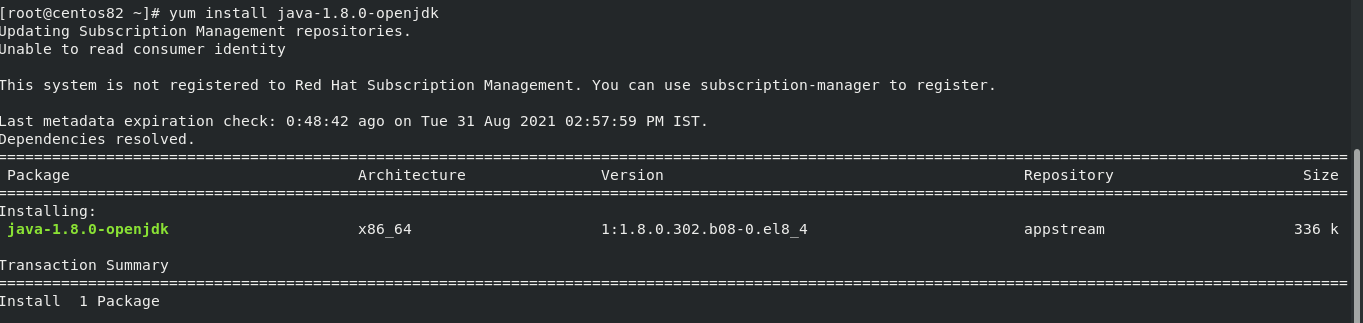
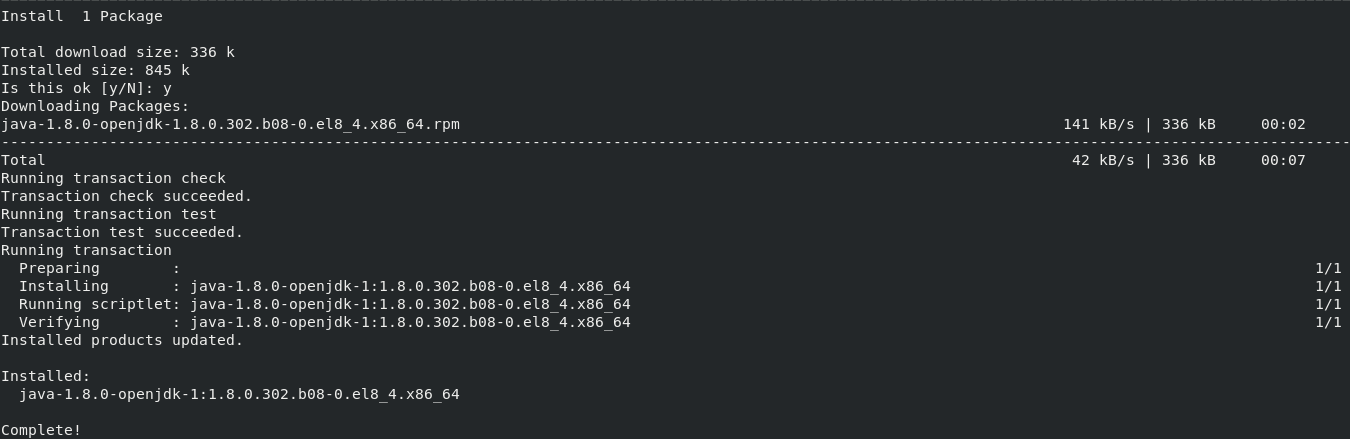
**Install Jenkins Automation Server with Nginix**

JAVA INSTALLATION

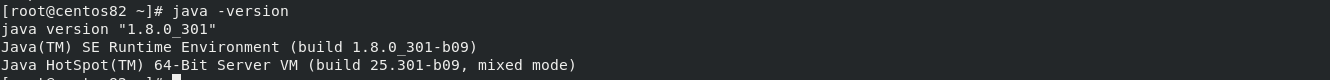
**Command:**

* yum install java-1.8.0-openjdk





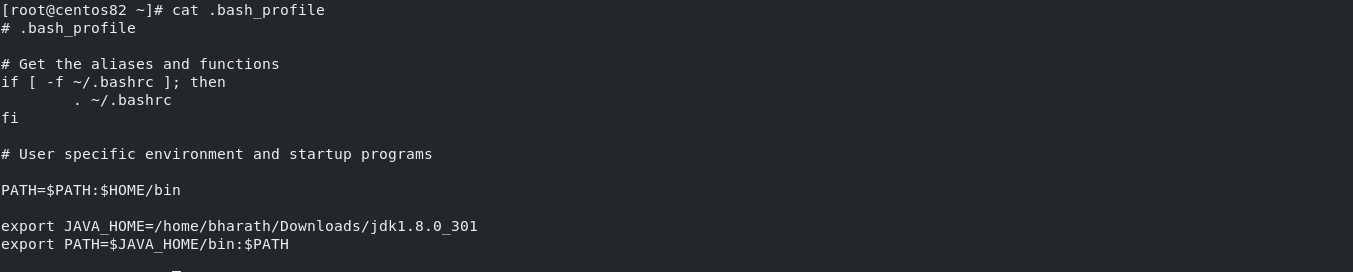
* java -version



* Add Below lines in the .bash\_profile

export JAVA\_HOME=/home/bharath/Downloads/jdk1.8.0\_301

export PATH=$JAVA\_HOME/bin:$PATH



* Run .bash\_profile

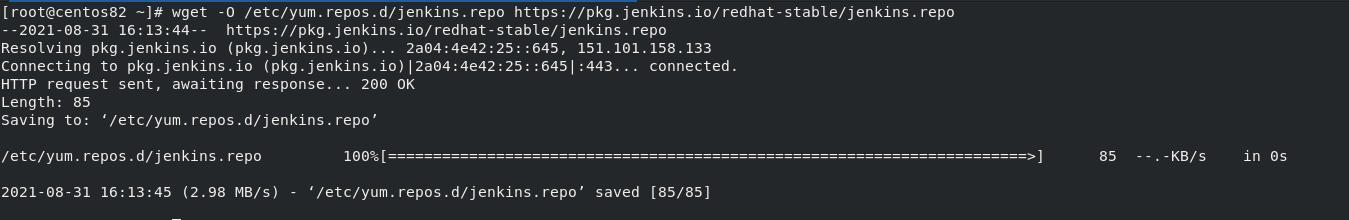
JENKINS INSTALLATION

Jenkins is free and opensource Automation server used for continuous integration and continuous deployment for building and testing our applications.

Jenkins can be installed directly by adding the repository and importing the GPG key.

**Commands:**

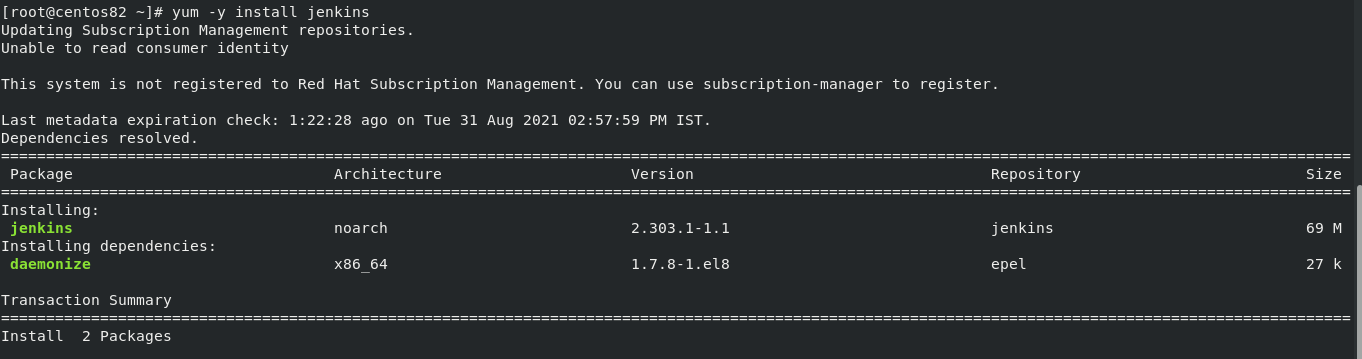
* wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo

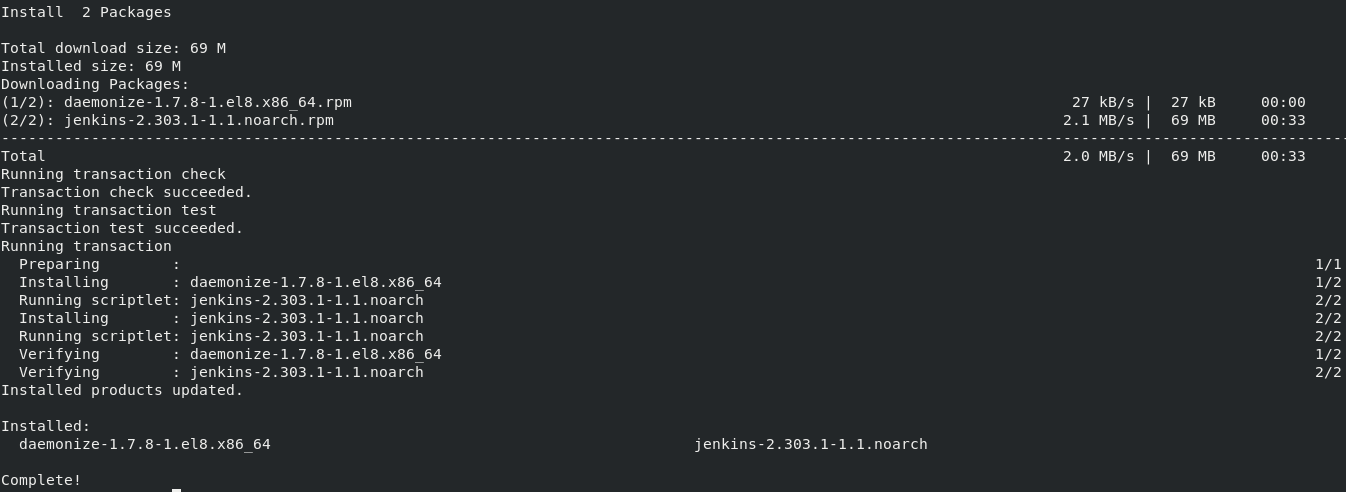


* rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key



* yum -y install Jenkins





* systemctl start jenkins --🡪 Start jenkins
* systemctl stop jenkins --🡪 stop Jenkins
* systemctl status Jenkins 🡪 checks status of Jenkins

