Jenkins Installation Process

https://www.youtube.com/watch?v=woMAXn4e8NA

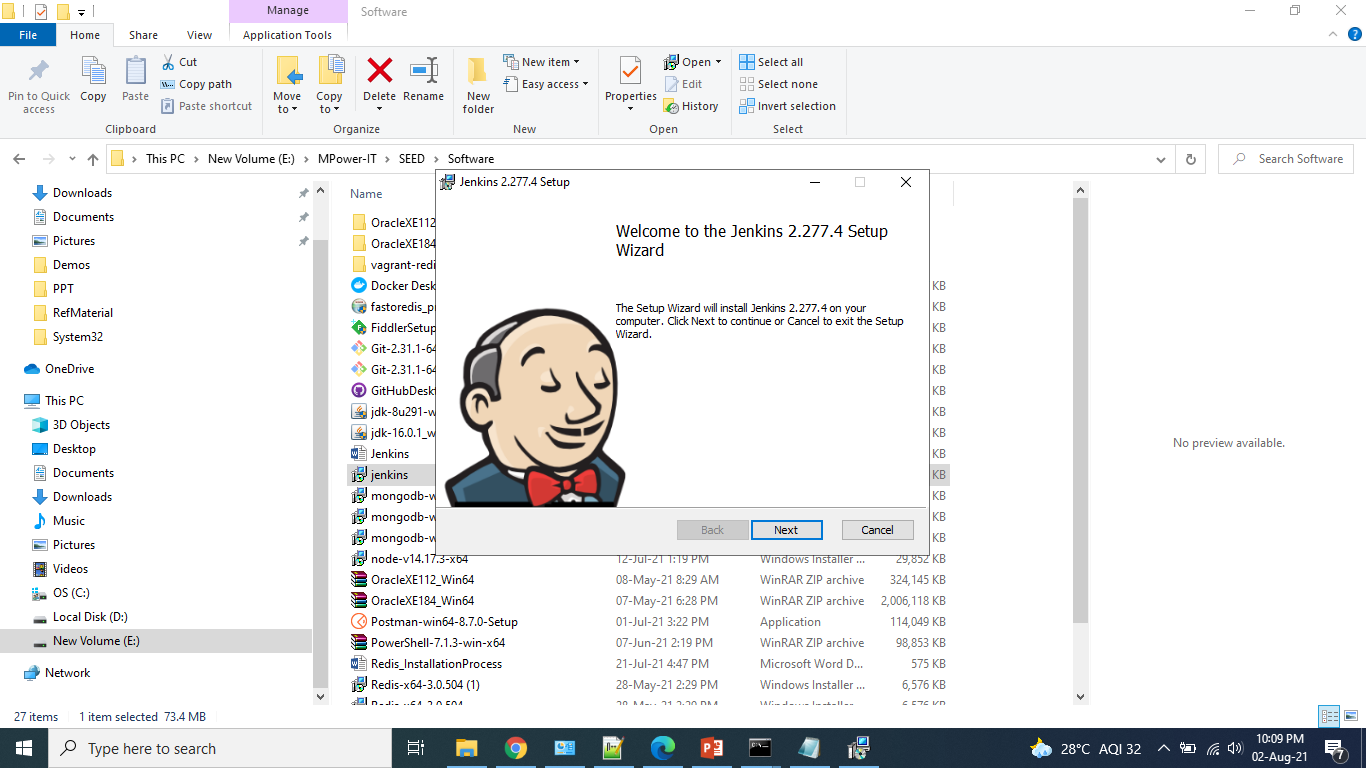
https://www.youtube.com/watch?v=FX322RVNGj4

