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Continuous Integration Pipeline using Jenkins and Docker

Step 1: Installed Java in Amazon EC2- Ubuntu

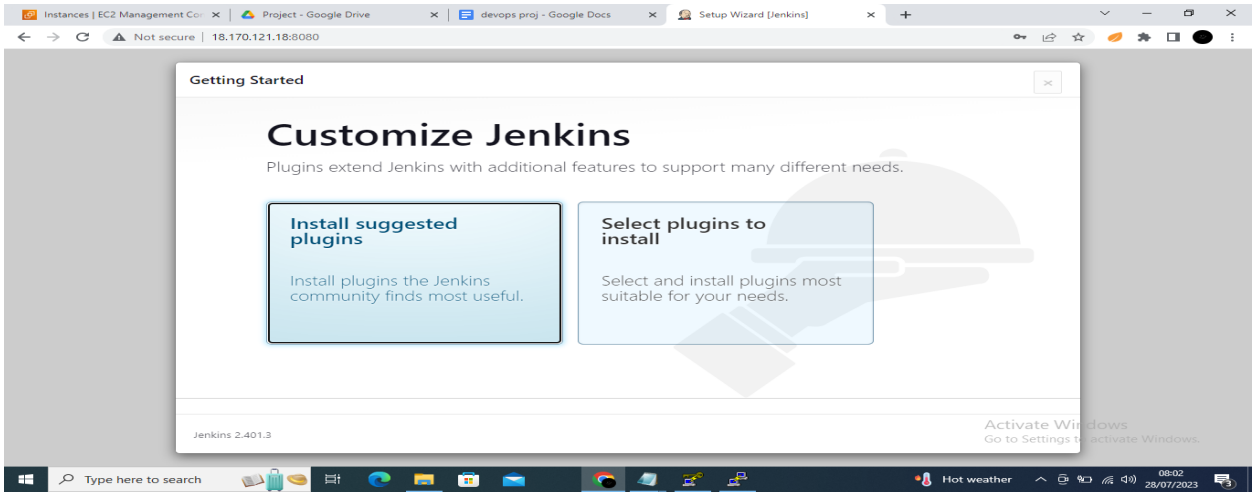
```
root@ip-172-31-1-108:~# sudo apt update
sudo apt install openjdk-17-jre
java -version
openjdk version "17.0.7" 2023-04-18
OpenJDK Runtime Environment (build 17.0.7+7-Debian-1deb11u1)
OpenJDK 64-Bit Server VM (build 17.0.7+7-Debian-1deb11u1, mixed mode, sharing)
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Hit:2 http://eu-west-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:3 http://eu-west-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:4 http://eu-west-2.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [108 kB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [634 kB]
```

