**Jenkins**

* **Jenkins is a java application**
* **Used for continuous integration and continuous delivery**

1. Download Jenkins installer from [***https://jenkins.io/***](https://jenkins.io/) or war file from <https://updates.jenkins-ci.org/download/war/> and place it in a folder you can download installer or war file.

**NOTE:-** If you downloaded war file from

then Go to cmd in same directory and type ***java -jar Jenkins.war --httpPort=’any number’***

* This will command will extract Jenkins war file.
* It will start a winstone server which is a default server of Jenkins and host your Jenkins application in that server
* It will ask for admin password, get the password from cmd logging messages
* Hit localhost:8080 you will get Jenkins page
* **NOTE:-** If you downloaded installer then extract and install it. It will start a winstone server which is a default server of Jenkins and host your Jenkins application in that server.
* Hit localhost:8080 you will get Jenkins page
* It will ask for admin password, get the password from

**C:\Program Files (x86)\Jenkins\secrets\initialAdminPassword**

1. It will ask you to install suggested plugin / select plugin to install.

* You can install suggested plugin or you can go to select plugin to install and select and select nothing and then hit submit to get the clean Jenkins.

1. Now it will ask to create users for Jenkins, you can create some users or skip by hitting continue as admin. now page should apper.

**Deploy Jenkins on tomcat**

**Why we need to deploy Jenkins on any other port?**

* Jenkins run on port 8080 and it will continuously hold this port. You might want to use this post for another applications. this is a problem
* You might also want your Jenkins and application share the server for some reason.ie you don’t want to run Jenkins on default server (jetty / winstone).

1. For prerequisite you need to install tomcat 5/5+ & java 7/7+ .
2. You need Jenkins.war file. Because if you download installer then will have all preconfigured things like port, server etc. we don’t need that.
3. Place Jenkins.war file in tomcat (where u extracted your tomcat) --->webapps folder.

**If you downloaded the jar file of tomcat**

Go to tomcat->bin folder open cmd and type command

* chmod +x \*.sh ( this command will make all .sh file executable )

to start tomcat server go to tomcat->bin and type

* ./startup.sh
* Go to localhost:8080 and if u able to see tomcat home page then it is fine.

to stop tomcat server go to tomcat->bin and type

* ./shutdown.sh

1. To open Jenkins on tomcat localhost:8080/Jenkins. you will get Jenkins homepage.

**NOTE:-** you can also use eclipse to start and close tomcat instead of cli.

**If you downloaded the tomcat installer**

Go to tomcat->bin folder

* There will be a file called tomcat.exe. double click on it will start your tomcat on default port 8080

**Note:- if you start tomcat via eclipse then it will not deploy the Jenkins jar. you have to trigger via tomcat.exe.**

**create users and assign roles**

1. Open Jenkins UI and and logged in as a admin then go to

* Manage Jenkins -> manage users and create some users there
* Log out as admin in Jenkins and log in as newly created user to check weather it is working or not

1. Configure newly created user

* As soon as you logged on you will see user name at top right corner. Press the drop down and select **configure** .do your required configurations.

1. Create new roles, logged in as a admin then to create different roles you need to install Jenkins plugin called ‘[**Role-based Authorization Strategy**](https://plugins.jenkins.io/role-strategy)’

* Go to manage Jenkins -> manage plugins ->available and search for ‘[Role-based Authorization Strategy](https://plugins.jenkins.io/role-strategy) ‘ and install it.
* Go to manage Jenkins->configure global security

And in Authorization section select the **Role Base Strategy** and then apply and save.

* To check this try to logging as newly created user. Jenkins will not allow to do that
* Logged in as a admin as go to manage **Jenkins->manage and assign roles->manage roles**

Now you will see 3 sections ( global roles, project roles ,slave roles).

create global roles and assign access rights to this role. usually we provide here only view roles not add and modify roles.

In project section you can assign roles according to project. For eg tester should only see file there , developer should modify files etc create project specific role and give access rights to those roles.

In pattern section you can set pattern according to your project roles eg for tester (Test.\* ) it means all access are eligible to those project which starts from Test. Something. for developer it will be (Dev.\*)

1. To assign roles go to **Jenkins->manage and assign roles->Assign Roles**

* Add newly created user in global and project section and provide roles to them.
* To test this. Create 1 developer and 1 tester user, provide appropriate roles to them and set pattern as (Dev.\* , Test.\*)
* Create jobs with name DevAnyName and TestAntName developer should not see TestAntName and vica-versa

**To create a job in jenkins**

1. Go to Jenkins UI and click on **new Items**

* give the name of the job and select project type as **Freestyle Project** and click ok.
* You will see 5 sections, each section has it’s own

Significance.