**Running Jenkins on an Amazon Linux Machine**

* **Launch a Linux EC2 Instance**
  + Create keypair
  + Create security group with HTTP and Custom TCP at port 8080
  + Launch instance
* **Connect to EC2 Instance**
  + Download MobaXterm
  + Add SSH session
  + Go to instance and copy public IP and post it in the remote host input
  + Tick the “Specify username” checkbox and add “ec2-user”
  + Click on “Advanced SSH Settings”
  + Tick the “Use private key” checkbox and browse your public keypair
  + Click on
* **Downloading and installing Jenkins**
  + Switch to super user
    - **sudo su**
  + Update machine
    - **sudo yum update -y**
  + Add the Jenkins repo using the following command:
    - **sudo wget -O /etc/yum.repos.d/jenkins.repo \https://pkg.jenkins.io/redhat-stable/jenkins.repo**
  + Import a key file from Jenkins-CI to enable installation from the package:
    - **sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key**
    - **sudo yum upgrade**
  + Install Java:
    - **sudo amazon-linux-extras install java-openjdk11 -y**
  + Install Jenkins:
    - **sudo yum install jenkins -y**
  + Enable the Jenkins service to start at boot:
    - **sudo systemctl enable jenkins**
  + Start Jenkins as a service:
    - **sudo systemctl start jenkins**
* **Installing git**
  + Install git
    - **sudo yum install git**
  + verify git installation
    - **whereis git**
* **Installing Apache Maven**
  + First, enter the following to add a repository with a Maven package.
    - **sudo wget** [**https://repos.fedorapeople.org/repos/dchen/apache-maven/epel-apache-maven.repo -O /etc/yum.repos.d/epel-apache-maven.repo**](https://repos.fedorapeople.org/repos/dchen/apache-maven/epel-apache-maven.repo%20-O%20/etc/yum.repos.d/epel-apache-maven.repo)
  + Enter the following to set the version number for the packages.
    - **sudo sed -i s/\$releasever/6/g /etc/yum.repos.d/epel-apache-maven.repo**
  + Then you can use yum to install Maven
    - **sudo yum install -y apache-maven**
  + Verify apache maven installation
    - **mvn –version**
* **Launching Jenkins**
  + Connect to http://<your\_server\_public\_DNS>:8080 from your browser. You will be able to access Jenkins through its management interface.
  + Use the following command to display this password:
    - **sudo cat /var/lib/jenkins/secrets/initialAdminPassword**
  + create admin user
  + install plugins
* **Configure Jenkins tools**
  + Go to dashboard
  + Click manage Jenkins
  + Click Global configuration tool
  + Set up JDK, Git and Maven Paths in Global Tool Configuration
  + JAVA\_HOME
    - */usr/lib/jvm/java-1.7.0-openjdk-1.7.0.321-2.6.28.2.amzn2.0.1.x86\_64*
  + Path to Git executable
    - */usr/bin/git*
  + MAVEN\_HOME
    - */usr/share/apache-maven*
* **Creating scripted pipeline**
  + Go to dashboard
  + Click add new Item
  + Enter name and choose pipeline
  + Write pipeline script
    - pipeline{

agent any

tools{

maven 'myMaven'

}

stages{

stage("checkout"){

steps{

git url : 'https://github.com/subparcoder/calculator'

}

}

stage("compile the code"){

steps{

sh 'mvn compile'

}

}

stage("test the code"){

steps{

sh 'mvn test'

}

}

stage("QA the code"){

steps{

sh 'mvn pmd:pmd'

}

}

stage("package the code"){

steps{

sh 'mvn package'

}

}

}

}

* Save and build