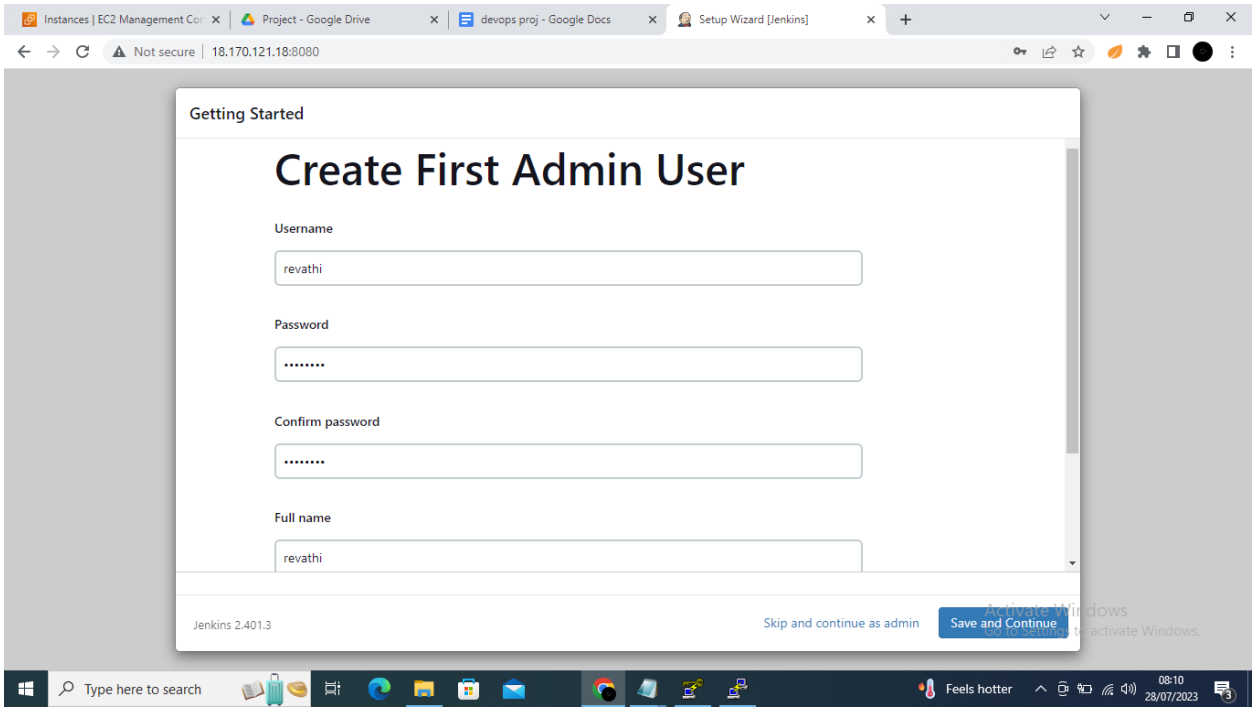
Step 2: Installed Jenkins in Amazon EC2

```
root@ip-172-31-1-108:~# curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee \
  /usr/share/keyrings/jenkins-keyring.asc > /dev/null
echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \
  https://pkg.jenkins.io/debian-stable binary/ | sudo tee \
  /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install jenkins
Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease
Get:2 https://pkg.jenkins.io/debian-stable binary/ Release [2044 B]
Get:3 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Hit:4 http://eu-west-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:5 http://eu-west-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
```

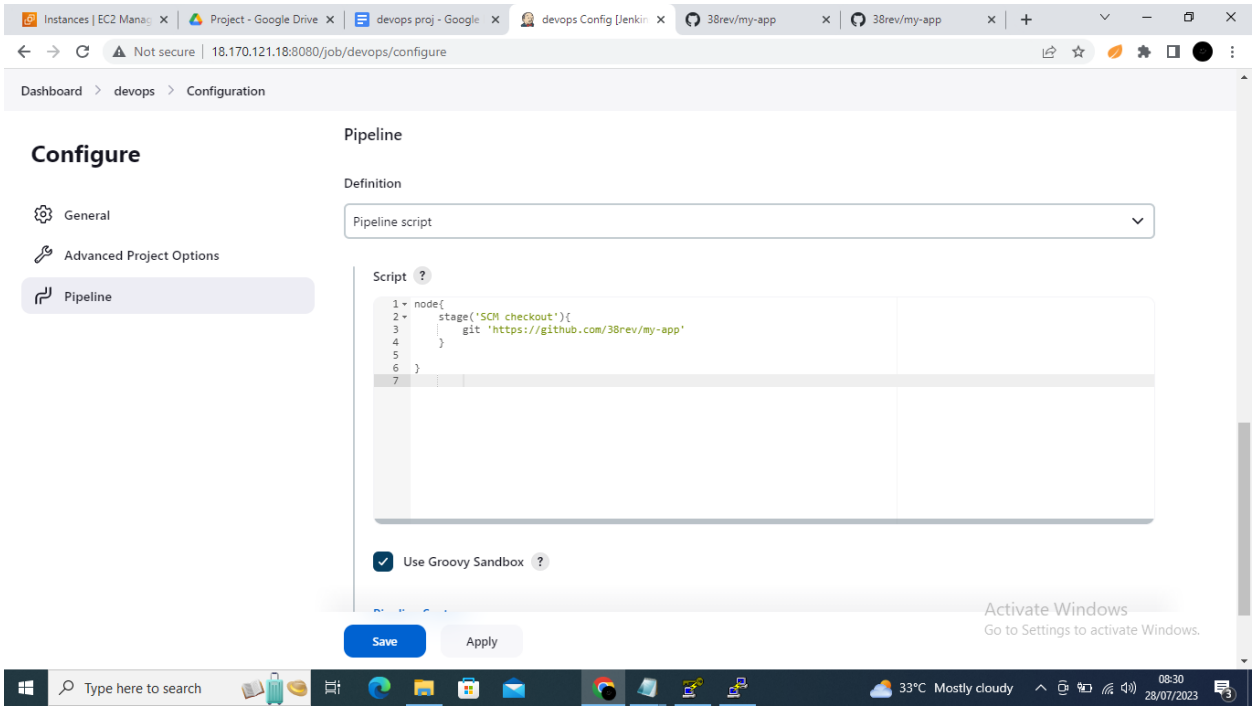
```
root@ip-172-31-1-108:~# cd /var/lib/jenkins/
root@ip-172-31-1-108:/var/lib/jenkins# ls
config.xml                     jenkins.telemetry.Correlator.xml  nodeMonitors.xml  plugins     secret.key.not-so-secret  updates
hudson.model.UpdateCenter.xml  jobs                              nodes             secret.key  secrets                   userContent
root@ip-172-31-1-108:/var/lib/jenkins# cd secrets/
root@ip-172-31-1-108:/var/lib/jenkins/secrets# ll
total 20
drwx------  2 jenkins jenkins 4096 Jul 28 13:59 ./
drwxr-xr-x 11 jenkins jenkins 4096 Jul 28 14:00 ../
-rw-r-----  1 jenkins jenkins   33 Jul 28 13:59 initialAdminPassword
-rw-r--r--  1 jenkins jenkins   32 Jul 28 13:59 jenkins.model.Jenkins.crumbSalt
-rw-r--r--  1 jenkins jenkins  256 Jul 28 13:59 master.key
root@ip-172-31-1-108:/var/lib/jenkins/secrets# cat ^C
root@ip-172-31-1-108:/var/lib/jenkins/secrets# cat initialAdminPassword
be785f09f2684ca6b7ae4af17ac2324d
```