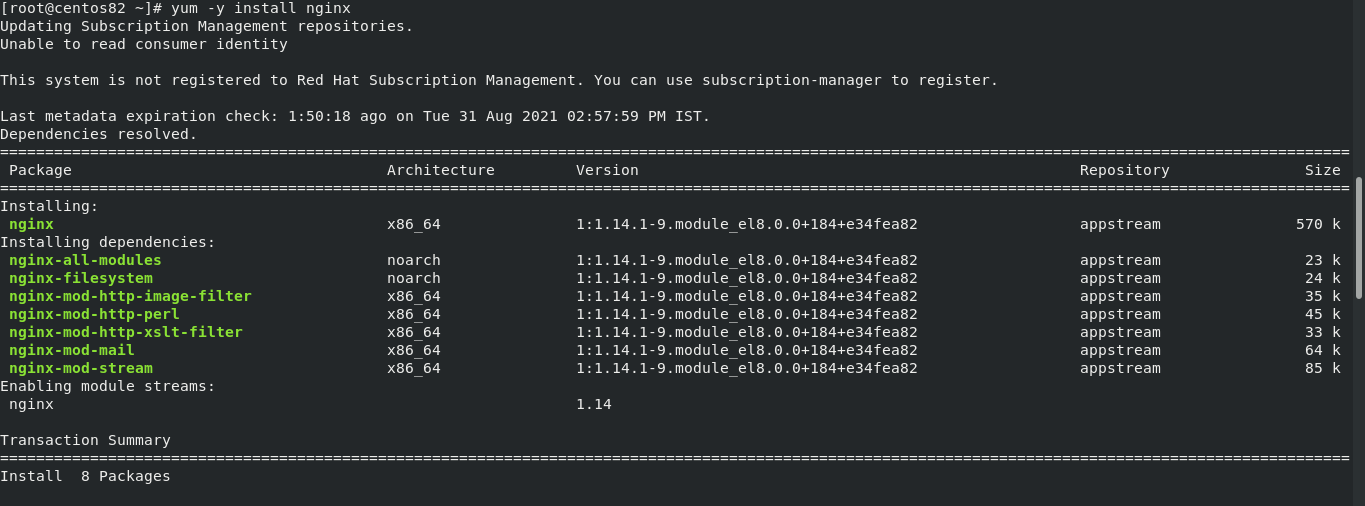
NGINIX INSTALLATION

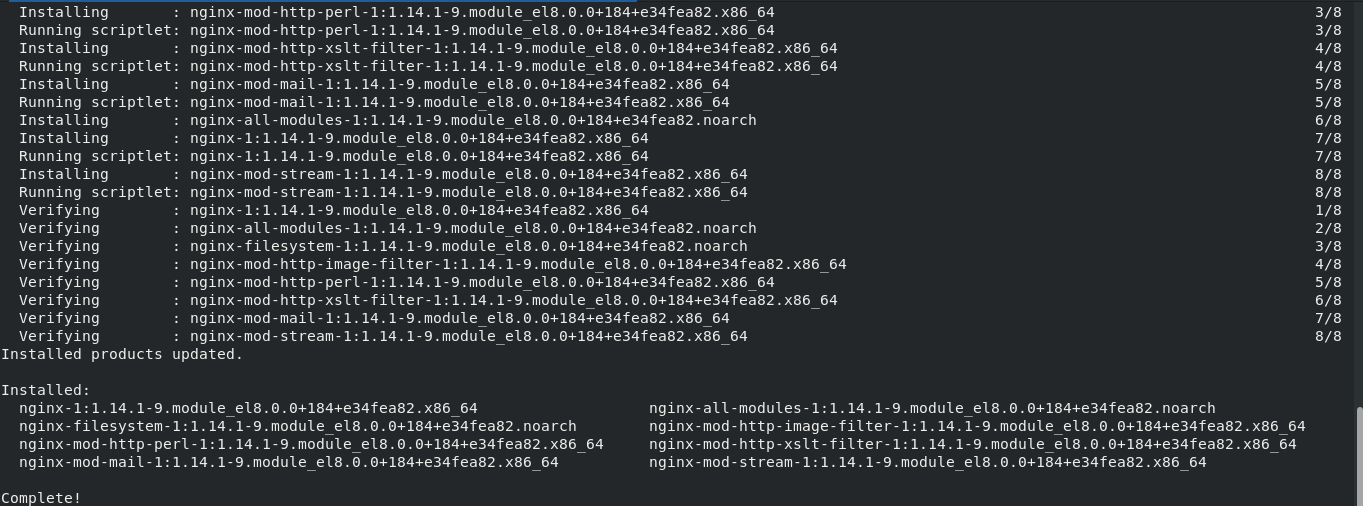
NGINX is open source software for web serving.

nginx is not available in default YUM repository. You will need to install EPEL repository to install Nginx.

**Commands:**

* yum -y install epel-release
* yum -y install nginx





* Go to /etc/nginix/conf.d path and create Jenkins.conf file
* In jenkins.conf place the below populated lines

upstream jenkins{

server localhost;

}

server{

listen 80;

server\_name http://centos82.eidikointernal.com:8081;

access\_log /var/log/nginx/jenkins.access.log;

error\_log /var/log/nginx/jenkins.error.log;

proxy\_buffers 16 64k;

proxy\_buffer\_size 128k;

location / {

proxy\_pass http://jenkins;

proxy\_next\_upstream error timeout invalid\_header http\_500 http\_502 http\_503 http\_504;

proxy\_redirect off;

proxy\_set\_header Host $host;

proxy\_set\_header X-Real-IP $remote\_addr;

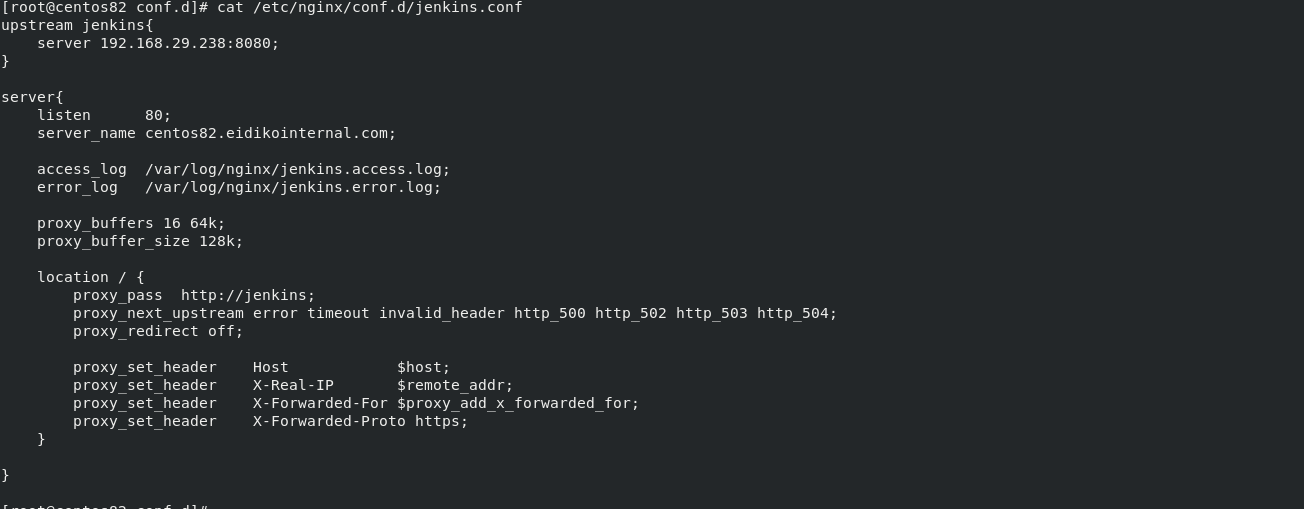
proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;

proxy\_set\_header X-Forwarded-Proto https;

}

}

* Under server give the port number of your system and in servername give the name of ur server.



* systemctl start nginx
* systemctl enable nginx

CONFIGURE FIREWALL AND SELINUX

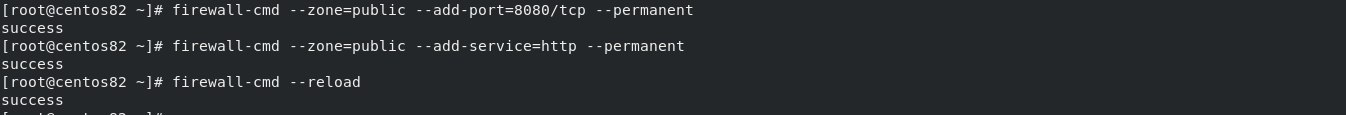
If you have a firewall running on your server, you will need to allow port 8080 and standard HTTP port through the firewall.

