

HOW TO CREATE CI/CD PIPELINE

Step by step process.

Launch EC2 Instance – Create a T2-micro instance with a security group allowing ports 22 & 8080.

Install Java 21 – Use Amazon Corretto: `yum install java-21-amazon-corretto-devel`.

Install Maven – Download & extract Maven 3.9.6 to `/opt/maven` and set `MAVEN_HOME`.

Install Jenkins – Add Jenkins repo, install it via yum, and start the Jenkins service.

Access Jenkins UI – Open `http://<your-ec2-ip>:8080` and complete setup.

Configure Maven in Jenkins – In “Global Tool Configuration,” add Maven 3.9.6 manually.

Create Jenkins Job – Use Freestyle project, link your GitHub repo, and run Maven goals like `clean install`.

Setup Tomcat Server – On another EC2, install Java & Tomcat 9, and enable port 8080.

Install “Deploy to Container” Plugin – In Jenkins, configure post-build to deploy `target/*.war` to Tomcat.

Trigger Jenkins Build – WAR gets deployed automatically to the remote Tomcat server.

NOW SETUP CI/CD PIPELINE

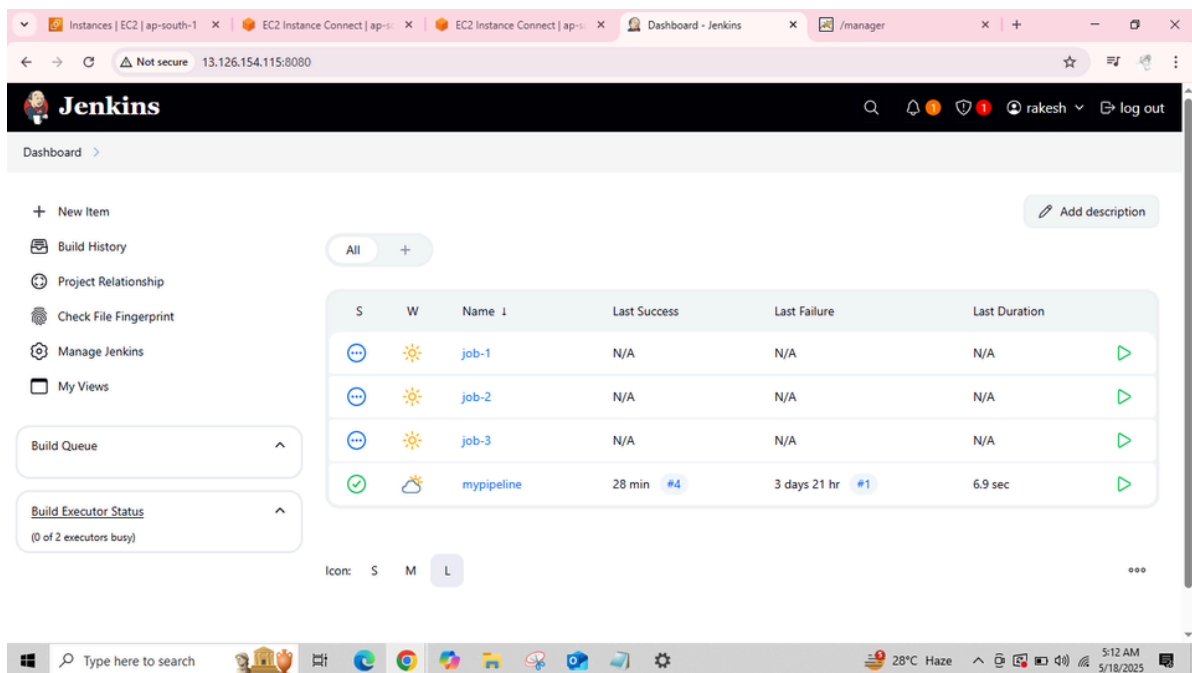
Navigate to jenkins sever:

I already have one jenkins job called mypipeline.(which contains war file).

