**Install Jenkins on RHEL**

* **JAVA should be installed in EC2-machine or VM. Use below command to check whether Java is available or not**
  + **$** alternatives –config java - when multiple versions of Java exist
  + **Java –version**
* **If Java does not exist then install it otherwise go to next step**
  + sudo yum install java
* Go to google.com and search – “Jenkins download”, open first link – [www.jenkins.io/download/](http://www.jenkins.io/download/) & choose the OS.
* The opened page contains set of commands which we need to execute to install Jenkins

1. sudo wget -O /etc/yum.repos.d/jenkins.repo <https://pkg.jenkins.io/redhat-stable/jenkins.repo>
2. sudo rpm --import <https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key>
3. sudo yum upgrade
4. sudo yum install fontconfig java-21-openjdk
5. sudo yum install Jenkins
6. sudo systemctl daemon-reload

* **Now start Jenkins**

sudo systemctl start Jenkins

* **Check status of Jenkins**

sudo systemctl status Jenkins -> It should return the running status with process id

* Check port of Jenkins
  + $ sudo netstat -lntup | grep <process\_id>

NOTE:- if netstat command not found then install the package net-tools. By default, it should be 8080. In Security Group of your EC2 machine, In Inbound rules port 8080 should be open.

sudo yum install net-tools

* Check Jenkins configurations –
  + $ sudo cat /etc/sysconfig/Jenkins

NOTE: From this file we can change port or other configurations.

Now Go to browser & open your public IP with port 8080

First time when we launch Jenkins then it used to be in locked state. We need to open it through Administrator password which is available in /var/lib/Jenkins/secrets/initialAdminPassword

In terminal use below command to get Administrator Password

**$ sudo cat /var/lib/Jenkins/secrets/initialAdminPassword**

After this Jenkins will be unlocked, Create account and redirect to the dashboard page.

**What is job in Jenkins?**

* A Jenkins job is a sequential set of tasks that a user defines. For example: a job can fetch source code from version control, compile the code, run unit tests and more.

**Create a sample Job**

* From dashboard click on New Item
* Enter an item name
* Choose ‘Free style Project’
* Click on ‘OK’ button
* In opened page, from left panel (configuration) choose ‘Build Steps’
* In ‘Build steps’ drop down, choose ‘Execute shell’
* Now let’s run a basic shell script

**echo “This is my first Jenkins task”**

**date >> /tmp/date.txt**

* Now click on “Save” button
* Now from the left menu options, choose ‘Build Now’ (Build Now means running the job)
* In Build History section (At the bottom of left menu) we can see Build No. like #1, #2 and so on. Click on any build No to see the console output.

**Automate the Build**

**Timer:**

**Poll scm:**

**GITHub hook trigger for GITSCM polling -**