BUILDING FREESTYLE JENKINS PIPLINE INFRASTRUCTURE

CONFIGURE DEV SERVER

1. Open/create a file with vi editor
   vi jenks.sh
2. Copy the commands below and past in jenks.sh file and save
   #!/bin/bash
   sudo apt update
   sudo apt install openjdk-11-jdk -y
   sudo apt install -y git maven
   wget https://get.jenkins.io/war-stable/2.401.2/jenkins.war
   java -jar jenkins.war
3. run jenks.sh file to install jenkins with the command bellow
   sh jenks.sh

CONFIGURE QA SERVER

1. Open/create a file with vi editor
   vi tomcat.sh
2. Paste the following code inside
   #!/bin/bash
   sudo apt update
   sudo apt install tomcat9 -y
   sudo apt install tomcat9-admin -y
3. Run tomcat.sh file to install tomcat with the command bellow
   sh tomcat.sh
4. To create tomcat web server user go to **cd /etc/tomcate9/**
5. Open users file **vi tomcat-users.xml** press insert to add user
6. Create user and password in **tomcat-users.xml file (:wq! = save quit) (:qa! = Quit)**

<user username="admin" password="admin" roles="manager-script, manager-status, manger-gui"/>

7. Restart tomcat to save our user
   sudo service tomcat9 restart
8. To access tomcat copy ec2 instance ip and add port 8080 = **ip:8080/**
9. Do the same thing in the 3rd machine **(prod server)**

JENKINS FREESTYLE PROJECT

Continuous download (download **build pipeline** and **deploy to container** plugins)

1. Creat a freestyle job **web-app**
2. Go to **source code management -> git -> branch sp: main = apply $ save(build/run)**

Continuous build ***(create war file)*** **Practice repo: https://github.com/ONEIL6677/Devops.git**

1. Go to configure same job **build steps -> add build steps -> invoke top maven targets**
2. Under goals write **package =apply $ save (build triggers)**

Continuous Deployment (Deploy To QA Server)

1. Go 1st job configure **post build action->post b actions->deploy WAR.EAR to container**
2. Under **war.ear: **/*.war -> context path: web-app-> containers: tomcat9**
3. Add credentials used in **tomcat9 add->username->password ->add**
4. Select ncreated credentials **-> tomcat url: https://ip:8080 = apply $ save (build/run)**
5. To acess the QA server **https://ip:8080/web-app = context path**

Continuous testing ***(practice repo: https://github.com/ONEIL6677/test-scripts.git)***

1. Create another job and call it **tests**
    a. Testing team will give you a shell script for testing
2. Go to **source code management -> git -> branch sp: main = apply $ save(build/run)**
3. Go to 2nd job **Build steps->add build steps->execute shell**
4. **Echo "testing passed" apply $ save**
5. Go to first job **configure->post build action->add post build action->archive the artifact**
6. To make sure you are testing the artifact in first job
7. Go up and **archive the artifact: **/*.war= apply $ save**
8. Copy the artifact to second job. Go to first job and call second**(test)** job
9. Go to first job. **Configure->post build actions-> add p b actions-> build other projects**
10. Scroll up **projects to build: tests apply $ save**

Continuous delivery

1. Go to second job copy artifact from first job
2. **build steps->add build steps->copy artifact->**scroll down **project: name:web-app (save)**
3. Go to 2nd job. **post build actions-> add p b actions-> deploy WAR.EAR to container**
4. Under **war.ear: **/*.war -> context path: main-app-> containers: tomcat9**
5. Add credentials used in **tomcat9 add->username->password ->add**
6. Select ncreated credentials **-> tomcat url: https://ip:8080 = apply $ save (build/run)**
7. To acess the QA server **https://ip:8080/main-app = context path**

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Kimbi codes email: kimbicodes0@gmail.com contact: +237653916677