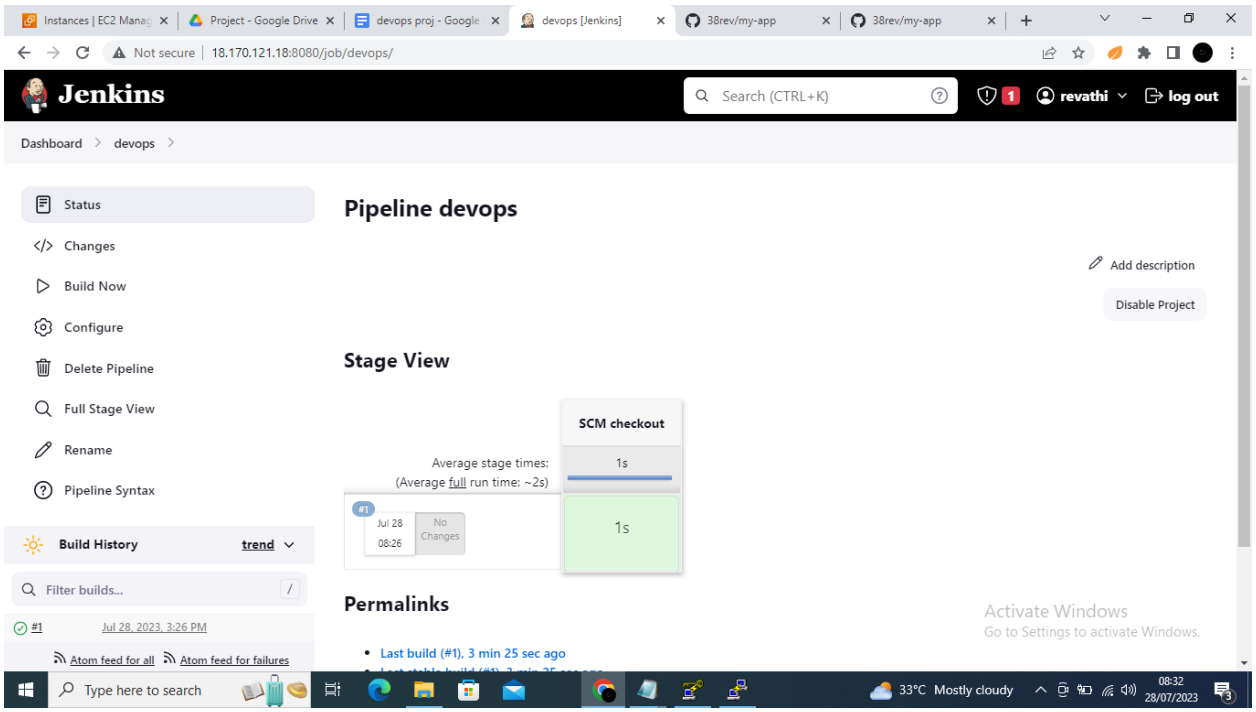
Step 3: Login into Jenkins





Step 4: Created Pipeline

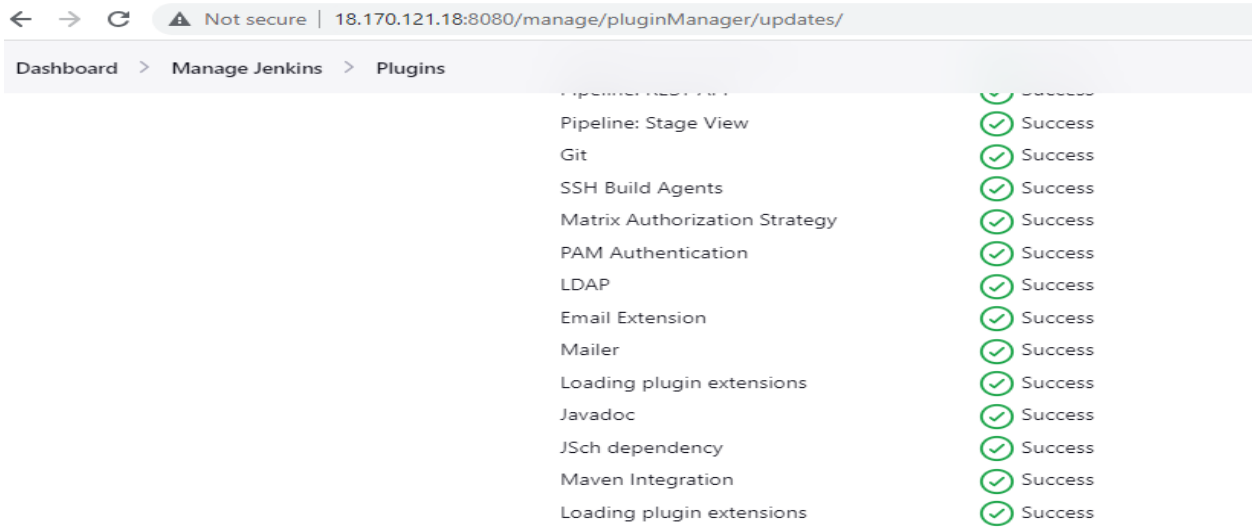




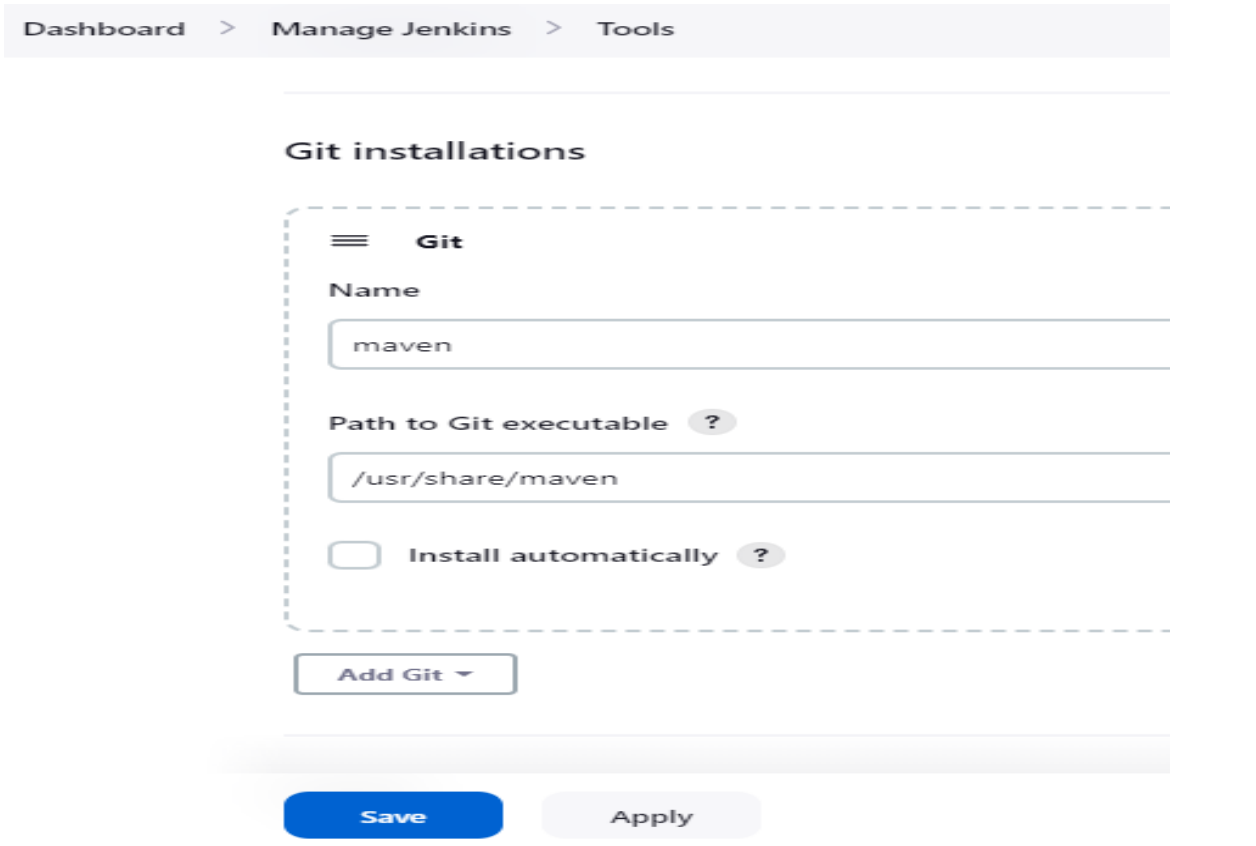
Step 5: Installed Maven in EC2 instance.

```
root@ip-172-31-1-108:/# sudo apt install maven
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libaopalliance-java libapache-pom-java libatinject-jsr330-api-java libcdi-api-java libcommons-cli-java libcommons-io-java libcommons-lang3-java
  libcommons-parent-java libgeronimo-annotation-1.3-spec-java libgeronimo-interceptor-3.0-spec-java libguava-java libguice-java libhawtjni-runtime-java libjansi-java
  libjansi-native-java libjsr305-java libmaven-parent-java libmaven-resolver-java libmaven-shared-utils-java libmaven3-core-java libplexus-cipher-java
  libplexus-classworlds-java libplexus-component-annotations-java libplexus-interpolation-java libplexus-sec-dispatcher-java libplexus-utils2-java libsisu-inject-java