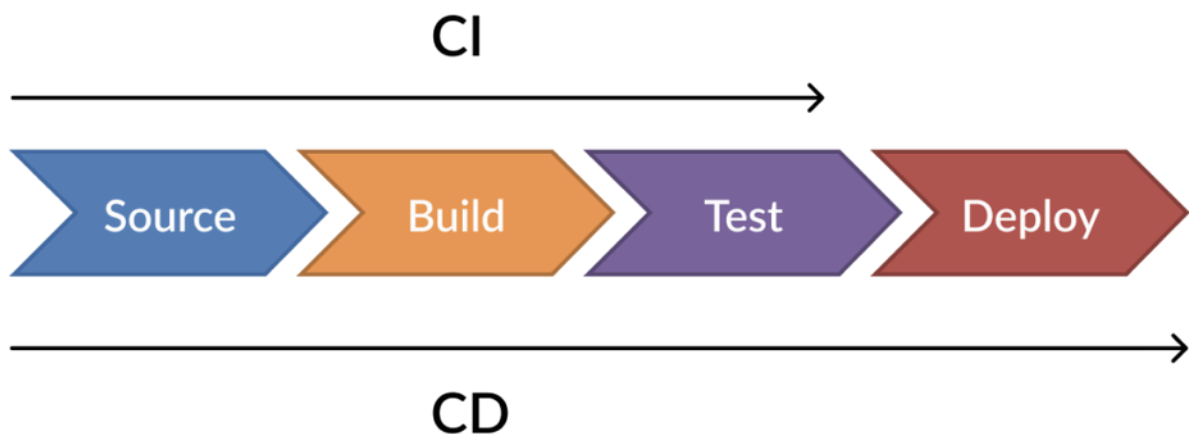
Now create multiple jobs with freestyle project like:

- job-1
- job-2
- job-3

Ex:



Pipeline Structure is like



Assume i.e:

- Source code = mypipeline
- Build = job-2
- Test = job-3
- Deploy = job-4

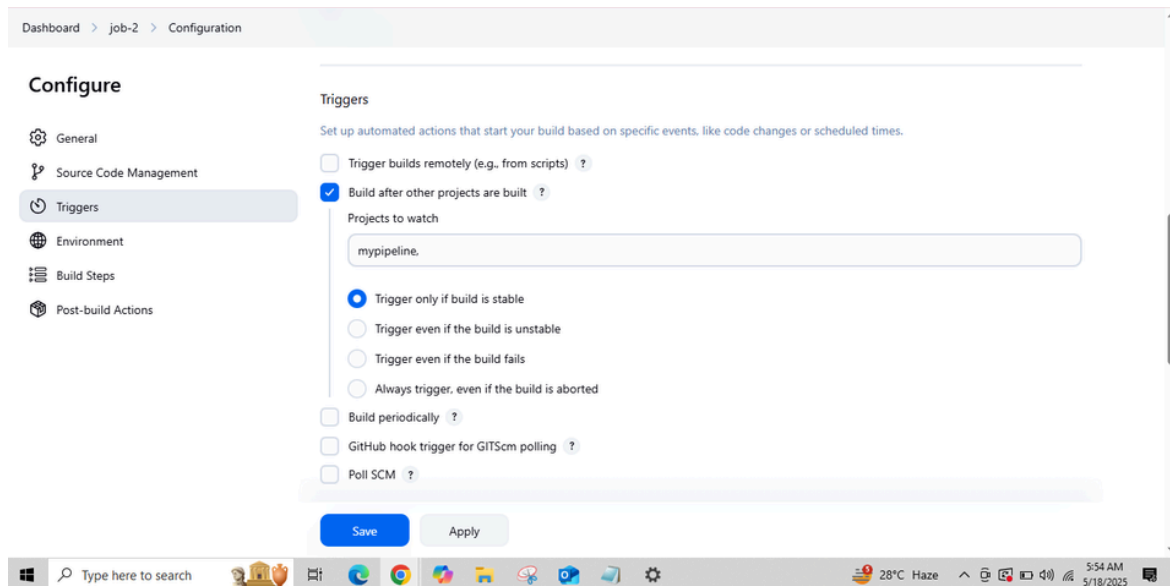
If we manually trigger **mypipeline** in Jenkins and it runs successfully, it will automatically trigger **job-2**, followed by **job-3**, and then **job-4** in sequence.