**Commands:**

* firewall-cmd --zone=public --add-port=8080/tcp –permanent
* firewall-cmd --zone=public --add-service=http –permanent

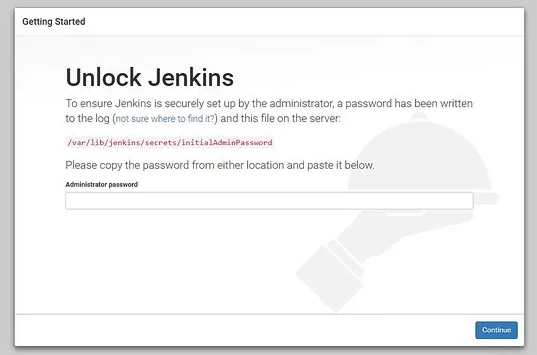
Reload the firewall zones

* firewall-cmd --reload

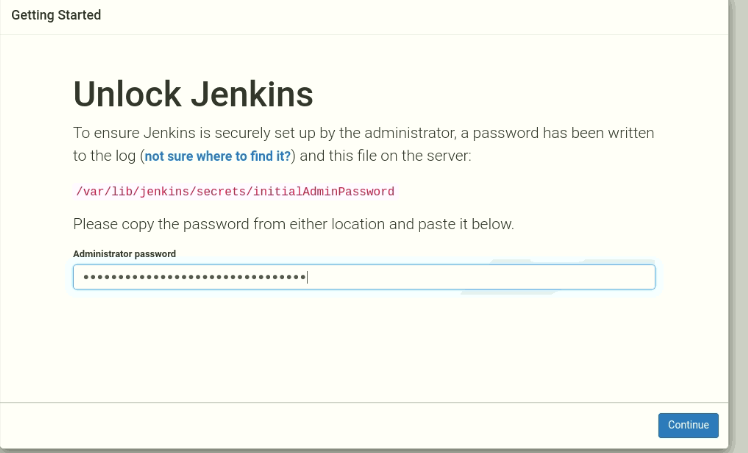


Configure SELinux for nginx proxy configuration

* setsebool httpd\_can\_network\_connect 1 -P
* Go to browser and hit <http://servername:8080>

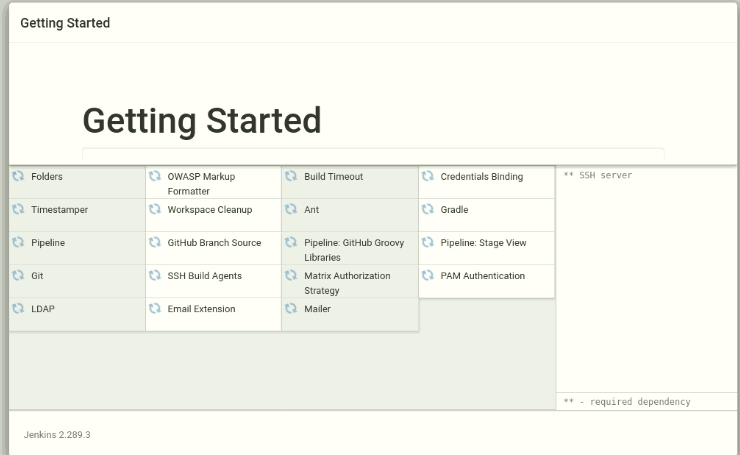


* For Administartor password goto this path /var/lib/jenkins/secrets/initialAdminPassword copy that and paste in administrator password block.

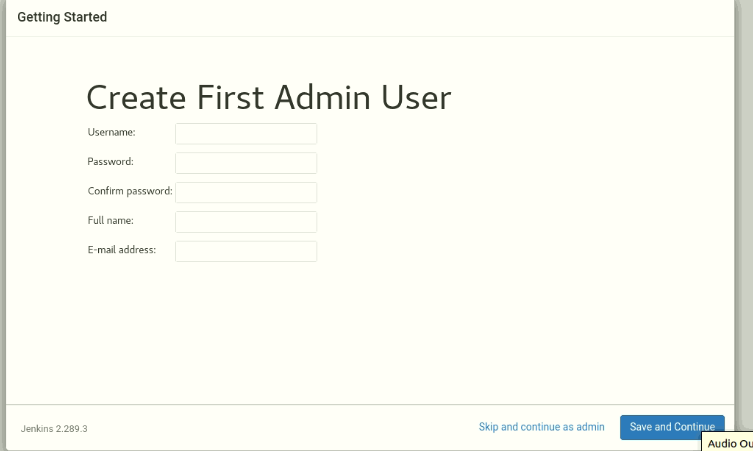


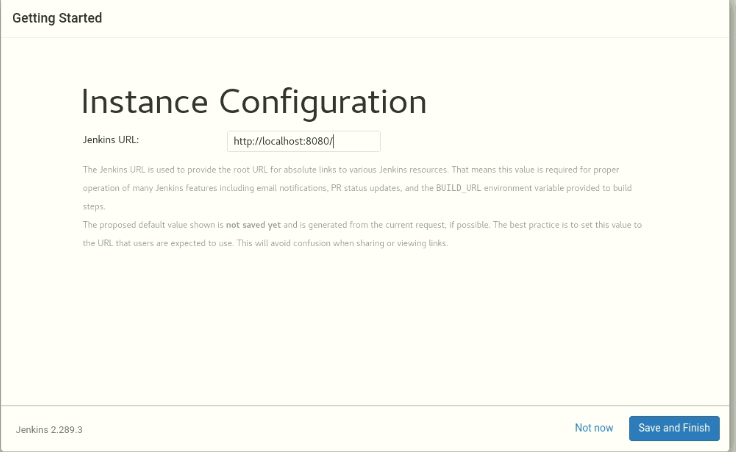
* Click on suggested plugins

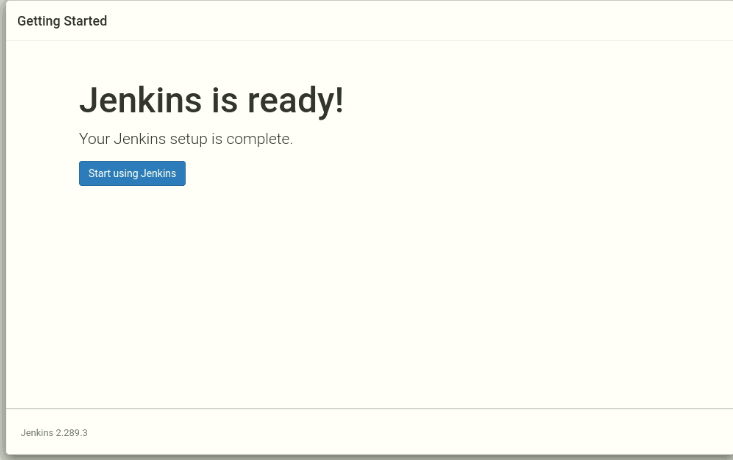


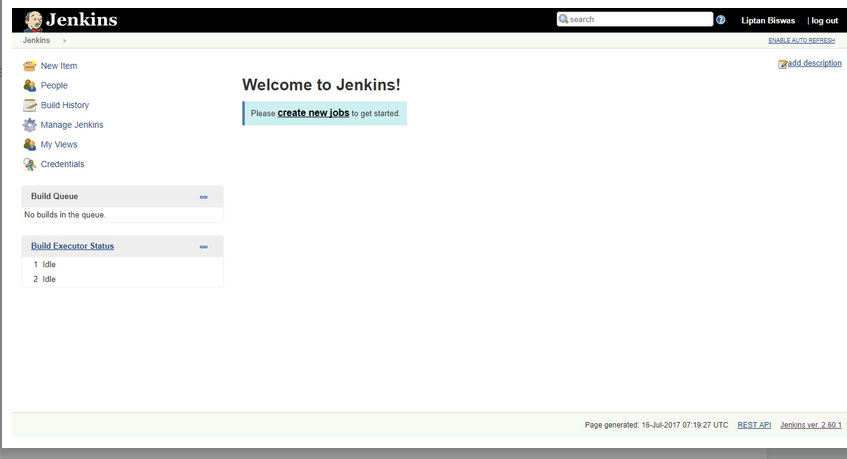


* Create your own user









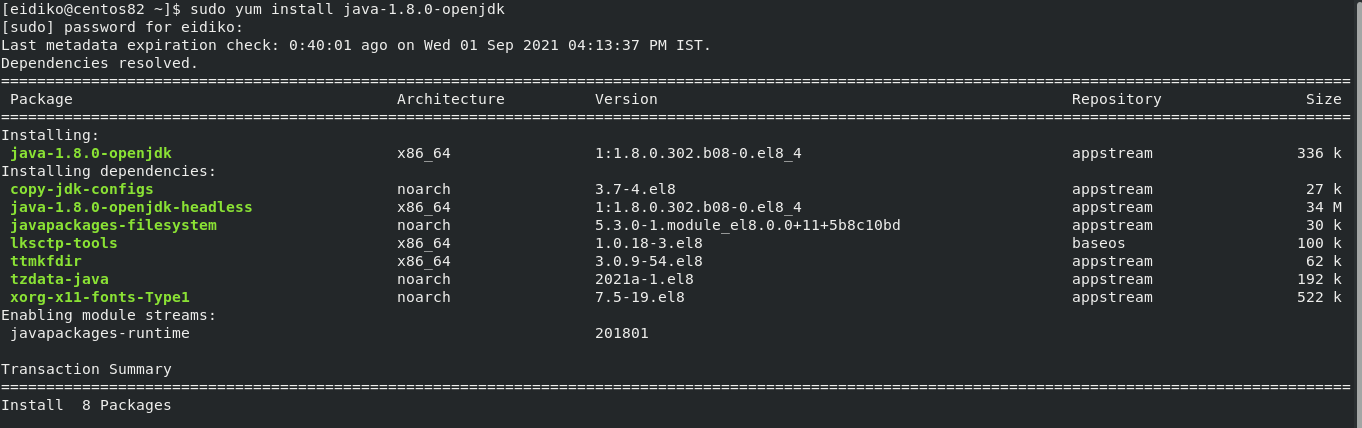
**Jenkins Installation with Apache-Tomcat:**

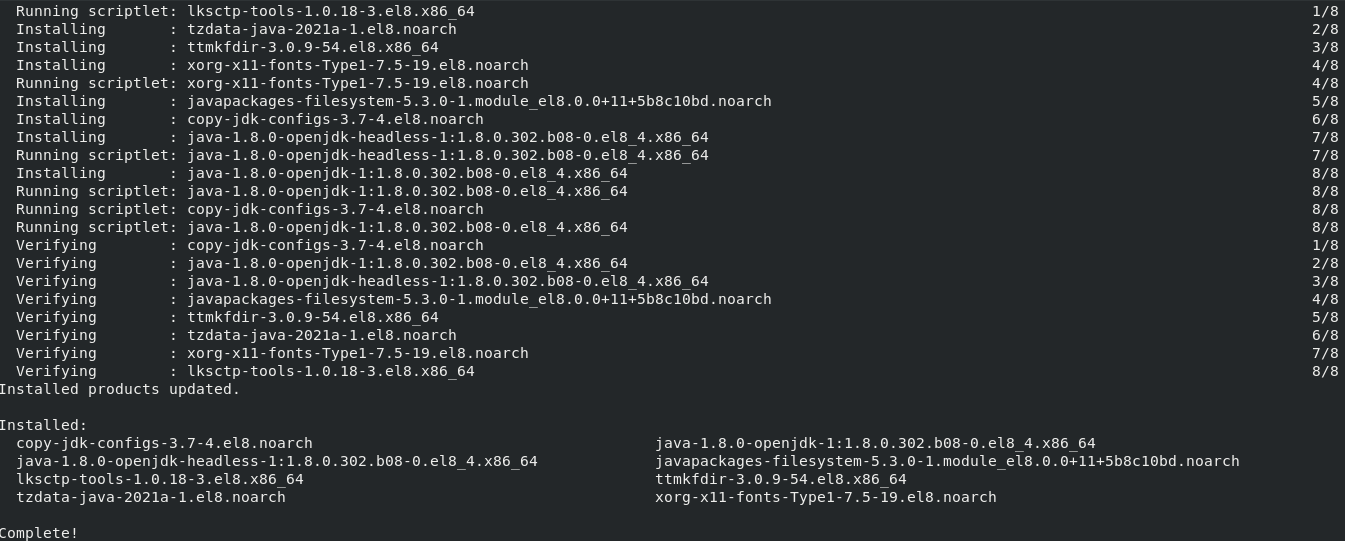
Apache tomcat is a free and open source Java based web server which provides an environment to run Java applications.