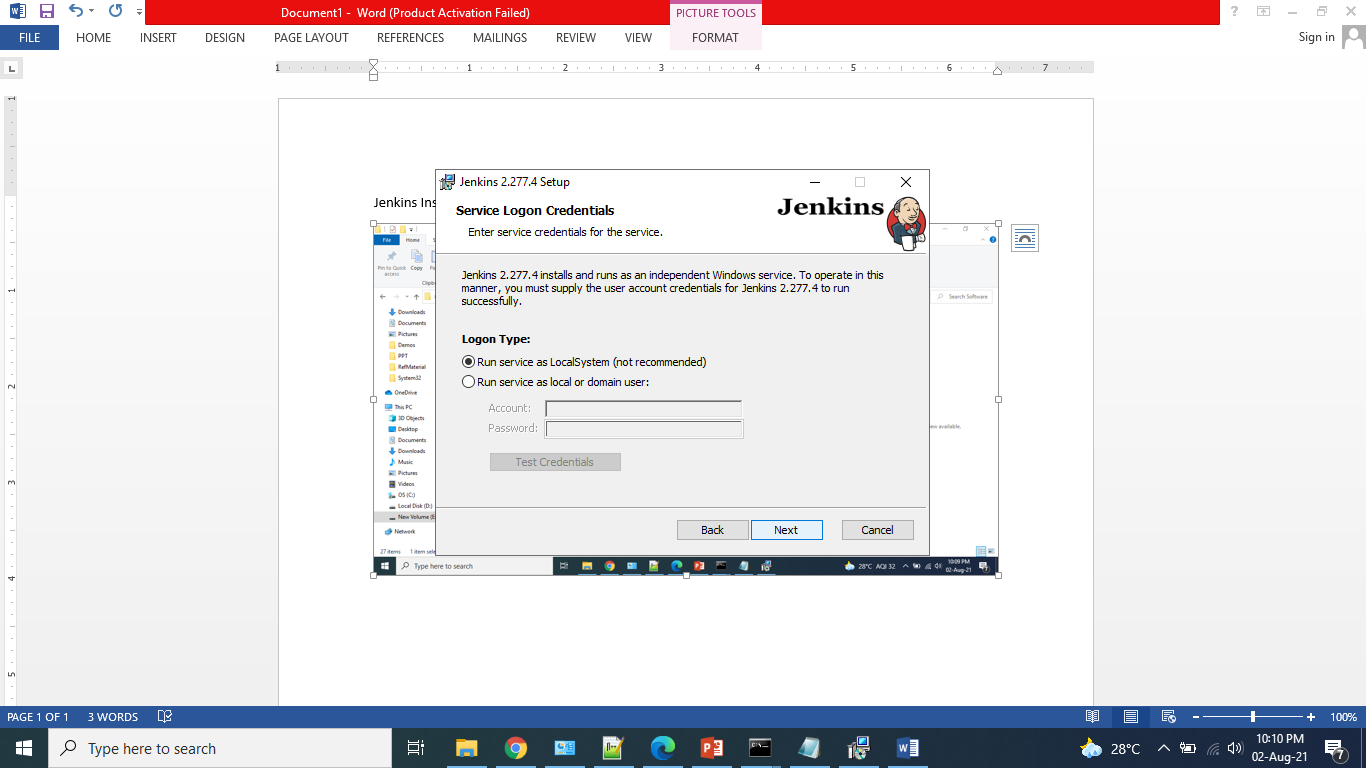
Simplilearn – Java Based- Maven

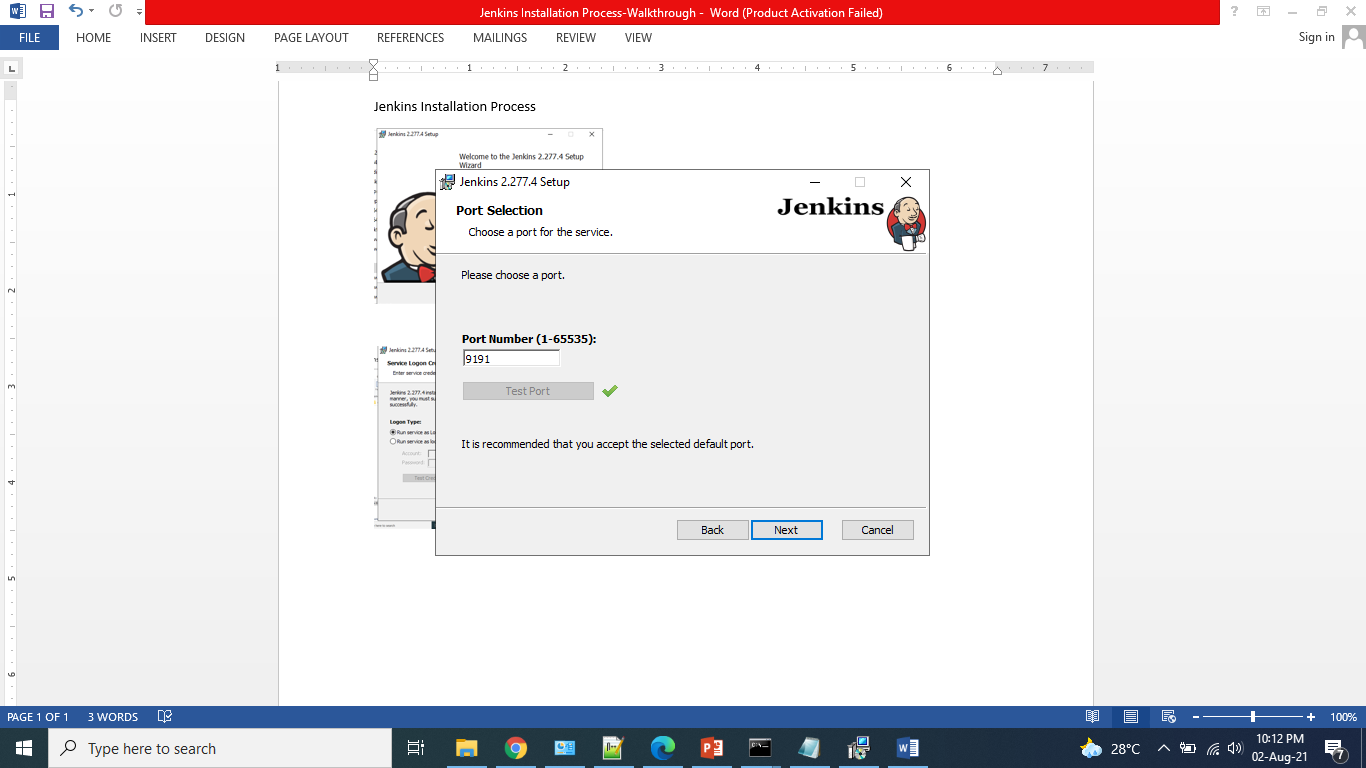
https://www.youtube.com/watch?v=3a8KsB5wJDE

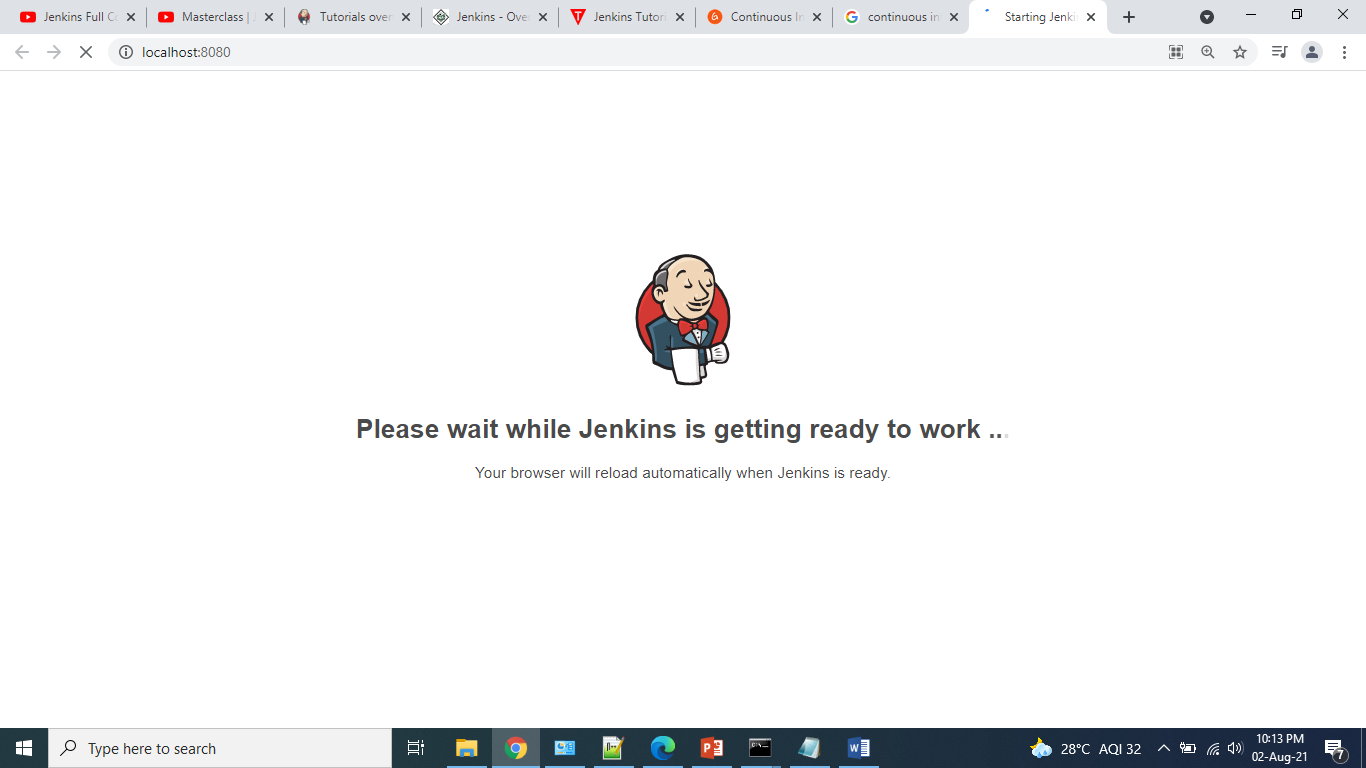
Edureka (Master / Slave)- Scripted pipeline1.21