  libsisu-plexus-java libslf4j-java libwagon-file-java libwagon-http-shaded-java libwagon-provider-api-java
Suggested packages:
```

Step 6: Installed Maven plugins in Jenkins to communicate between Jnekins and EC2 instances.



Step 7 : Assigned home path for Maven



Dashboard > cdjob >

- Status
- Changes
- Build Now
- Configure
- Delete Pipeline
- Full Stage View
- Rename
- Pipeline Syntax

Build History trend

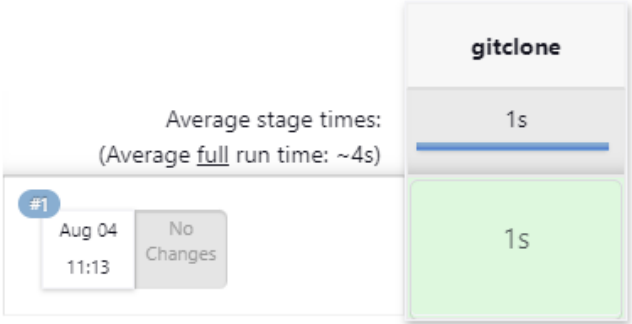
Filter builds... /

#1 Aug 4, 2023, 6:13 PM

Atom feed for all Atom feed for failures

Pipeline cdjob

Stage View



Permalinks

Script ?

```
    }
    stage('compile'){
        agent any
        steps{
            sh 'mvn compile'
        }
    }
    stage('test'){
        agent any
        steps{
            sh 'mvn test'
        }
    }
    stage('package'){
        agent any
        steps{
            sh 'mvn package'
        }
```

Use Groovy Sandbox ?

Pipeline Syntax

Save Apply