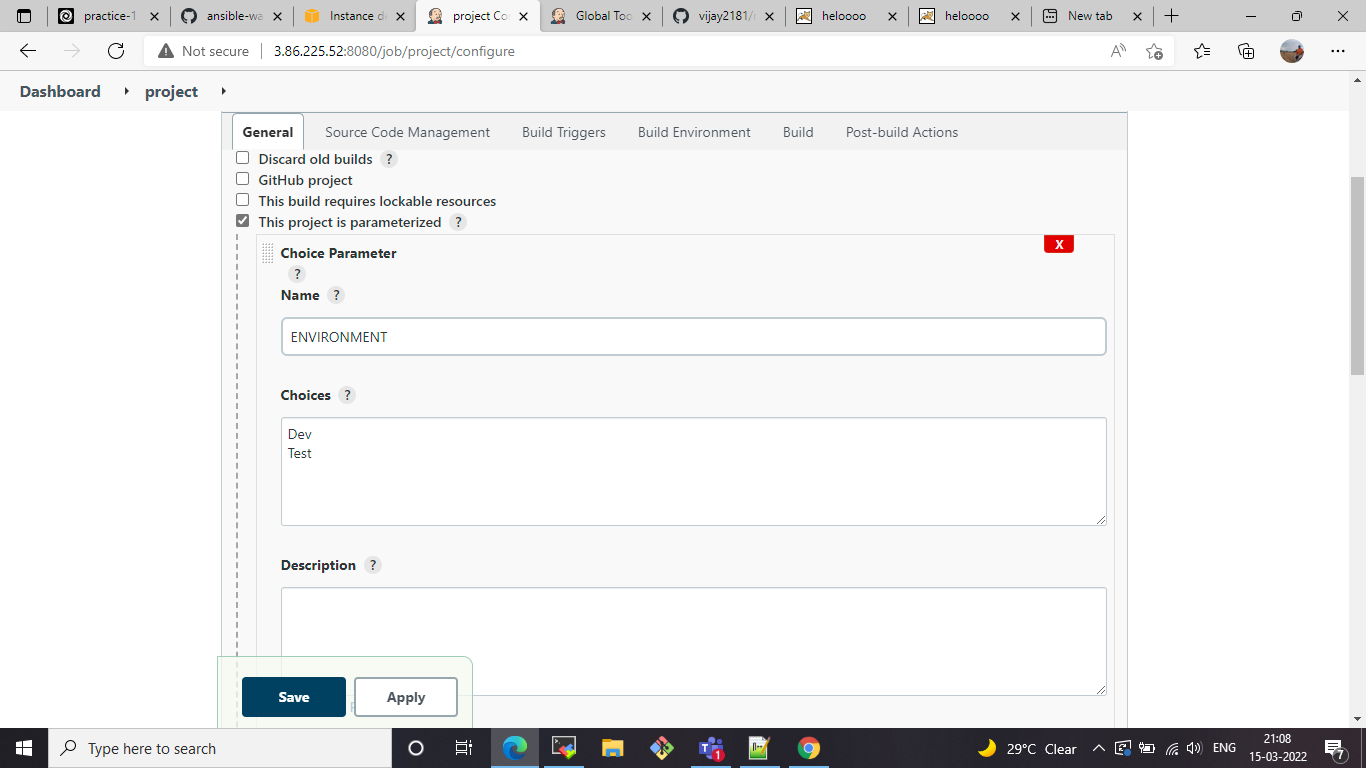
- click on advanced option

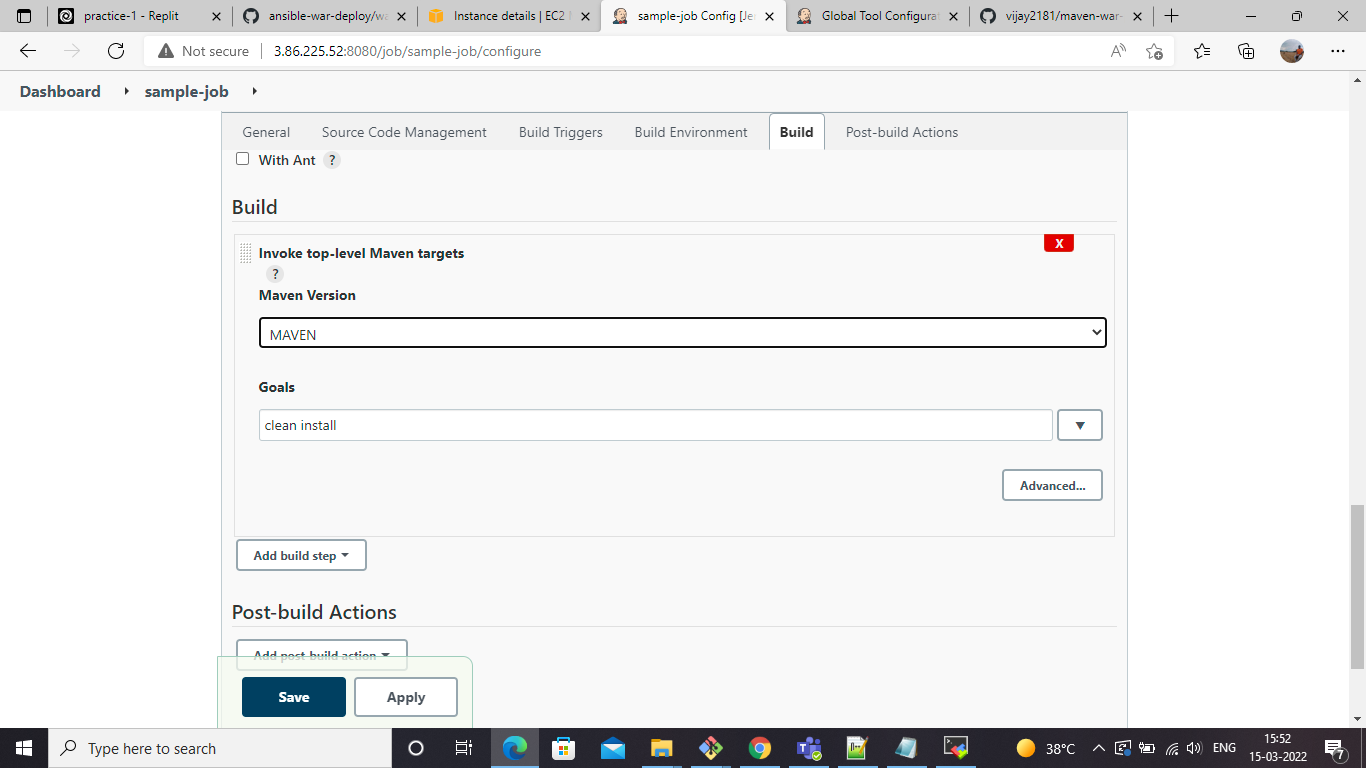
- click on password

- give vijay user password

- test the connection configuration

once build a sample job to know the location of jenkins





workspace(/var/lib/jenkins/workspace/sample-job/target/project-3-1.0-SNAPSHOT.war)

- goto sample job

- configure

- add build step --> "send files or execute commands over ssh"

- source files = target/\*.war

- Remote Directory = //opt//artifact

- save

- build and check in ansible server whether file is copied to target folder or not

- you may get build as "UNSTABLE" because jenkins through vijay user need to have required permission to copy files into Ansible server folders

- enable "Verbose output in console" in add build step

STEP 5

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SERVER 3 and SERVER 4:-(AMAZON-LINUX-2)(Dev-tomcat, Test-tomcat)

===================================================================

TOMCAT INSTALLATION:-

sudo yum -y install java-1.8.0-openjdk

cd /opt

sudo mkdir tomcat && cd tomcat

sudo chown -R vijay:vijay /opt/tomcat

sudo wget https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.60/bin/apache-tomcat-9.0.60.tar.gz

sudo tar -xvf apache-tomcat-9.0.60.tar.gz

cd apache-tomcat-9.0.60/

cd conf

pwd

/opt/tomcat/apache-tomcat-9.0.60/conf

changing tomcat server port:-

for server 3 :-

sudo vim server.xml

<Connector port="8081" protocol="HTTP/1.1"

connectionTimeout="20000"

redirectPort="8443" />

server 4:-

<Connector port="8082" protocol="HTTP/1.1"

connectionTimeout="20000"

redirectPort="8443" />

we need have a user to authenticate to tomcat

cd /opt/tomcat/apache-tomcat-9.0.60/conf

sudo vim tomcat-users.xml

- add only below content in the file