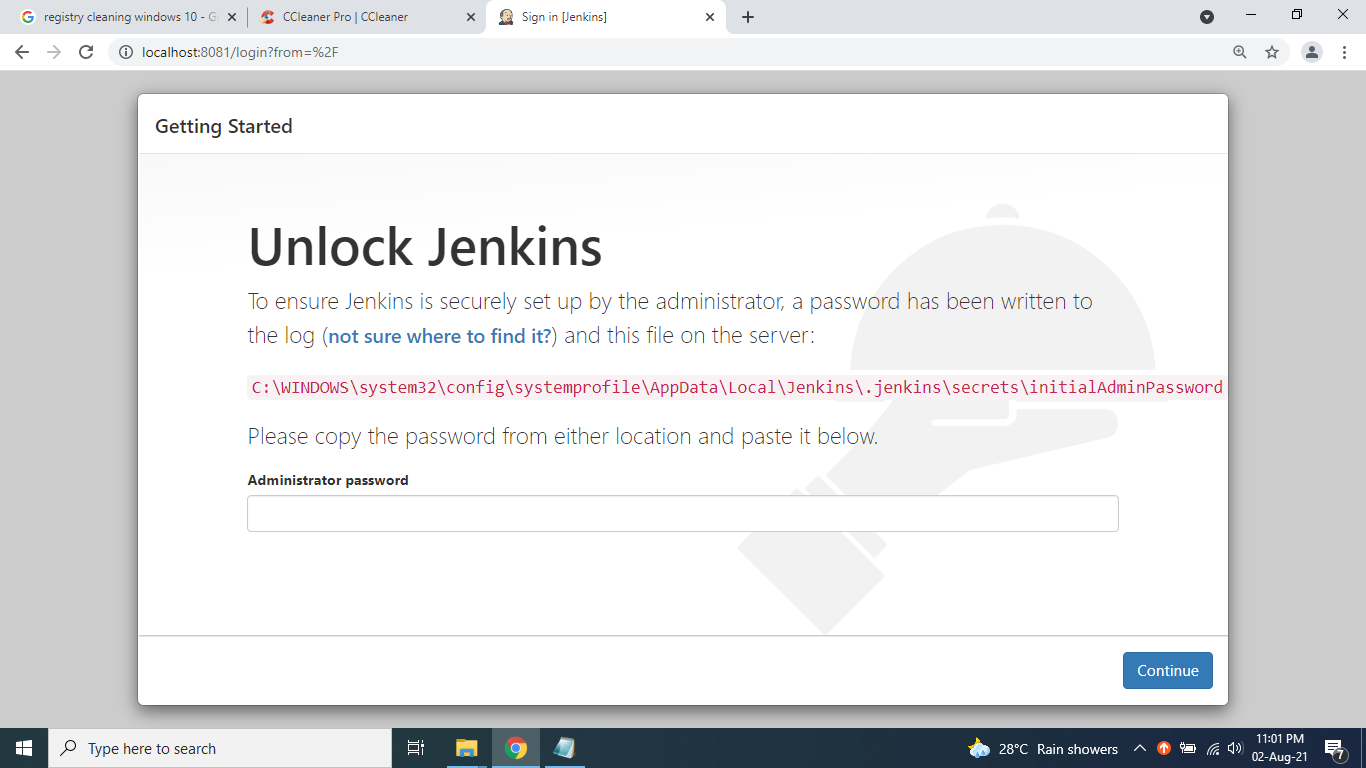
1:55 Min – create jobs



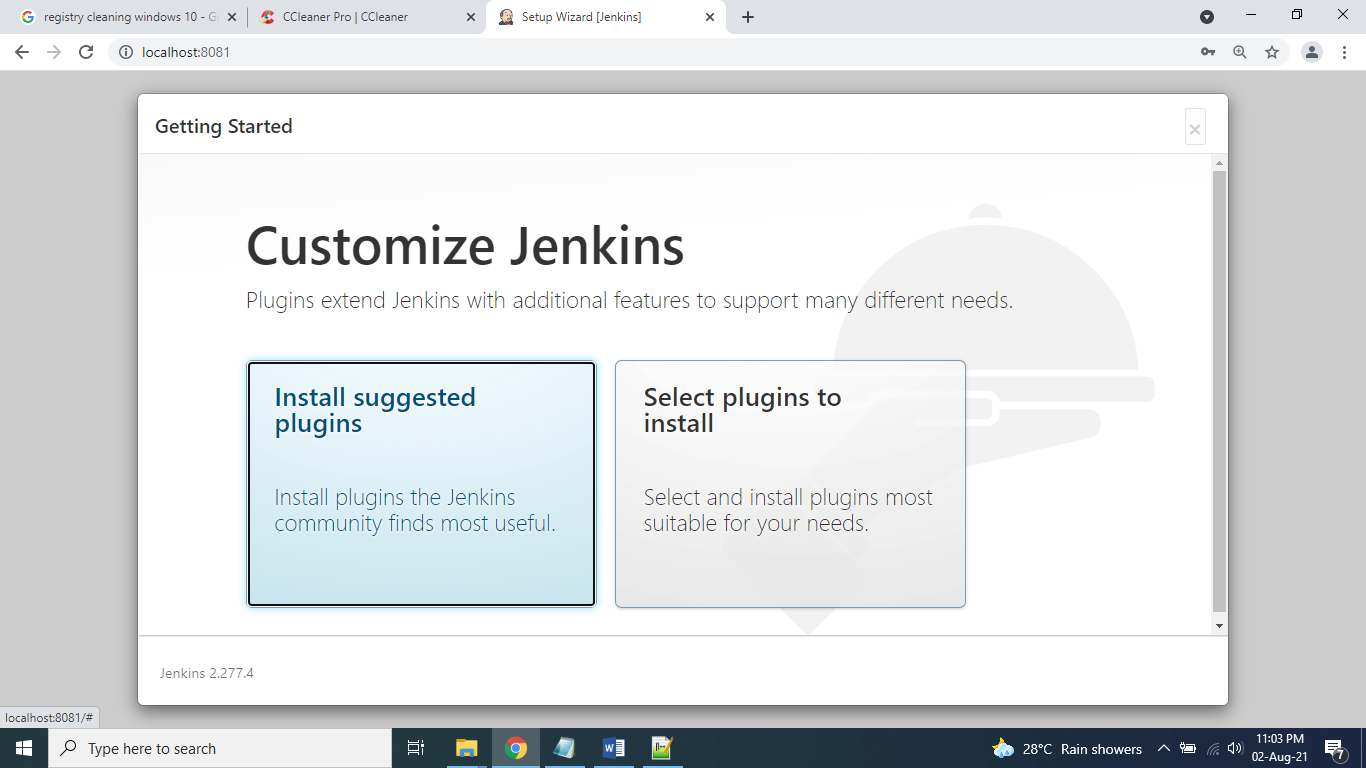


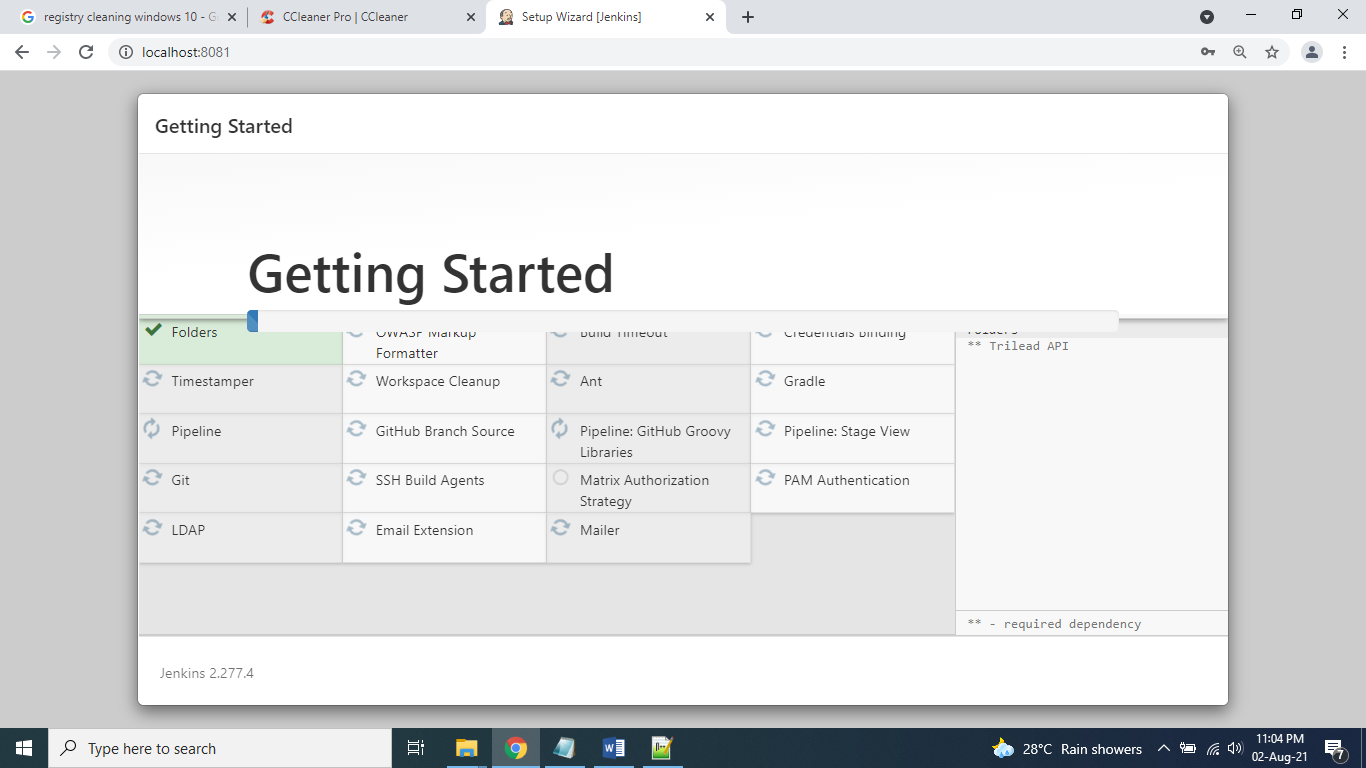






Password Key : 4dfd9b810eb74e899f8a23ab33e96090





**User Details**

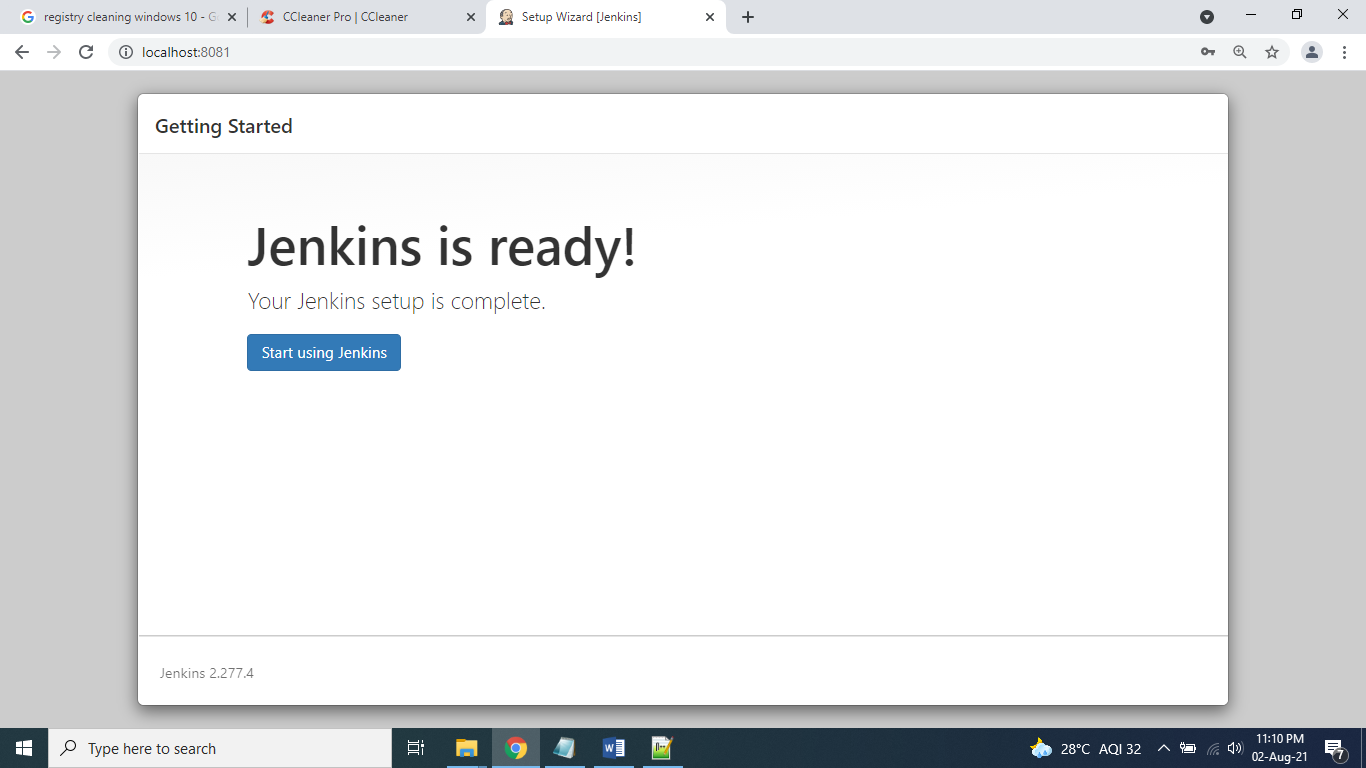
Username : kavitav

Password : kavita@123

Full name

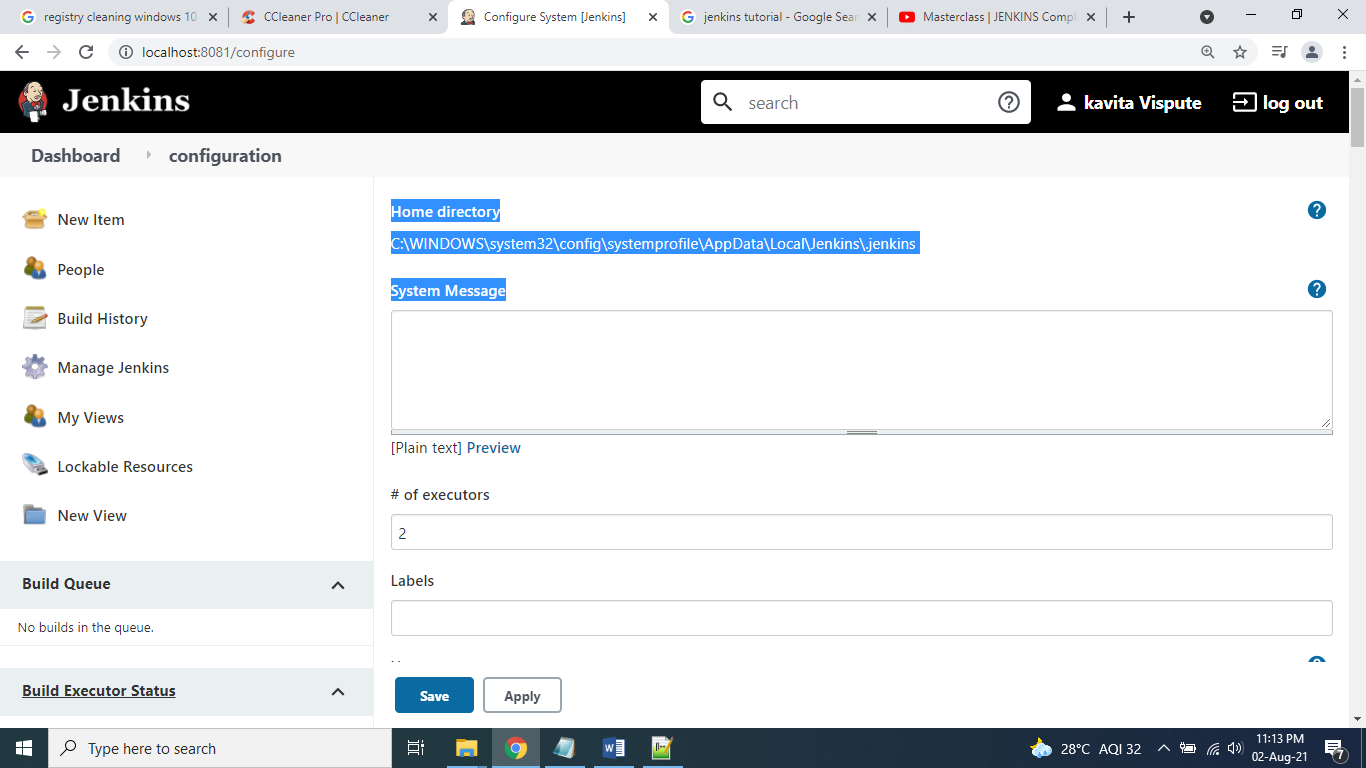
Email id : [kavita17.vispute@gmail.com](mailto:kavita17.vispute@gmail.com)

Jenkins URL : <http://localhost:8081/mpower>



https://www.youtube.com/watch?v=woMAXn4e8NA

Home Directory



Jenkins.xml

JENKINS\_HOME

Demo-1

Download and install Jenkins

Place the war file into any location

Goto commad Window

To start Jenkins

-java –jar Jenkins.war

OR

-java –jar Jenkins.war –httpPort:8081

GOTO browswer

Localhost:8080

Enter the pass word from initialAdminPassword

Save and continue

Start Jenkins initial screen

Next

Installed Suggested plugins or Select plugins

Next….

