Project-2

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Project:[Jenkins-Maven-Ansible-Nexus]

Project: **Build Java Application thru Maven and Push artifacts to Nexus Repo thru Ansible Playbook by Jenkins pipe**
         [Github + Jenkins + Maven + Ansible + Nexus]
Reference Video: **https://youtu.be/30l_dUBOM44**   [BC Reddy Devops]

Step 1: Application code files in Github
Step 2: Launch 3 EC2 (Amazon Linux2) servers 1st for [Jenkins + Maven + Ansible + Nexus], 2nd , 3rd are Dev, QA servers
Step 3: Open Ports 22, 80, 8080 ports in 1st EC2 and 22, 80 in 2nd , 3rd EC2s
Step 4: Git, Jenkins, [Java11-openjdk + Maven + Ansible + Nexus]all are installed in 1st EC2 (in /opt folder)
Step 5: Generate SSH key in 1st EC2, Make SSH key passwd-less connection from 1st EC2 to remain both EC2s [Dev + QA]
Step 6: Install and configure Git, JDK, Maven, Ansible and Git credentials in Jenkins dashboard
Step 7: Create Jenkins Pipeline Job and build it and push to [Dev + QA] and triggered with Github webhook

Required files: pom.xml, Jenkinsfile, src/main and dump folders with Maven related project files

Task-1 (Git & Ansible) on 1st EC2
```
1. sudo yum update -y & sudo yum install git -y
2. sudo -i
3. ssh-keygen
4. cd .ssh/
5. ls -ltr
6. ssh-copy-id root@35.174.105.47 (# Pvt IP of Node) # run this same for all 2 nodes
7. sudo amazon-linux-extras install ansible2 -y
8. ansible --version
9. cd /etc/ansible
10. ls -l
11. sudo chown -R ec2-user:ec2-user *
12. vi hosts          # adding the all Node servers pvt IPs in [servers] group
13. vi ansible.cfg # uncomment inv line, add interpreter_python = /usr/bin/python under defaults
14. ansible all -m ping      # to ping all Nodes status
15. cd /home ==> git clone github-repo link
```

Task-2 (Maven, Nexus) on 1st EC2
```
1. cd /opt
2. wget https://dlcdn.apache.org/maven/maven-3/3.9.3/binaries/apache-maven-3.9.3-bin.tar.gz
3. ls
4. tar -xvzf apache-maven-3.9.3-bin.tar.gz
5. ls
6. mv apache-maven-3.9.3 maven3
7. rm -rf apache-maven-3.9.3-bin.tar.gz
8. export PATH=$PATH:/opt/maven3/bin/
9. cd /opt
10. wget https://download.sonatype.com/nexus/3/nexus-3.58.1-02-unix.tar.gz
11. ls
12. tar -xvzf nexus-3.58.1-02-unix.tar.gz
13. ls
14. mv nexus-3.58.1-02 nexus-3
15. rm -rf nexus-3.58.1-02-unix.tar.gz
16. chown -R ec2-user:ec2-user nexus-3
```

Task-3 (Jenkins) on 1st EC2
```
1. amazon-linux-extras install java-openjdk11 -y [on both EC2s]
2. sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
3. sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
4. yum install fontconfig java-11-openjdk
5. yum install jenkins
6. systemctl start jenkins
7. systemctl enable jenkins
8. systemctl status jenkins
9. cat /var/lib/jenkins/secrets/initialAdminPassword [login to Jenkins dashboard public IP:8080]
```

Create Pipeline Job and run the build in Jenkins dashboard and check the Artifacts in Nexus Repo