**JAVA INSTALLATION:**

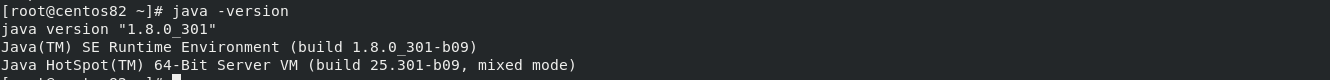
**Commands:**

* sudo yum install java-1.8.0-openjdk





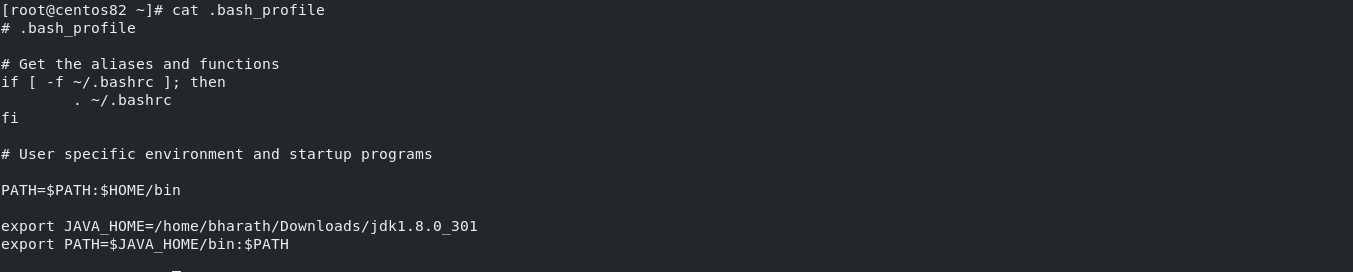
* java -version



* Add Below lines in the .bash\_profile

export JAVA\_HOME=/home/bharath/Downloads/jdk1.8.0\_301

export PATH=$JAVA\_HOME/bin:$PATH



* Run .bash\_profile

**Commands for apache tomcat and tomcat users:**

* Wget <https://archive.apache.org/dist/tomcat/tomcat-9/v9.0.0.M10/bin/apache-tomcat-9.0.0.M10.tar.gz>
* tar xzf apache-tomat-9.0.0.M10.tar.gz
* After untar goto apache-tomcat-9.0.0.M10/conf path in that goto tomcat-users.xml paste the below script in that file and save it.

tomcat-users-xml:

<tomcat-users>

<role rolename="manager-gui"/>

<role rolename="manager-script"/>

<role rolename="manager-jmx"/>

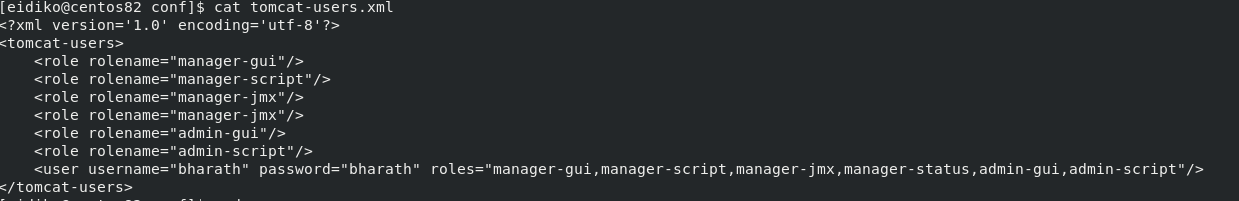
<role rolename="manager-jmx"/>

<role rolename="admin-gui"/>

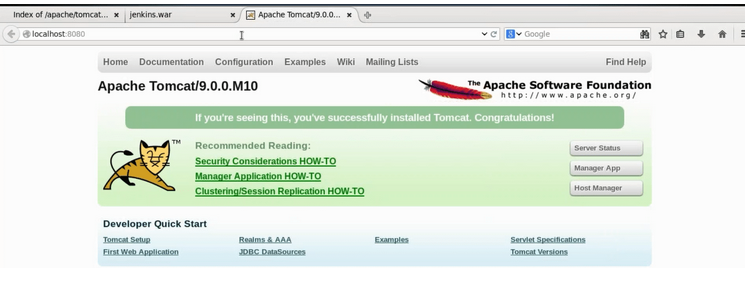
<role rolename="admin-script"/>

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

</tomcat-users>



* Goto apache bin folder and start the apache by using
* ./startup.sh
* Next goto web browser and hit the url [http://localhost:8080]



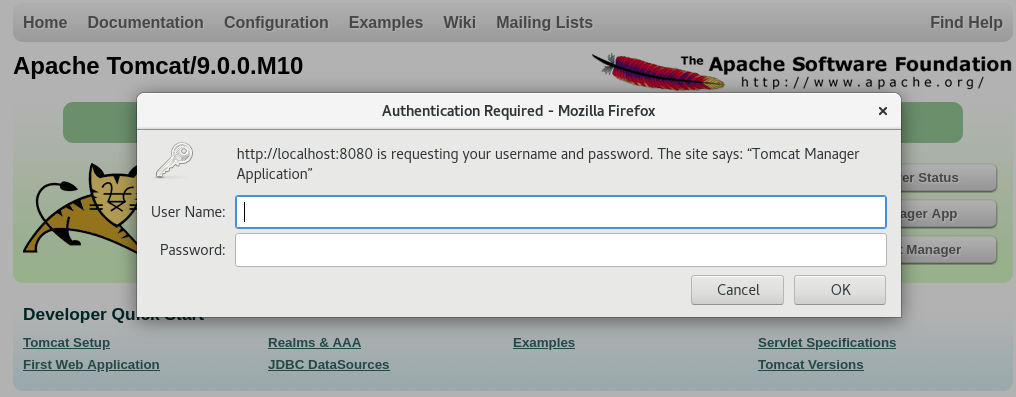
DOWNLOAD JENKINS WAR FILE:

To Install Jenkins we need to deploy the Jenkins war file by using Apache Tomcat.

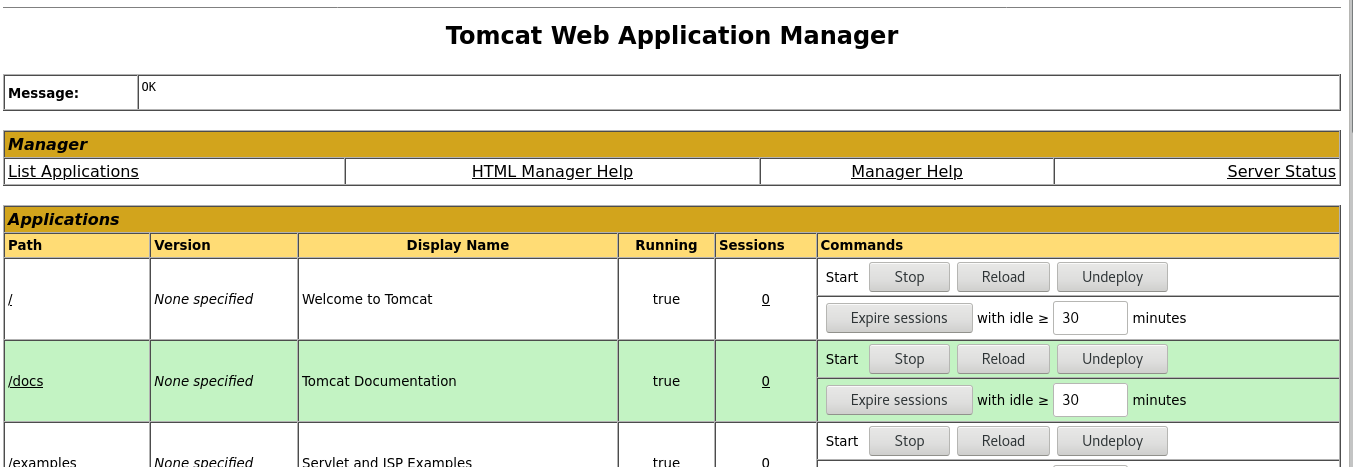
* wget <http://updates.jenkins-ci.org/download/war/2.7.3/jenkins.war>

DEPLOY THE WAR FILE:

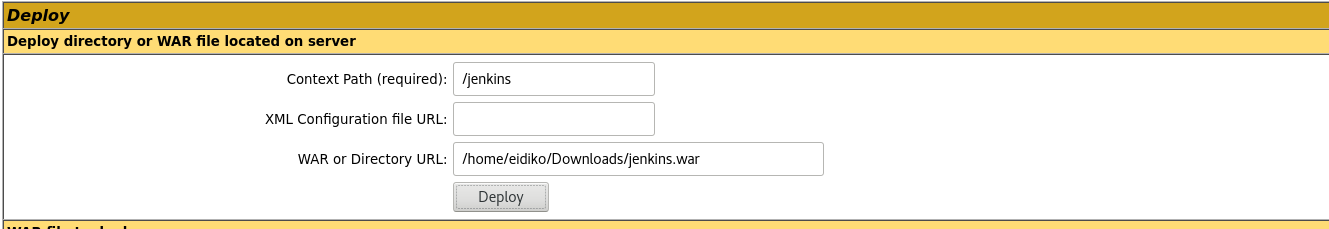
* Click on the manger App it will asks for username and password.



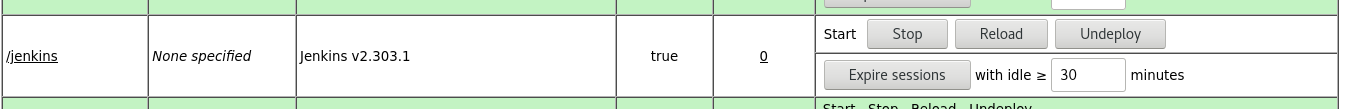
* After giving username and password it appears like this.