Create User

User Name

Password

…….

Start Jenkins……

Check all Jenkins directory

Install required plugins

Start Jenkins

Demo-2

Why Tomcat

Winstone

Servlet container

Demo-3

Change Home Directory to any location and

Set the environment Path

**to change the home directory**

* create new folder
* copy old files to new folder
* set env\_variable in system settings
* check the home directory agains

Demo 4

Command Line

Step: 1 – Jenkins

From command Prompt

Java – jar Jenkins.war –httpPort =8081

Go to Jenkins configuration

Configure Global Seucrity-> Enable Global Security

<http://localhost:8081/cli/>

**java -jar** [**jenkins-cli.jar**](http://localhost:8081/jnlpJars/jenkins-cli.jar) **-s http://localhost:8081/mpower/ -webSocket help**

download Jenkins-cli.jar place at any location

collection the pass phrase from login admin

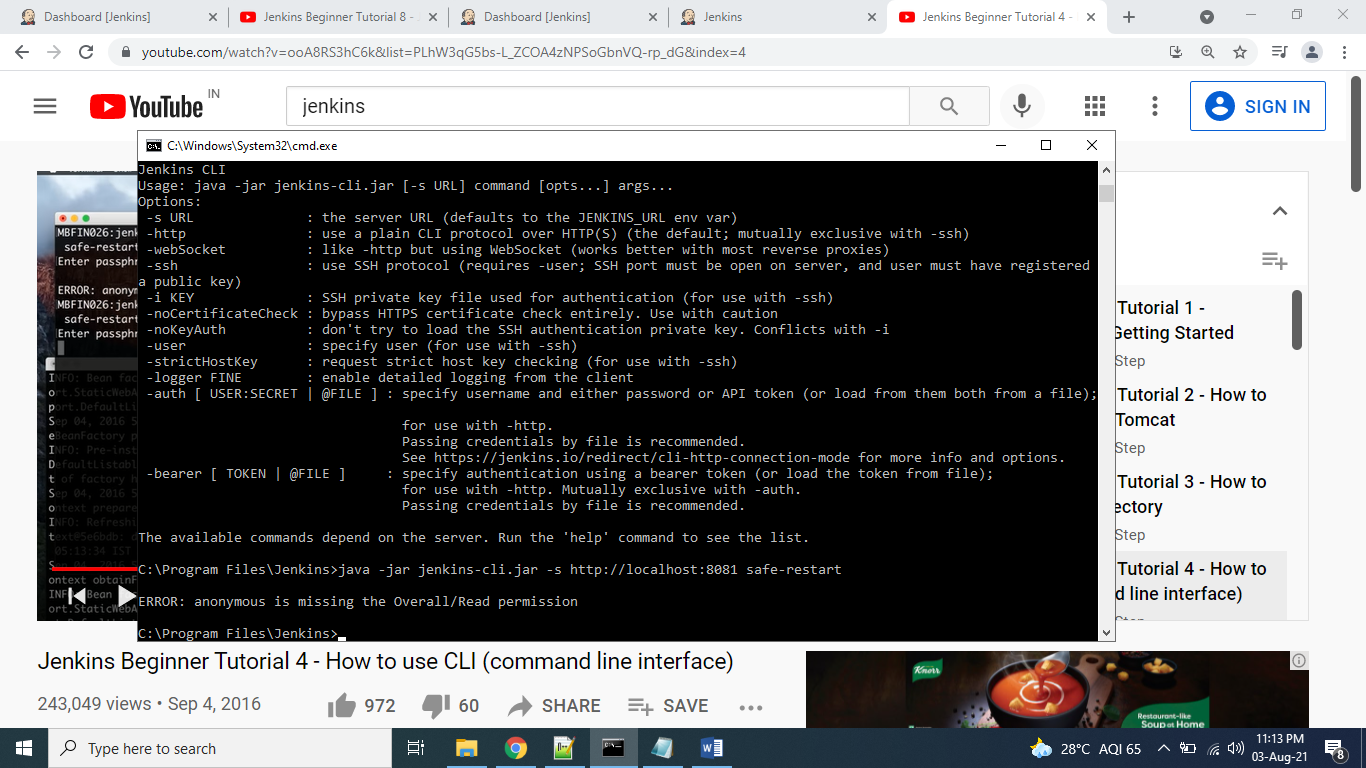
goto confifure

