<https://www.youtube.com/watch?v=89yWXXIOisk&index=1&list=PLhW3qG5bs-L_ZCOA4zNPSoGbnVQ-rp_dG>

@@jenkins :

-Java application

-used for continuous integration and continuous delivery

Step 1 : Download Tomcat

Step 2 : Unzip and place tomcat folder at any location.

Step 3 : Copy/Paste the jenkiins.war file inside tomcat/webapps folder

Step 4 : Goto command prompt/terminal

* Go to tomcat/bin directory
* Make all files executable : chmod +x \*.sh

Step 5 : Start Tomcat : sh startup.sh

Step 6 : Verify if tomcat started : Browser – <http://localhost:8080>

Step 7 : verify if Jenkins is running on tomcat : <http://localhost:8080/jenkins>

**####To start Jenkins standalone on a different port#####**

To start : Java –jar Jenkins.war

To start with different port number : Java –jar Jenkins.war - -httpPort=9090

###How to change home directory of Jenkins

**Jenkins Home Directory contains :**

1.All configurations

2.Plugins

3.Jobs details

4.Logs

**Why we have to change ?**

-To move Jenkins home directory to a location that has enough disk space.

-Project requirements

Step 1 : Check your current directory

Step 2 : Create a new folder

Step 3 : Copy all data from old dir to new directory

Step 4 : Change env variable-JENKINS\_HOME and set to new dir

Go to terminal and set env variable in .bashrc file

**#####How to use command line Interface(CLI)**

**Why u are more preferring to use cli?what is the difference between cli and gui?**

1.It is easier

2.Faster

3. more convinient

4.memory management(efficient) it consumes less memory than ui(user interface)

5.Continuous integration

Step 1 : start Jenkins

Step 2 : go to manage Jenkins >> configure global security > enable security

Step 3 : go to browser and type : <http://localhost:8080/cli/>

Step 4 : download Jenkins-cli.jar. Place at any location

Step 5 : test the Jenkins command line is working.

**####How to create Users + manage + Assign Roles**

**How to create New Users**

**How to configure Users**

**How to create new roles**

**How to assign users to roles**

**How to control access on projects**

**Step 1** : create new users : go to manage users and their we create users..

**Step 2** : configure users : whenever we enter into the Jenkins at the top of the right corner we will get a username whoever logged in , if we hit that one we enter into configure page their we can change user name , description and also we can create APi tokens for the user and also can change the password, in case if we want to set any ssh public key for authenticating we can set up there…This is called user configuration

Step 3 : Create and manage user roles

-first u have to install Roles Strategy Plugin

-two ways we can install plugins

1.download Roles strategy plugin from web and put into .jenkins/Plugins directory…and restart Jenkins

2.Go to manage Jenkins > manage plugins there will be update installed and available in available we install the roles strategy plugin anreload configuration from disk

Step 4 : Manage Jenkins > Configure global security > Authorisation > role based strategy.

Go to manage And Assign Roles this will be seen if we select Roles Based strategy only..

If we hit manage and assign roles we get 3 options :

1.Manage roles

2.Assign Roles

3.Role Strategy Macros

If we hit manage roles then we enter into the configure page like Global roles, Project Roles, Slave roles

Global role means that provides access and authorization global level

projec role means that provides access and authorization project level

Manage role is used to create roles and assign role is used to add the users to those roles..

For Ex : see this video : <https://www.youtube.com/watch?v=QvFungzXI5s&list=PLhW3qG5bs-L_ZCOA4zNPSoGbnVQ-rp_dG&index=5>

**####getting started with JOBS**

1.How to create basic Job in Jenkins

2.Basic job configurations

3.how to run the job remotely

4.How to chain Job Execution

Step 1 : Jenkins – new item – add details

First select new item from the Jenkins dashboard and select a name for the job and select Free style job and click ok and it take us to configure page there we get five sections like

General, Source code management, Build triggers , Build and post build actions. And configure these sections and we save it…

Step 2 : How to trigger the job remotely

Go to job configure and hit Build trigger option and select the trigger build remotely option we get Authentication token we provide token as our wish and we hit the url in browser as provided below and we trigger the build from outside that means remotely

Step 3 :

**###How to chain job executions**

Go to Jenkins dashboard and create a 3 new jobs …after that enter into configure page and hit build trigger section and select build after other projects are build and provide for example test1 and hit post-build action select build other project and provide test3 and save it

And run test1 as soon as test1 is finished test2 and at last test 3 is executed

**####Jenkins integration with git**

1. Create a java code or program and run it through command line

2.Create a Jenkins job to run the java program

3.Add this program/project to git

4.Jenkins – add git plugin

5.Configure Jenkins job to trigger the execution when a change is pushed to github

Step 1 : Create a java program

Step 2 : Create Jenkins job to run the program

Step 3 : Add project to Git and Github

Step 4 : if we want to add poll scm we can add poll scm…so it triggers every minute..

**######How to use catlight(Jenkins build monitor)**

We can download from <https://catlight.io>

**#####what is automated Deployement**

Automated Deployement is the process of automating the deployement process in a continuous Delivery system like

Build > Deploy > Test > Release

1.First we build the code and a war/ear file is generated

2.And we deploy those war/ear file in test environment like functional tests and non-functional tests/Performance tests

3.After passing tests successfully

4.we deploy/release into the production

Corresponding to every stage we have jobs and all these jobs are chained

When the build jobs are successful then only the deployement jobs are triggered then deployement jobs are successful only the test jobs are triggered….so all the jobs are chained in a continuous integrated system…..

After every job we will have notification and it tells about status of job or is there any issue…

**#####Pipeline :**

Pipeline is a workflow with group of events or jobs that are chained and integrated with each other in sequence.

Every job in a pipeline has some dependency on one or more other jobs

@@continuous delivery = Build + test + deploy + relesase for every stage there we will have a notifications….

**####Upstream :**

A job to be executed before current job