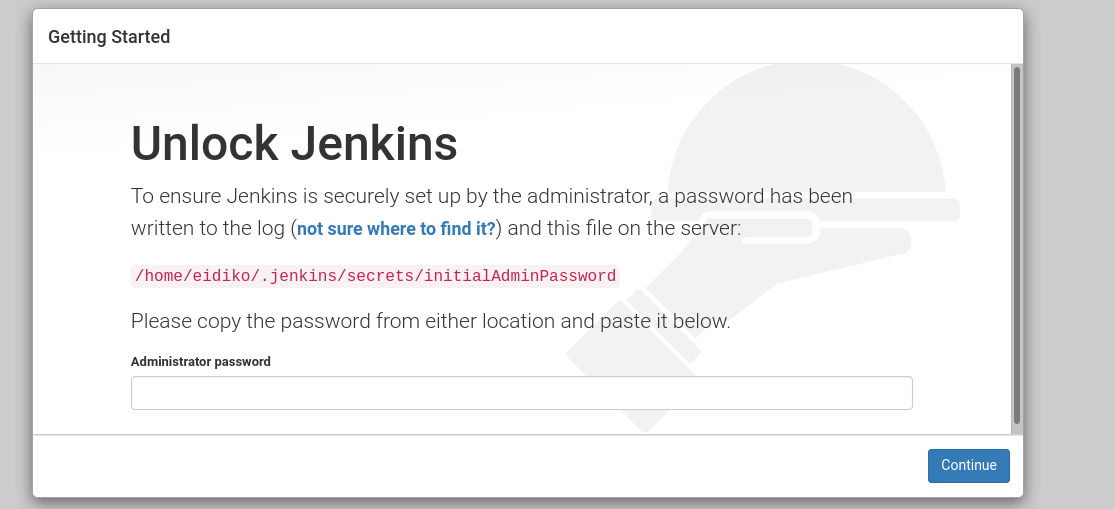
* Under deploying war file give the context path and WAR path .



* After successful deployment



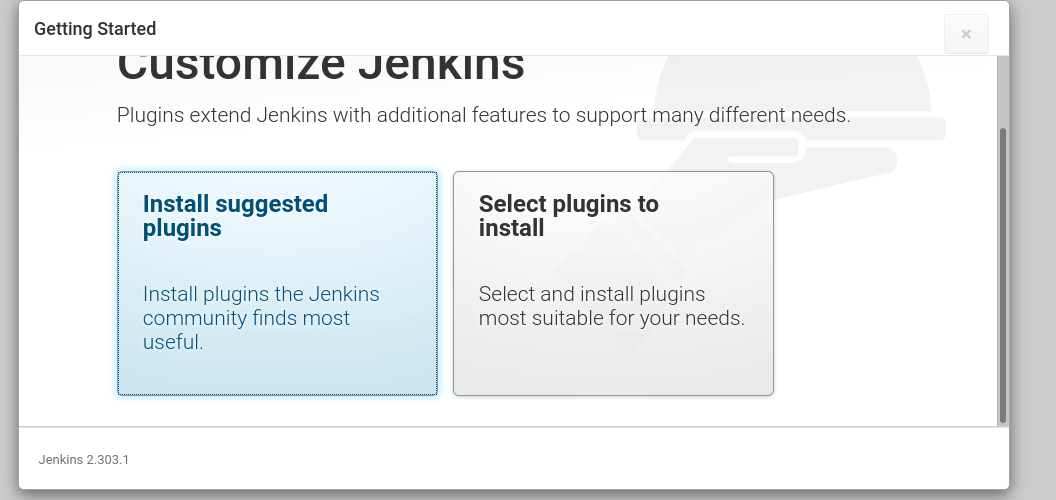
* Next click on /jenkins
* After clicking on /jenkins the page will appear like this

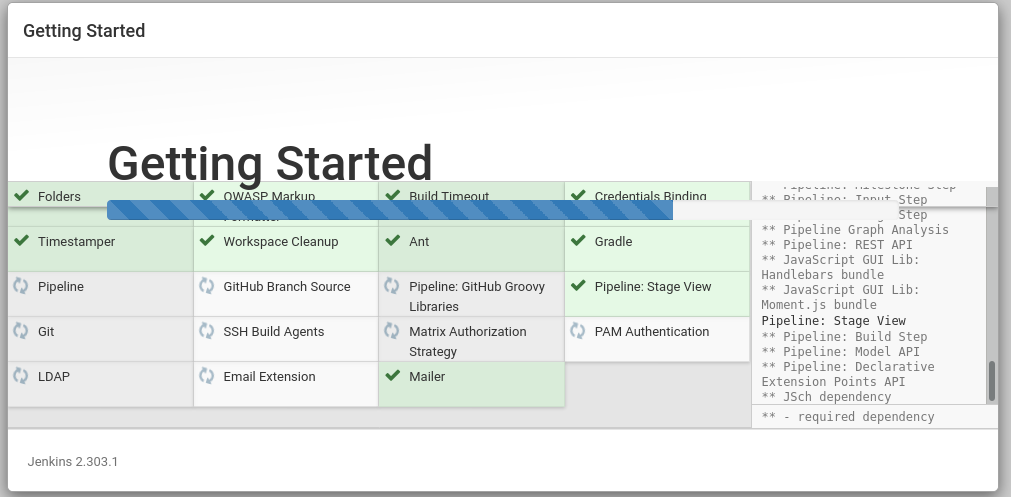


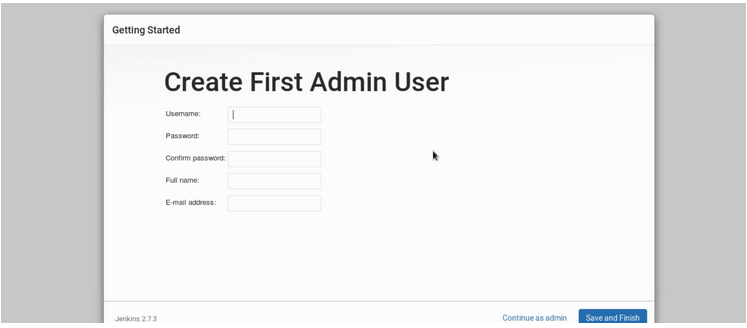
* Goto terminal and type cat /home/eidiko/.jenkins/secrets/initialAdminPassword

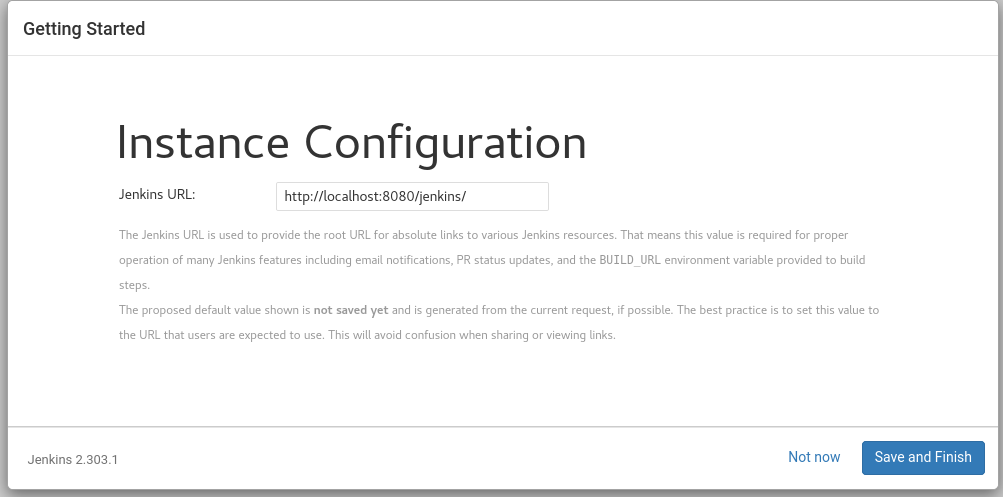


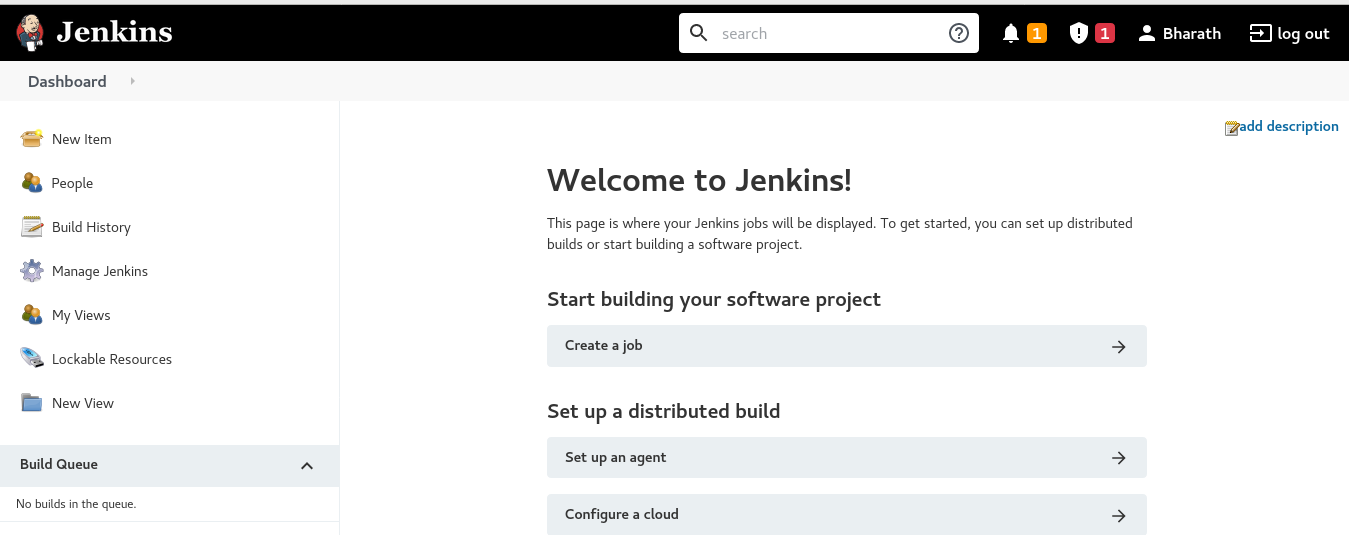
* Copy that administrator password and paste it in administrator password block











DEPLOYING SAMPLE WAR FILE IN APACHE TOMACT WEB SERVER

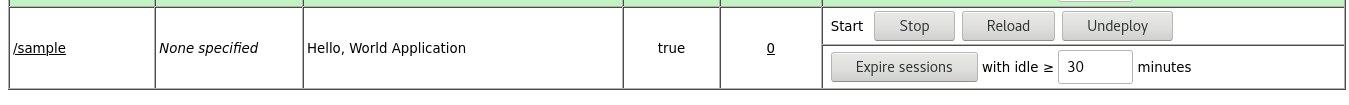
* Download the sample war file with .war extension
* Paste that war file in apache-tomat-9.0.0.M10/webapps path.