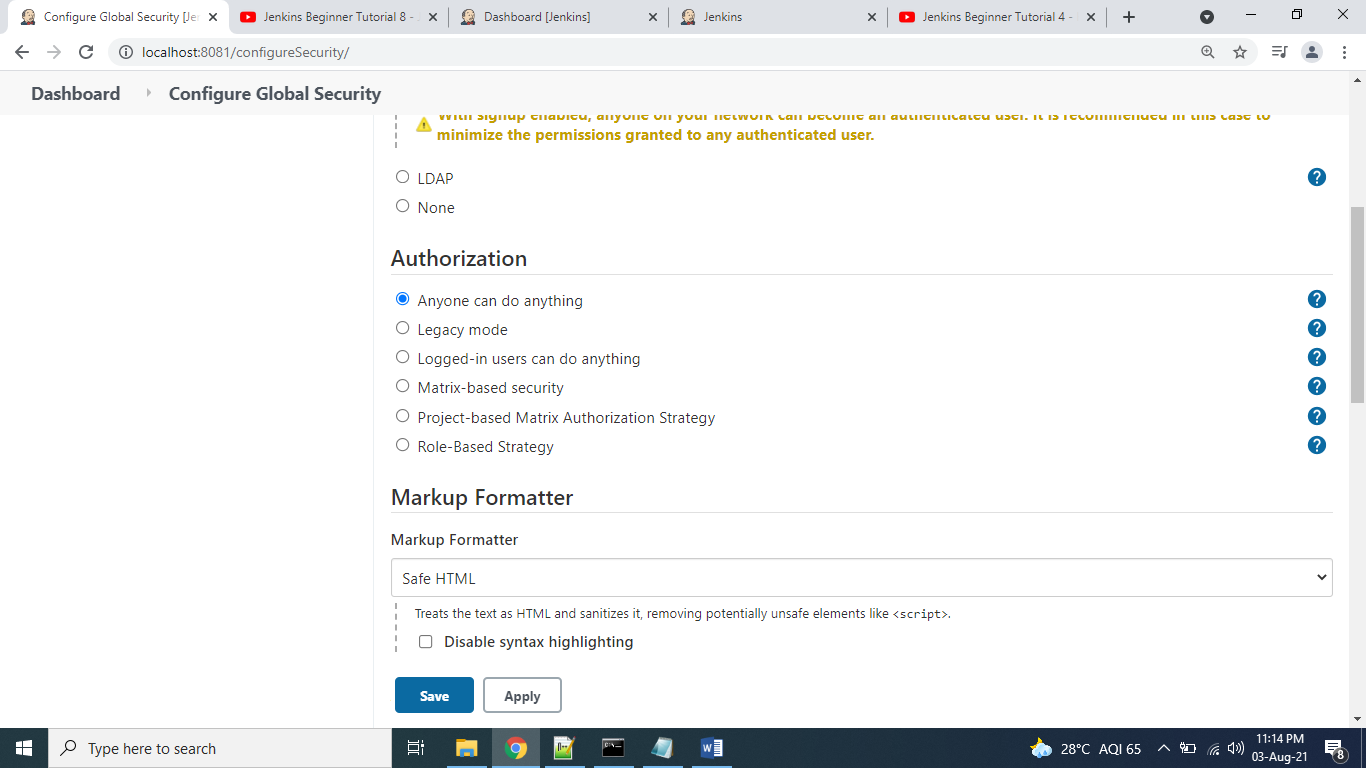
SSH public key

Incase of error

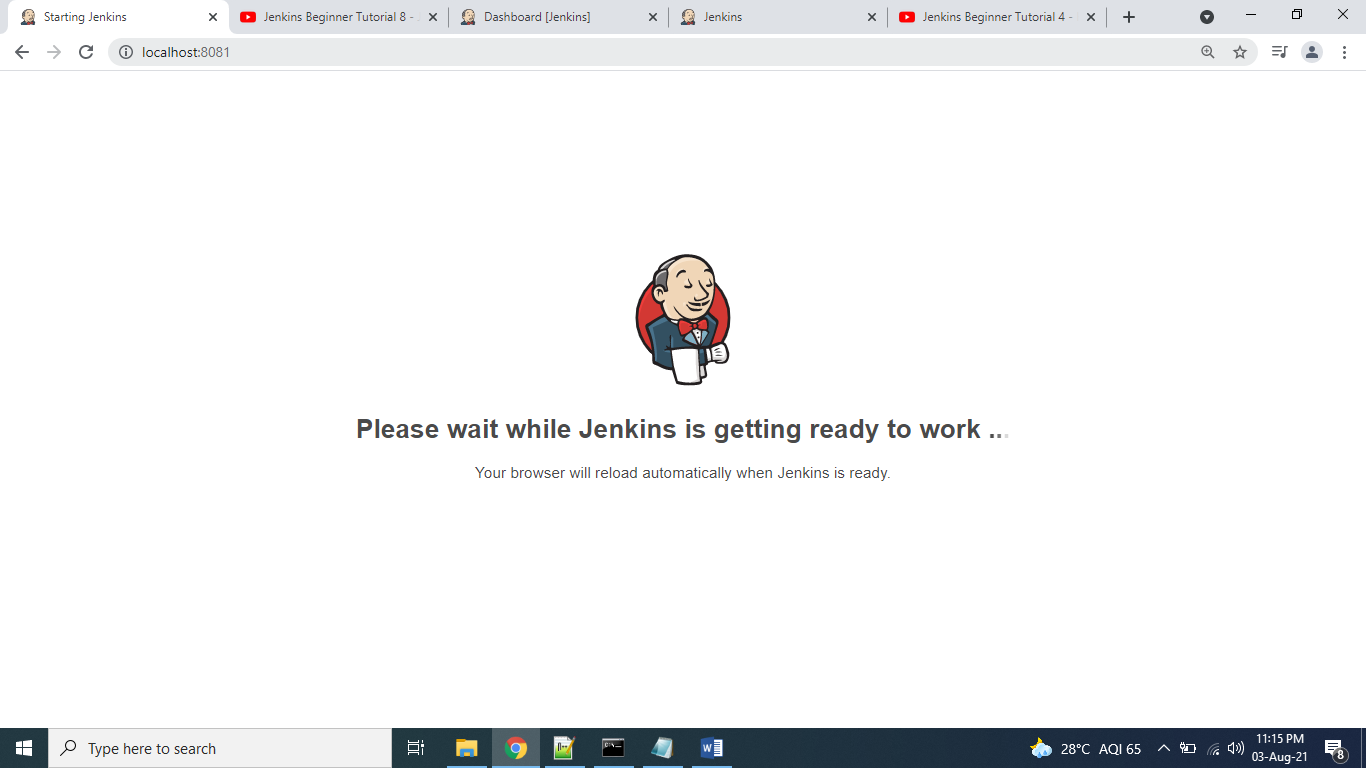
Config global security

Allow anonymous





java -jar jenkins-cli.jar -s http://localhost:8081 safe-restart



More on command line

http://lifuzu.com/blog/2014/04/24/playing-with-jenkins-create-job/

Demo 5

Create User

Developer User

Tester User

Configure the user

Add Plugins – Role strategy plugins

Manage Jenkings > Configure Global Security

From Authorization

Check on “Role Base Strategy”

User logins Access Denined

Allocate access

Manage Jenkins > Manage and Assign Role > Manage Roles

Global roles

Add Role – Employee

Allow Read Access

Allow View Access

APPLY

Project Roles

Create Role Sepcific to project

Create Developer

Patter Dev.\*

Give all Permission

Create Tester

Pattern Test.\*

Give All Permission

Slave Roles

NO CHANGE

Assign the Role

Add User1

Add User

Assign them ‘Employee role’