<?xml version="1.0" encoding="UTF-8"?>

<tomcat-users>

<role rolename="manager-gui"/>

<role rolename="admin-gui"/>

<user username="tomcat" password="tomcat" roles="manager-gui,admin-gui"/>

</tomcat-users>

we need to allow who can access the Tomcat

sudo vim /opt/tomcat/apache-tomcat-9.0.60/webapps/manager/META-INF/context.xml

- give the below value in the file

allow=".\*" />

cd /opt/tomcat/apache-tomcat-9.0.60/bin

./startup.sh --- starts the tomcat web server

<ip address>:8081

- manager app

- asks for username and password

whatever the content placed in webapps folder will be hosted on browser

- we need to write a playbook to copy the war file from Ansible server(server 2) to server 3

STEP 6

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SERVER 2:-(amazon linux-2)(Ansible server)

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cd /etc/ansible/

sudo mkdir playbooks

cd playbooks

sudo vim copy-war.yml

---

- hosts: webserver1

become: true

tasks:

- name: copying war file from ansible server to tomcat webapps folder

copy: src=/opt/artifact/target/project-3-1.0-SNAPSHOT.war dest=/opt/tomcat/apache-tomcat-9.0.60/webapps

- hosts: webserver2

become: true

tasks:

- name: copying war file from ansible server to tomcat webapps folder

copy: src=/opt/artifact/target/project-3-1.0-SNAPSHOT.war dest=/opt/tomcat/apache-tomcat-9.0.60/webapps

goto jenkins previous sample-jenkins job

- add build step --> "send files or execute commands over ssh"

- ADD ANOTHER add server

- Exec command

if [ $ENVIRONMENT == 'Dev' ]

then

ansible-playbook /etc/ansible/playbooks/copy-war.yml --limit webserver1

else

ansible-playbook /etc/ansible/playbooks/copy-war.yml --limit webserver2

fi

* Add the above script in “Exec command”

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