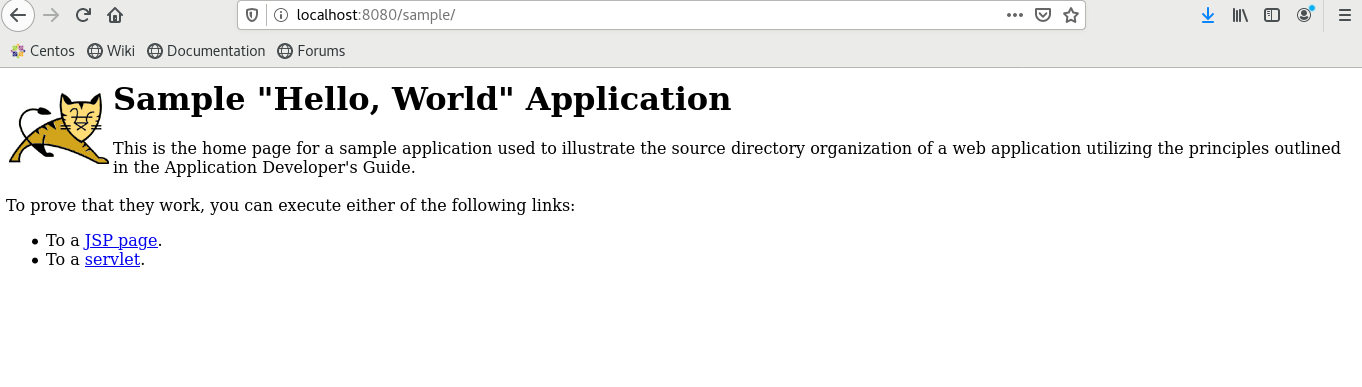


* Start the server



* Then, goto manger app and check war file is deployed or not.



* After successful deployment of war file click on /sample then it will display the output contents in the war file.

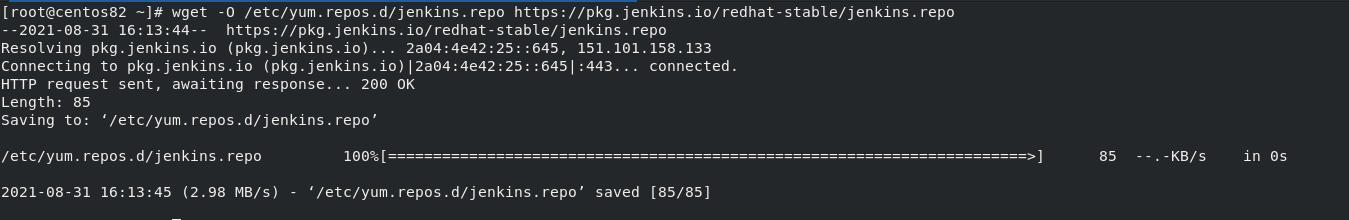
JENKINS INSTALLATION THROUGH TERMINAL

Jenkins is free and opensource Automation server used for continuous integration and continuous deployment for building and testing our applications.

Jenkins can be installed directly by adding the repository and importing the GPG key.

**Commands:**

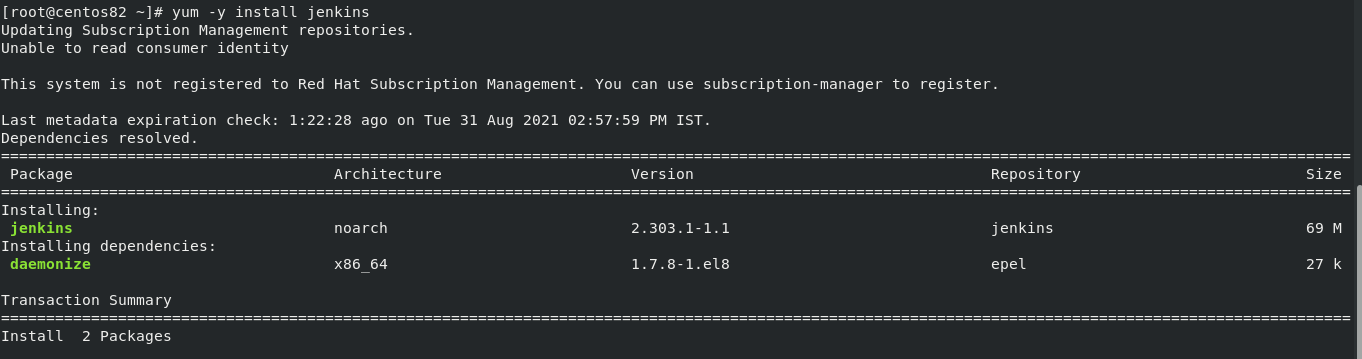
* wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo

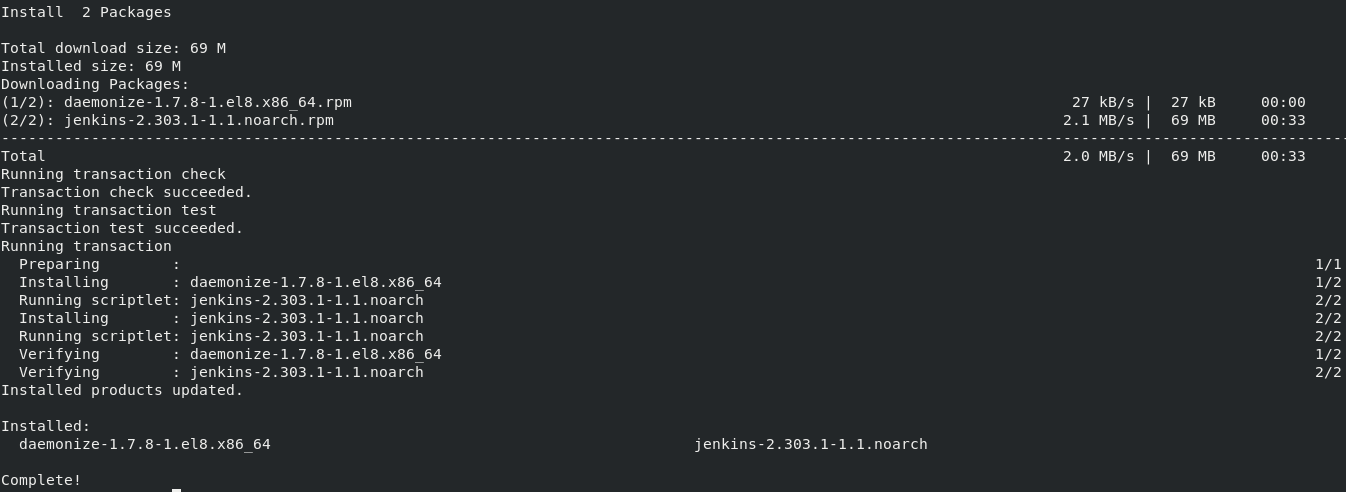


* rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key



* yum -y install Jenkins

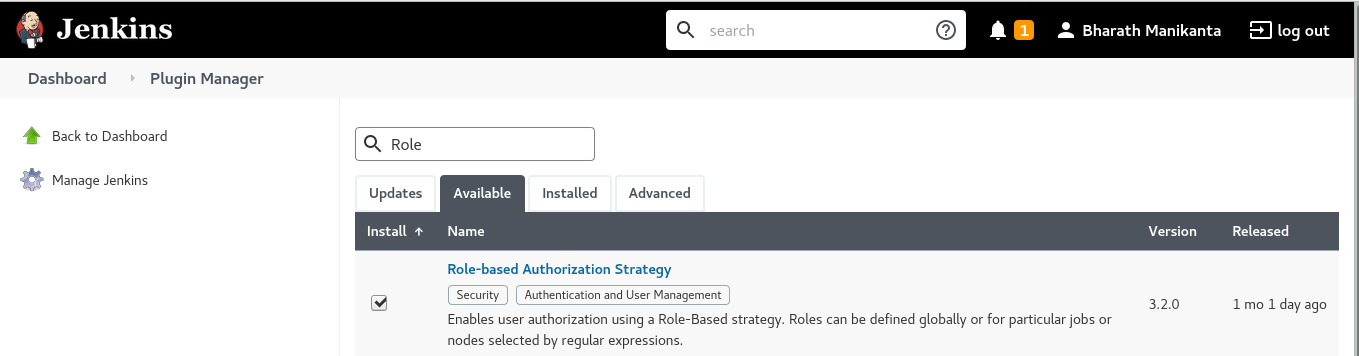




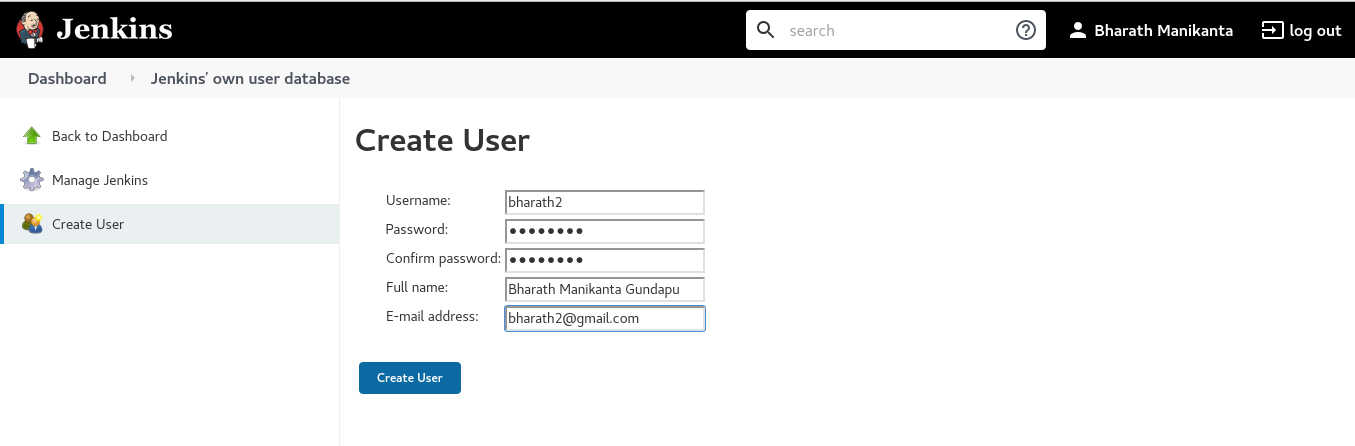
* systemctl start jenkins --🡪 start jenkins
* systemctl stop jenkins --🡪 stop Jenkins
* systemctl status jenkins 🡪 checks status of Jenkins