APPLY

Goto Project Role

User1 – Assign Developer

User2 – Developer Role

Add Roles

Login with users

Now create New Projects

DevName

TestName

Logout from admin

Login as User1

Should be able to see only DEVPROJECT

Cannot manage Jenkins

Logout

Login as User2

Should be able to see only TESTPROJECT

Cannot manage jenkins

Demo 6

Basic Configuration

Manage Jenkins

Configure System

**Home Directory**

**System Message: (FOR HTML Message)**

**Manage Jenkins > Global Security > Mark formattar : Select HTML**

**# of exeuctors: no. of parallel jobs at one time (threading)**

**Labels : Node configuration**

**Manage Jekins > Manage Nodes (System for distributed build)**

**Master machine and can nodes**

**So label allocate to nodes**

**New Node (Heading New Machine)**

**Windows -2 (Permanent Agent)**

**No of Exeuctor (Maximum build)**

**Label: Windows Machine 2**

**Usage : Only build jobs with expression matching this node**

**No go to existing job – configure**

**General Section – Restrict where this project can be run**

**WindowsMachine1**

**SCM Checkout : from git (POLL SCM ) while creating project**

**If build fails**

**Allow the nuber of build on particular jobs**

**Restrict project Name**

**Pattern : Dev**

**Try creating new project**

**Global Properties**

**Add Environment Variable**

**Key1**

**Value1**

**ADD**

**This is available to all jobs and builds**

**Jenkins Location:**

**System Admin Email**

**SSH Server**

**Shell Executable : cmd.exe**

**Usage**

**QuitePeriod**

**SCM Checkout count**

**Restrict Project Name**

**Pattern**

Demo-7

Create Basic Jobs

Create New Item

Test1

Free Style

Enter Desctiption in HTML

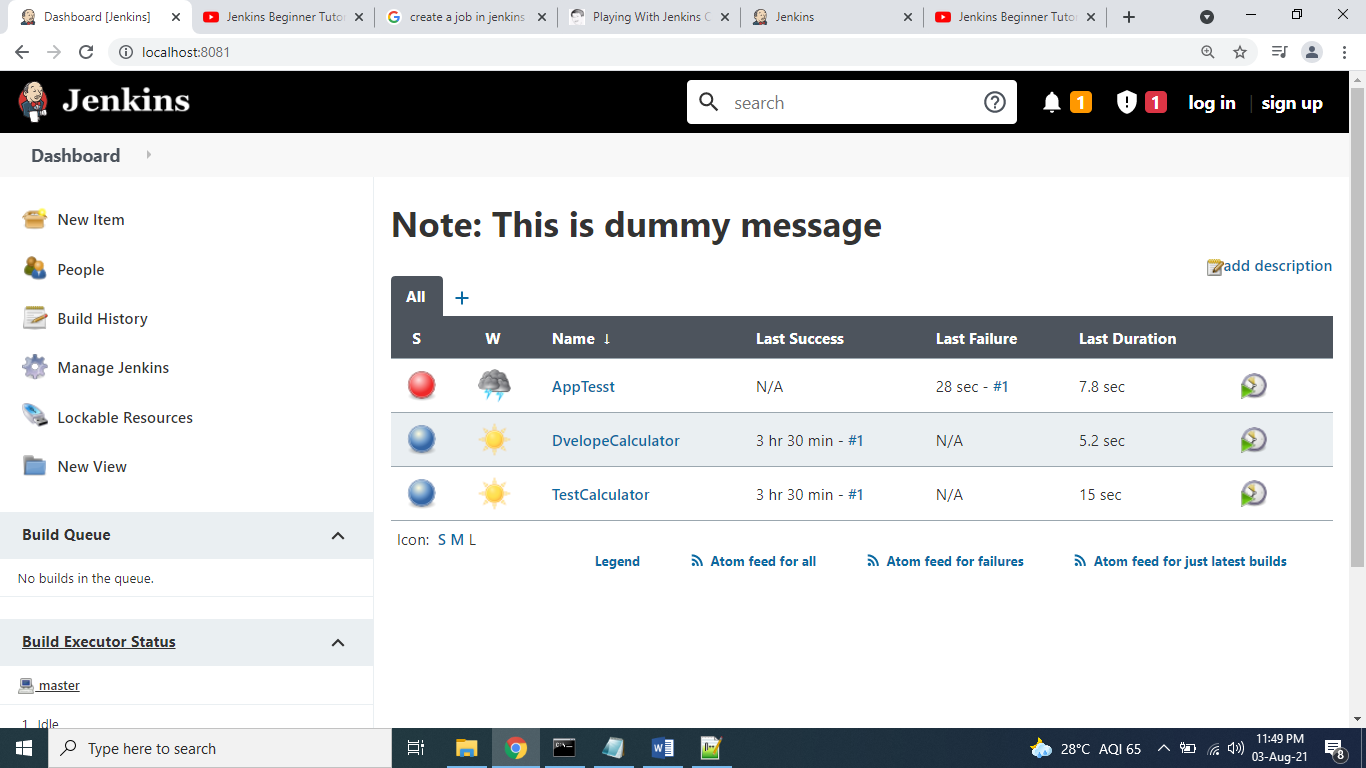
Source Code Manager

Build Triggers

Schedule

Give wrong command

Set email id

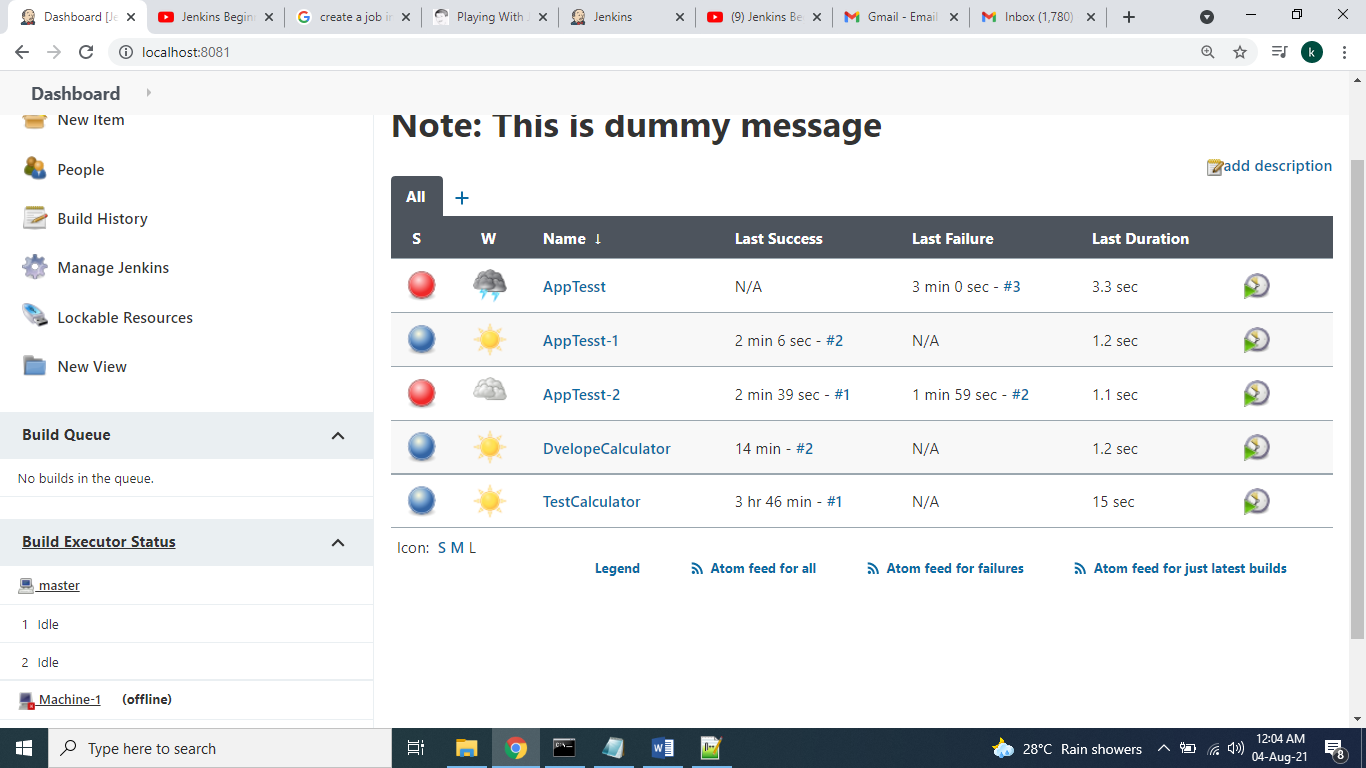


<http://localhostl8081/job/AppTesst/build?token=123>

Create Three Project

Schedule build after each one

Assing the code and test



Basic Jobs Configuration

Run Job Remotely

Chain Job

Check plugin for GIT

Create Job

TestJob

Free Style

How to create in git

Got Source code management

Git

Demo : 8

CI – With Git

Create Java Code

Create Item

Call Java Code in Jenkins

Build the Job

Check Console

GIT

Go to folder where java code is written

Go to git bash

Git init

Git status

Will display following message

Untracked files:

(use "git add <file>..." to include in what will be committed)

HelloWorld.class

HelloWorld.java

Jenkins Installation Process-Walkthrough.docx

Jenkins-Wlakthrough.docx

~$nkins Installation Process-Walkthrough.docx

nothing added to commit but untracked files present (use "git add" to track)

Git add .

Git status

Git commit –m “Added Java Code”

Sign in Git

Create New Repository

HelloWorld

Goto git

git remote add origin <https://github.com/Kavita17Vispute/HelloWorld.git>

go and check git repository

Step:2

Go to Jenkins

Manage Plugins

Look for Git Plugins

Go to “DevJava” Project on Dash Board

Go to Configuration

Check “Git” option and enter the Git address

<https://github.com/Kavita17Vispute/HelloWorld.git>

Change the code

Compile the code

Go to git

git add .

git commit -m "New Files addedd"