HOW TO CREATE USERS,ADD PERMISSIONS TO USER AND ASSIGNING ROLES TO THAT PATRICULAR USER

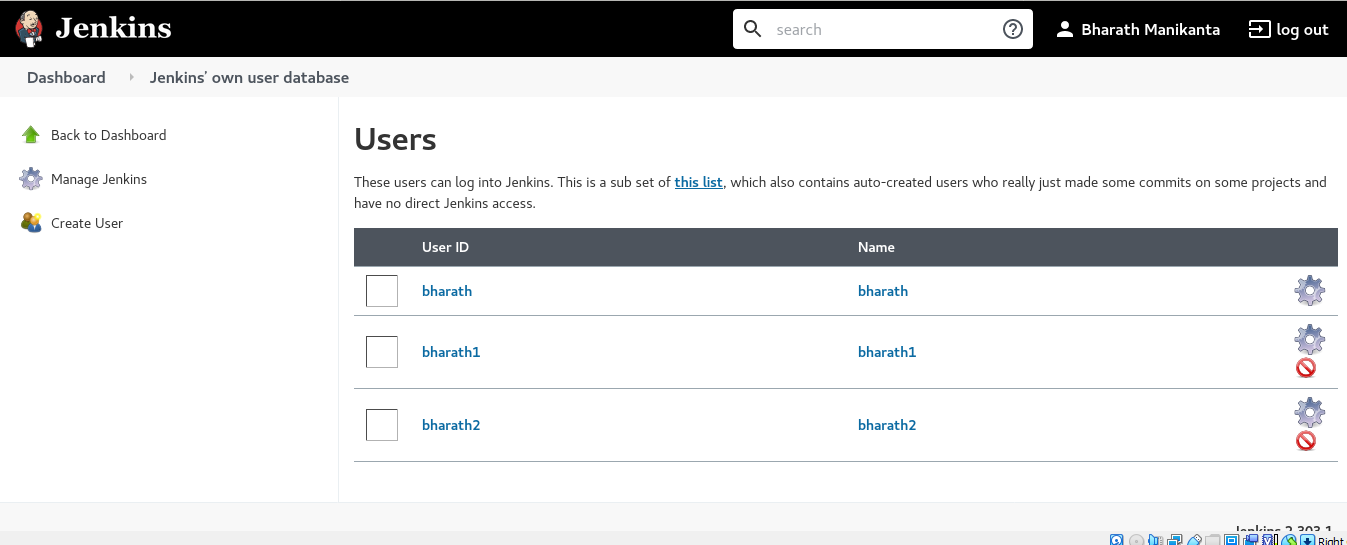
* Goto jenkins >Manage jenkins> Manage plugins> Available tab and install Role based-Authorization Strategy Plugin



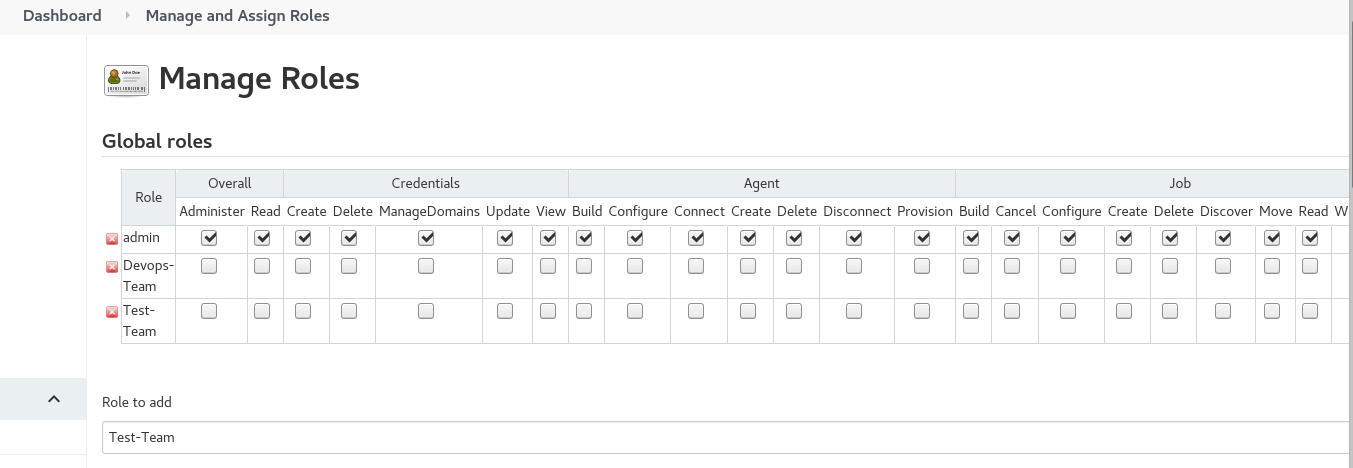
* After installation of plugin goto Manage plugins > configure-global security and select Role-based strategy
* Next goto Manage users and create users



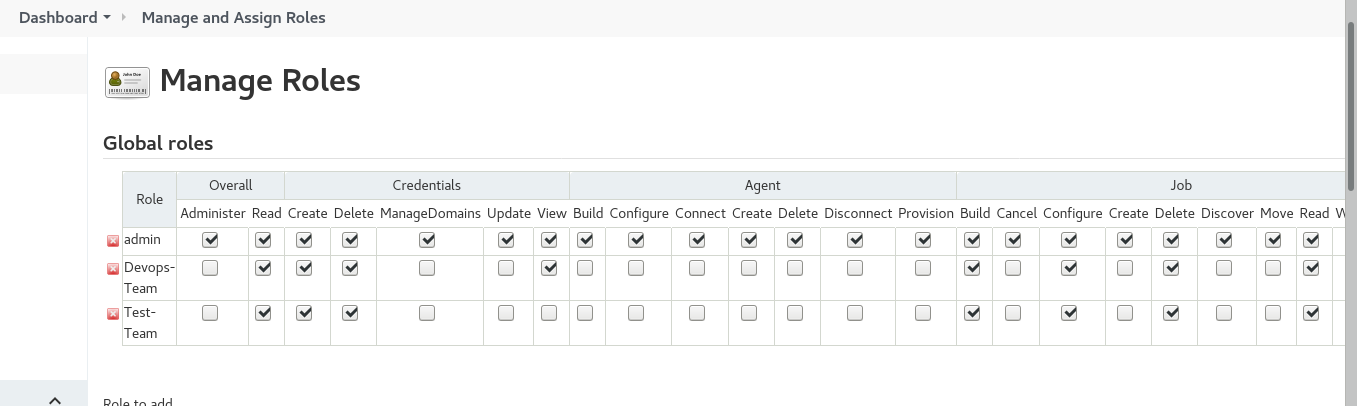
* After creating users it will displays like this



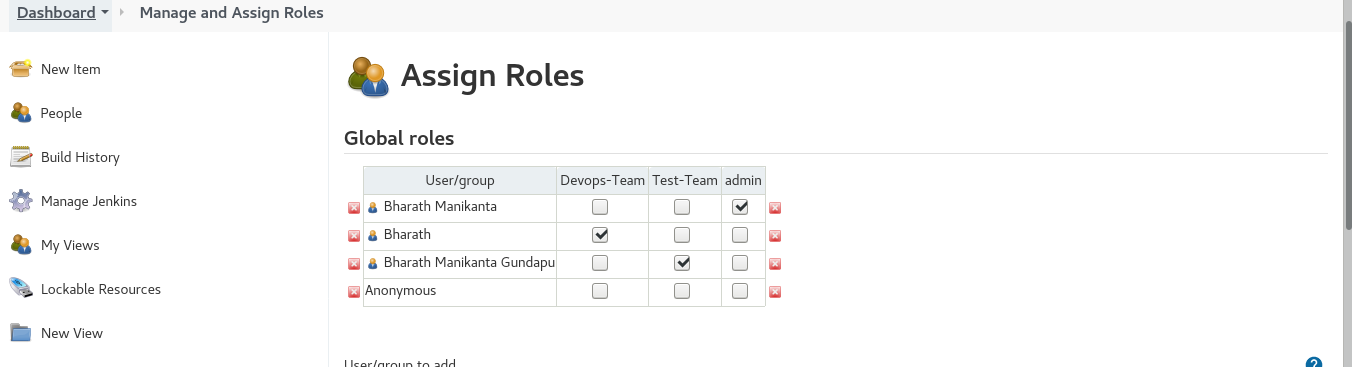
* Managing roles and Assigning roles to particular users,goto manage assign and roles
* First select Manage roles and add roles.