git push -u origin master

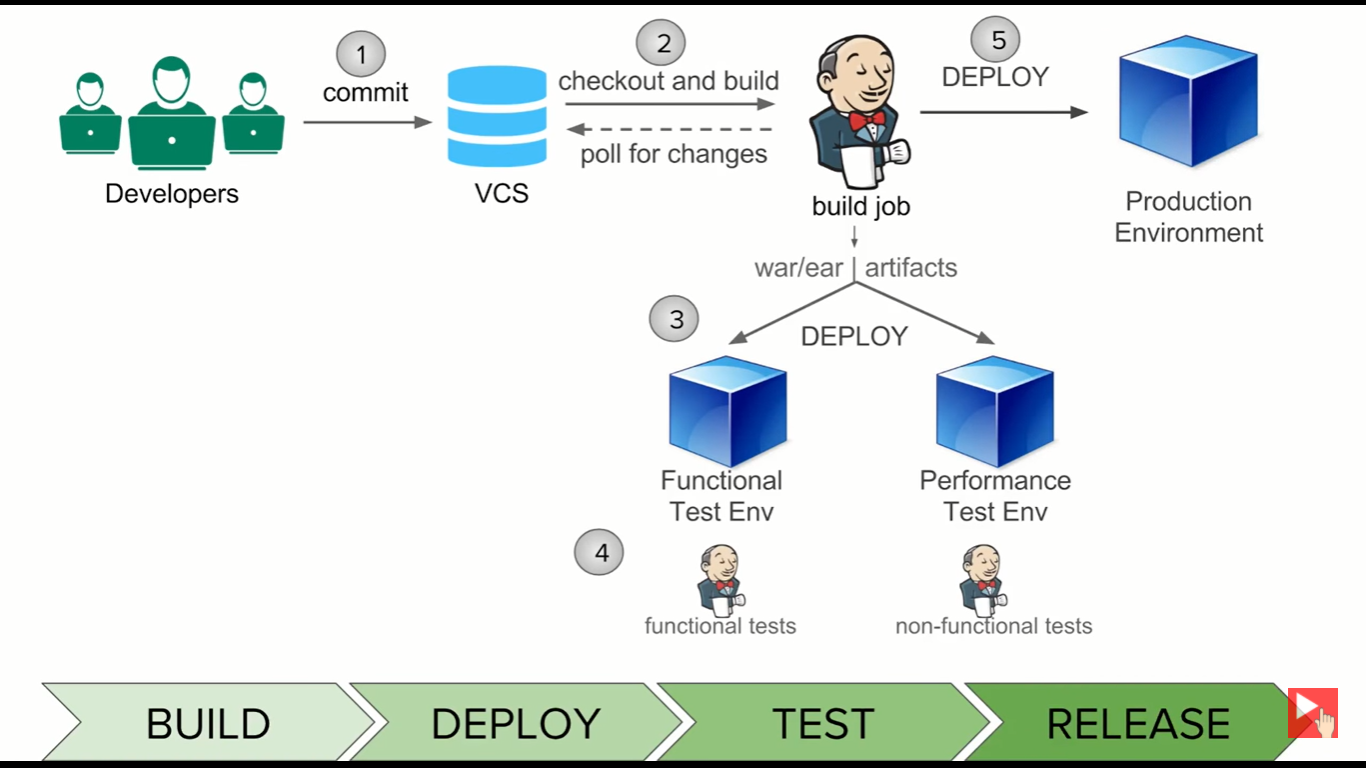
Now go to Jenkins

And check the Job

Wait for Batch Execution

Demo – 9

Automated Deployment



Demo-10

Jenkins notification

Sent Mail

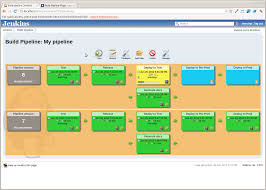
Need to cehck

Demo – 11

Jenkins Pipeline

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

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



Create three jobs

Configure for build chain

Create pipe line

Set the configuration

Demo-12

Jenkins Delivery Pipeline

Demo- 13

Build Pipleline

Demo-14

Jenkins – Jenkins File

………………………..

00:00 Introduction

00:44 What is Jenkins

01:17 What is CI CD

03:10 Jenkins Installation

04:18 Install on Windows

11:55 Install on Mac

16:42 Install on Linux

17:50 Jenkins GUI & Configuration

22:43 How to change Home Directory (win)

28:19 How to change Home Directory (Mac)

30:52 How to setup Git on Jenkins

32:20 Create First Job on Jenkins

35:51 How to connect to Git Repository

38:18 How to add Credentials

41:46 Use custom Job Workspace

43:35 CLI

50:08 Create Users + Manage + Assign Roles

59:12 Chain Jobs

01:04:06 Build Pipeline

01:07:15 Jenkins Pipeline | Jenkinsfile

01:19:35 How to get Jenkinsfile from SCM

01:27:00 How to clone Git Repo using Jenkinsfile

01:30:45 Message from Raghav

01:31:44 FAQs | Jenkins Interview Questions

01:31:48 What is Jenkins

01:32:00 What is CI-CD

01:32:21 What is Hudson

01:32:27 Steps to setup Jenkins

01:32:40 Command to start Jenkins

01:32:49 What is Jenkins Pipeline

01:32:59 How to implement JenkinsPipeline

01:33:05 What is Jenkinsfile

01:33:14 How to create Jenkins Pipeline

01:33:27 Declarative vs Scripted Pipeline

01:33:40 How to backup Jenkins

Jenkins creator - Kohsuke Kawaguchi

#JenkinsBeginnerTutorial

All Jenkins Courses - https://automationstepbystep.com/

Jenkins Complete Course in one video

For Complete Beginners | Step by Step from Scratch

Windows | Mac | Linux

Timeline in Description

What is Jenkins

- Jenkins is a CI CD tool

- Free & Open Source

- Written in Java

What is CI & CD

Continuous Integration, Delivery & Deployment

Installation

System Requirements

Memory 256 MB of RAM

Disk Space Depends on your projects

OS Windows, Mac, Ubuntu, Linux

Java 8 or 11 (JDK or JRE)

Installation on Windows

Step 1 : check Java is installed

Step 2 : Download Jenkins.war file

Step 3 : Goto cmd prompt and run command

java -jar jenkins.war --httpPort=9191

Step 4 : On browser goto http://localhost:9191

Step 5 : Provide admin password and complete the setup

Installation on Mac

Homebrew

Installation on Linux

https://youtu.be/jmm8DsosBqw

Jenkins Configuration

How to change Home Directory

Step 1: Check your Jenkins Home ＞ Manage Jenkins ＞ Configure System

Step 2 : Create a new folder

Step 3 : Copy the data from old folder to new folder

Step 4 : Create/Update env variable JENKINS\_HOME

Step 5 : Restart Jenkins

jenkins.xml

JENKINS\_HOME

How to setup Git on Jenkins

Step 1 : Goto Manage Jenkins ＞ Manage Plugins

Step 2 : Check if git is already installed in Installed tab

Step 3 : Else goto Available tab and search for git

Step 4 : Install Git

Step 5 : Check git option is present in Job Configuration

Create the first Job on Jenkins

How to connect to Git Remote Repository in Jenkins (GitHub)

Step 1 : Get the url of the remote repository

Step 2 : Add the git credentials on Jenkins

Step 3 : In the jobs configuration goto SCM and provide git repo url in git section

Step 4 : Add the credentials

Step 5 : Run job and check if the repository is cloned

How to use Command Line in Jenkins CLI

Faster, easier, integrate

Step 1 : start Jenkins

Step 2 : goto Manage Jenkins - Configure Global Security - enable security

Step 3 : goto - http://localhost:8080/cli/

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

Step 5 : test the jenkins command line is working

java -jar jenkins-cli.jar -s http://localhost:8080 /help --username ＜userName＞ --password ＜password＞

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 user access on projects

Step 1 : Create new users

Step 2 : Configure users

Step 3 : Create and manage user roles Role Based Authorization Strategy Plugin - download - restart jenkins

Step 4 : Manage Jenkins - Configure Global Security - Authorization - Role Based Strategy

Step 5 : Create Roles and Assign roles to users

Step 6 : Validate authorization and authentication are working properly

Chain Jobs

Jenkins Pipeline Beginner Tutorial

How to create Jenkinsfile

- What is pipeline

- What is jenkins pipeline

- What is jenkinsfile

- How to create jenkinsfile

Build ＞ Deploy ＞ Test ＞ Release

Jenkinsfile : Pipeline as a code

Step 1 : Start Jenkins

Step 2 : Install Pipeline Plugin

Step 3 : Create a new job

Step 4 : Create or get Jenkinsfile in Pipeline section

Step 5 : Run and check the output

Jenkins Pipeline

How to get jenkinsfile from Git SCM

Step 1 : Create a new job or use existing job (type : Pipeline)

Step 2 : Create a repository or GitHub

Step 3 : Add Jenkinsfile in the repo

Step 4 : Under Jenkins job ＞ Pipeline section ＞ Select Definition Pipeline script from SCM

Step 5 : Add repo and jenkinsfile location in the job under Pipeline section

Step 6 : Save & Run

Jenkins Pipeline

How to clone a git repo using Jenkinsfile

all videos on Jenkins

Jenkins is free and the most widely used CI CD tool today

Learning Jenkins

watch again and just to any topic using TimeLine in Description

Never Stop Learning

Raghav Pal

…………………………..