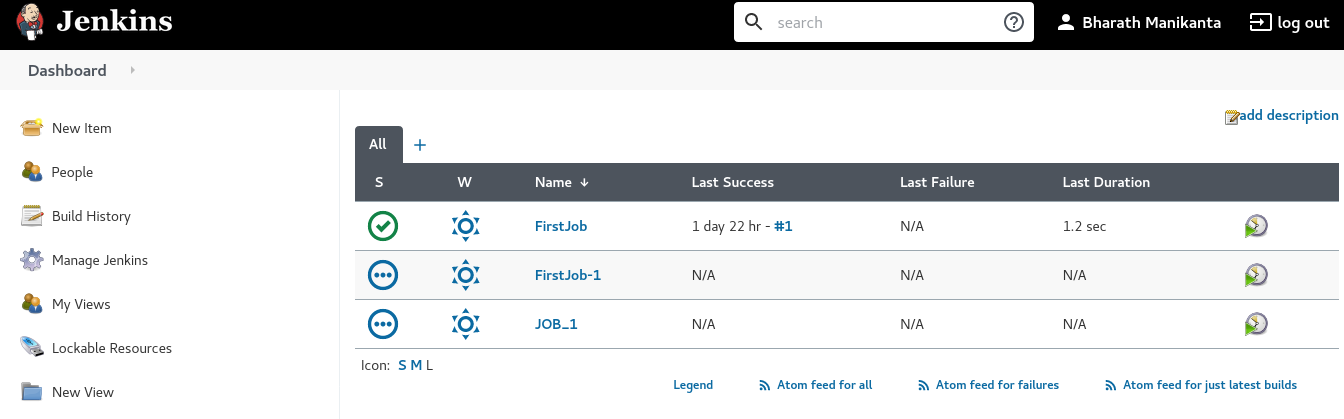
* Next giving permission to the roles which you added



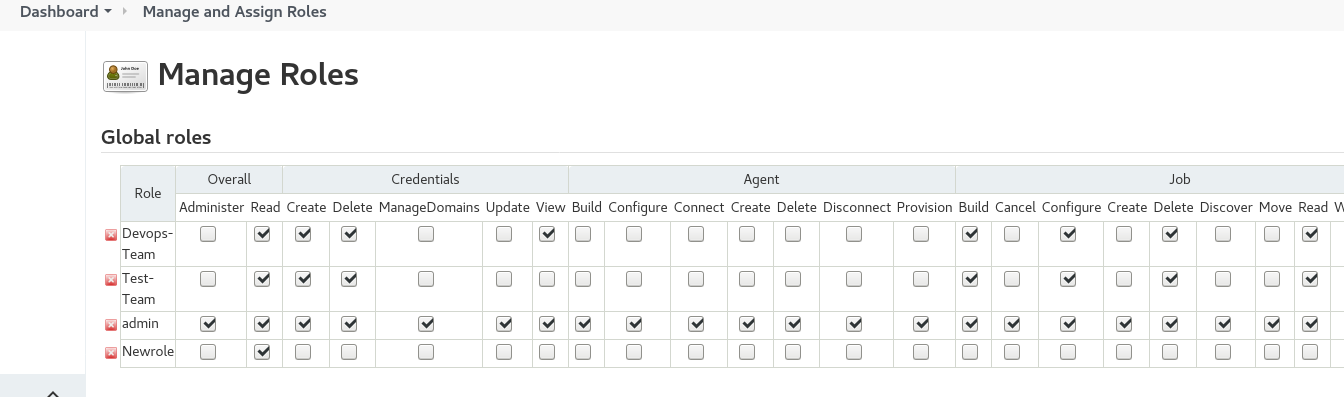
* Then,Click on assign roles and assign roles to the individual user



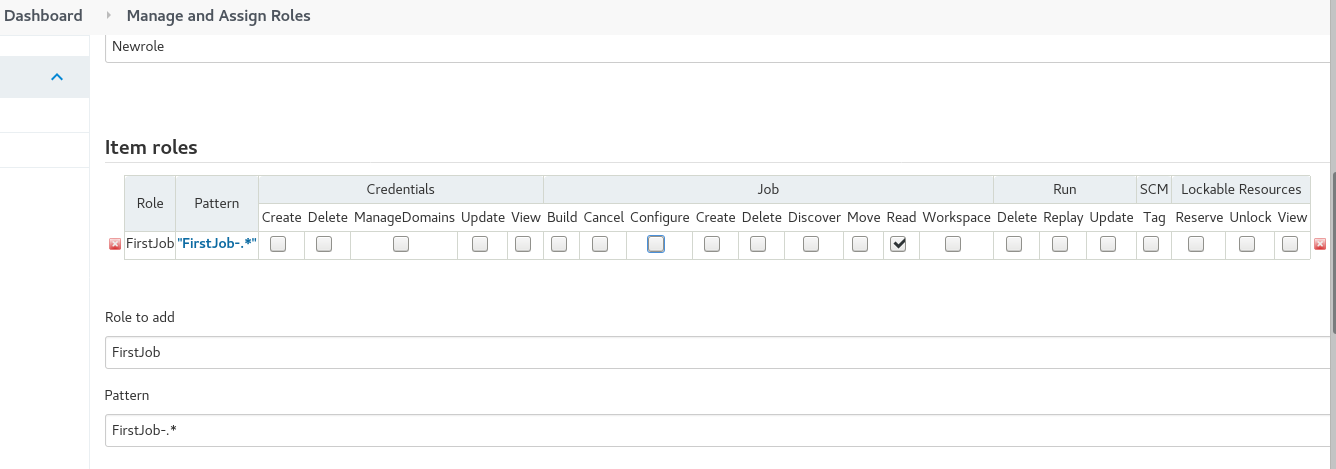
* I want to run the job with names FIRSTJOB

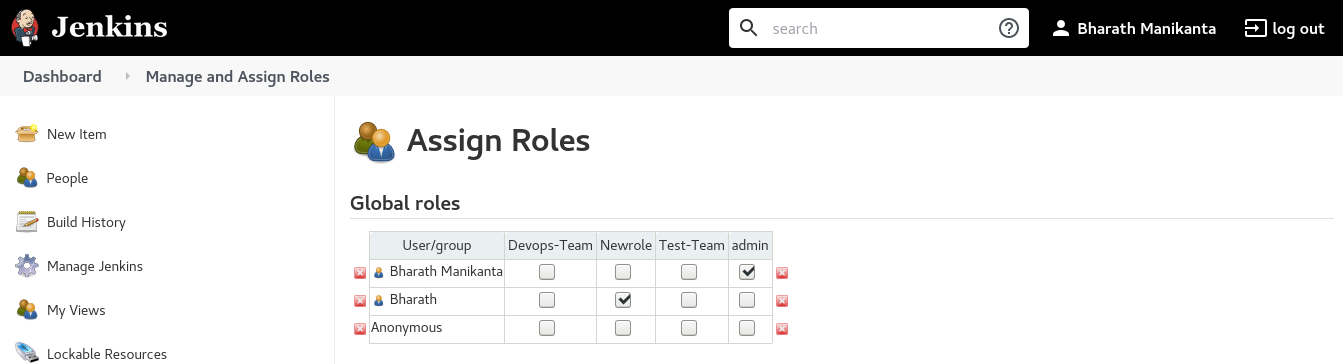


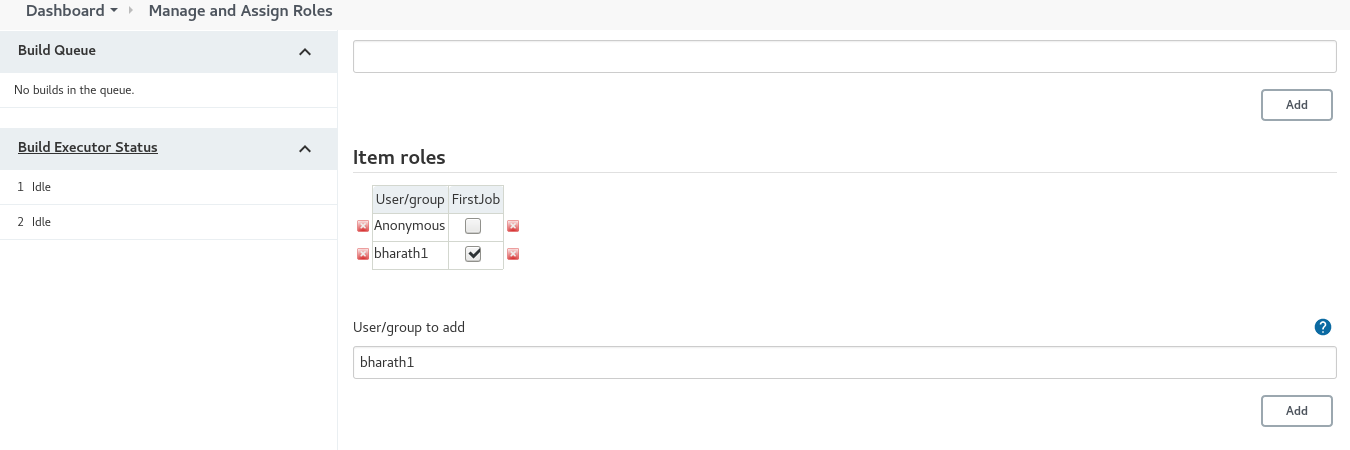
* Create a new role and give only overall read permission

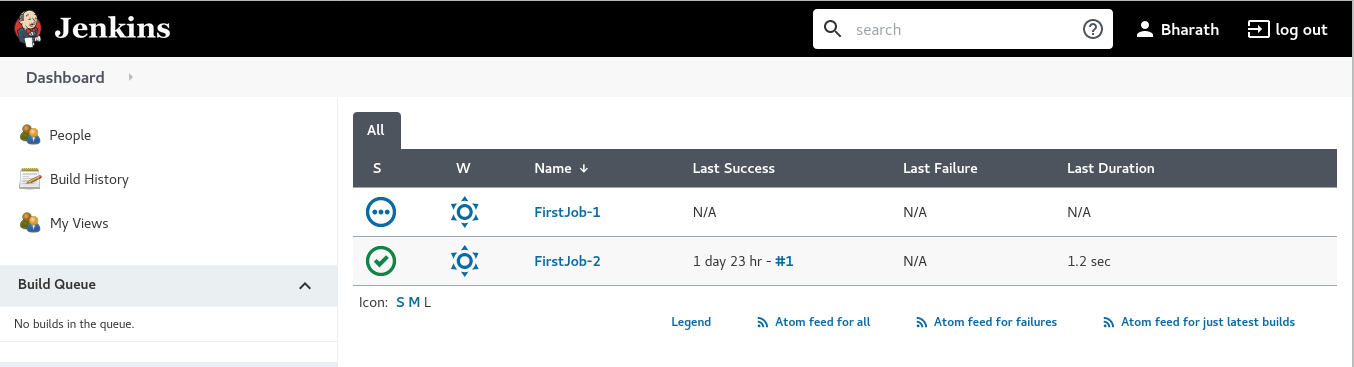


* Next,Create a project or item roles.









**Note:**

**Why does we need java for running Jenkins?**

Jenkins jobs may be executed on Java versions different from the controller/agent runtime. Generally, Jenkins allows ANY version of JRE/JDK to be invoked during the build.