Note: when job get success one after another then pipeline will build.

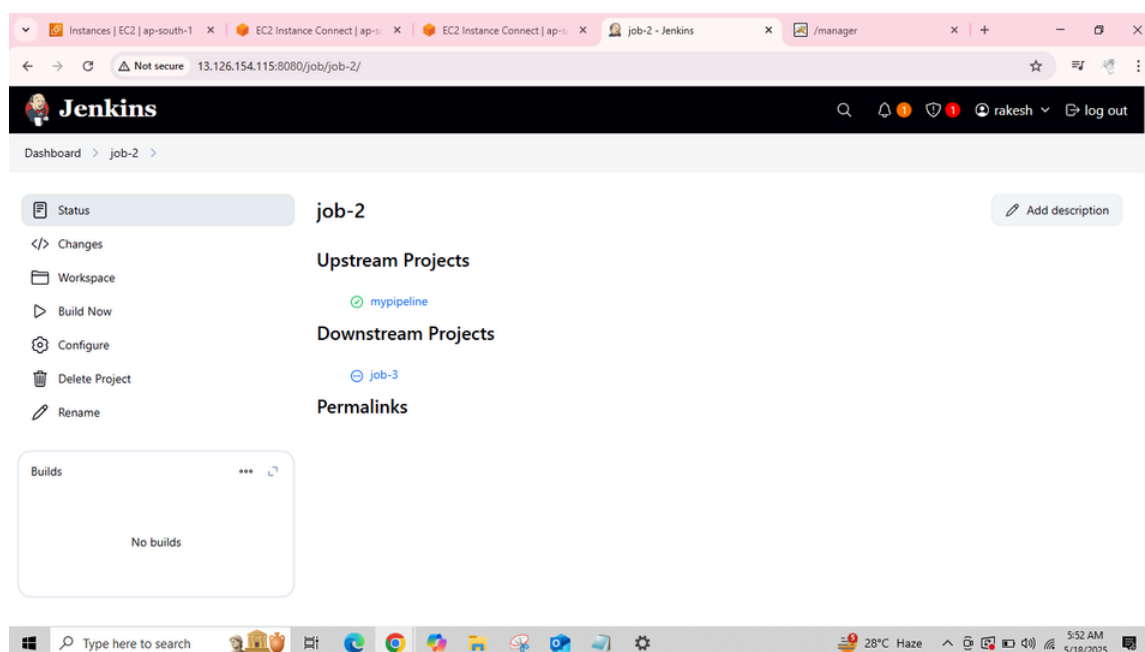
Go to the jenkins dashboard and navigate to **job-2**

- Go to configure – Triggers – check Build after other project and give the **mypipeline** as project to watch.
- Similarly for **job-3** give **job-2** as project to watch and for **job-4** give **job-3**.

Ex:

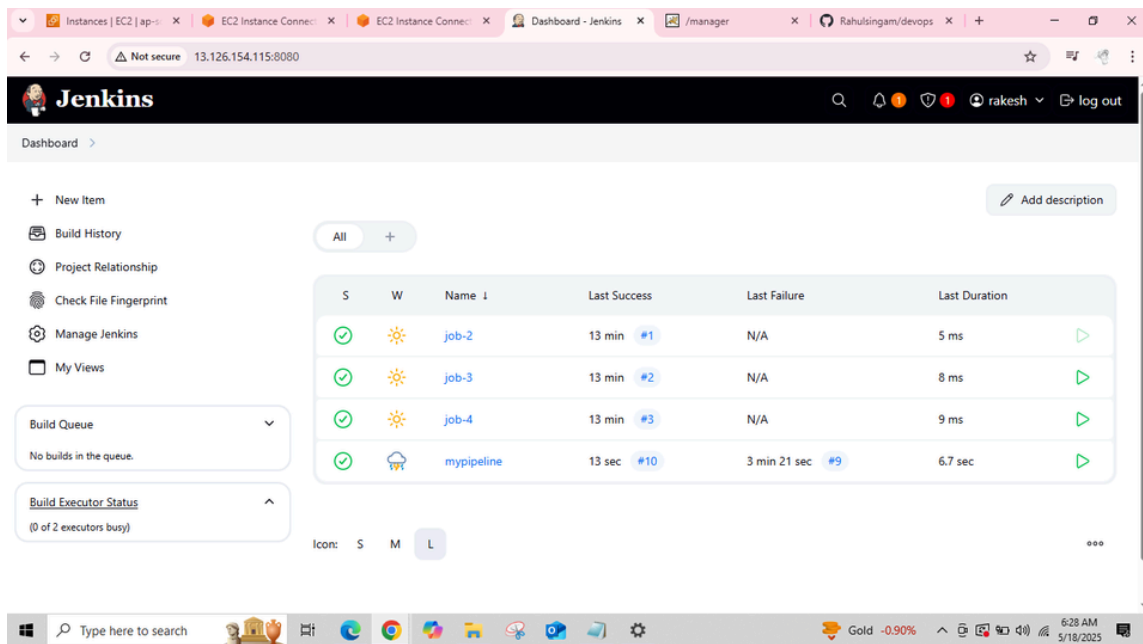


Check status like which job is in which stream(**Upstream or Downstream projects**) :



Now build the **mypipeline** job manually it get build success automatically one job-2 after other job

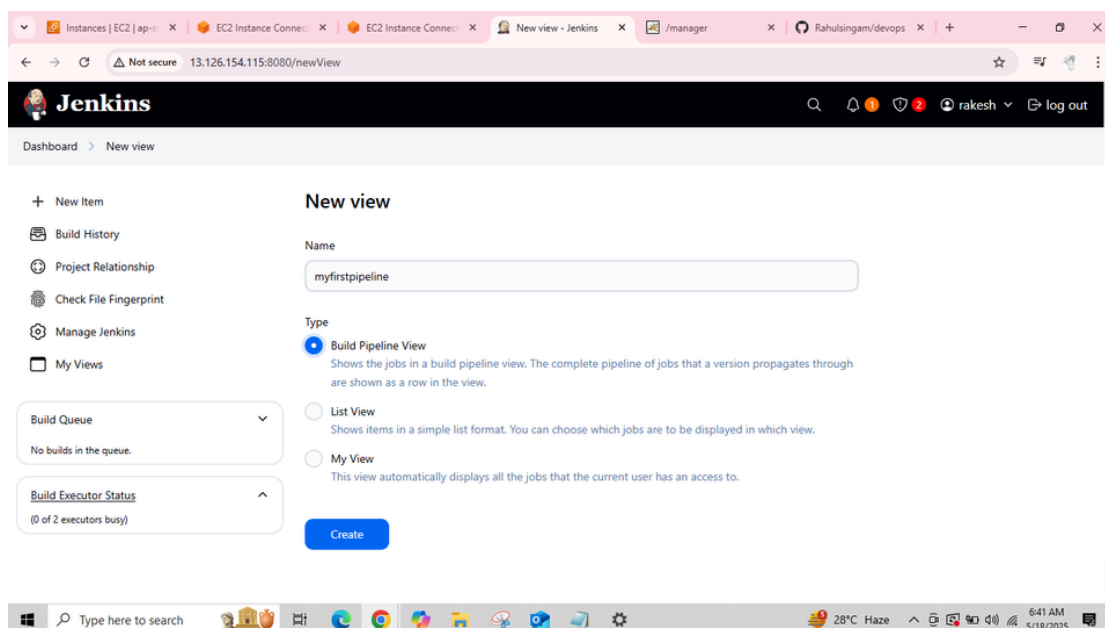
Ex: Without pipeline view



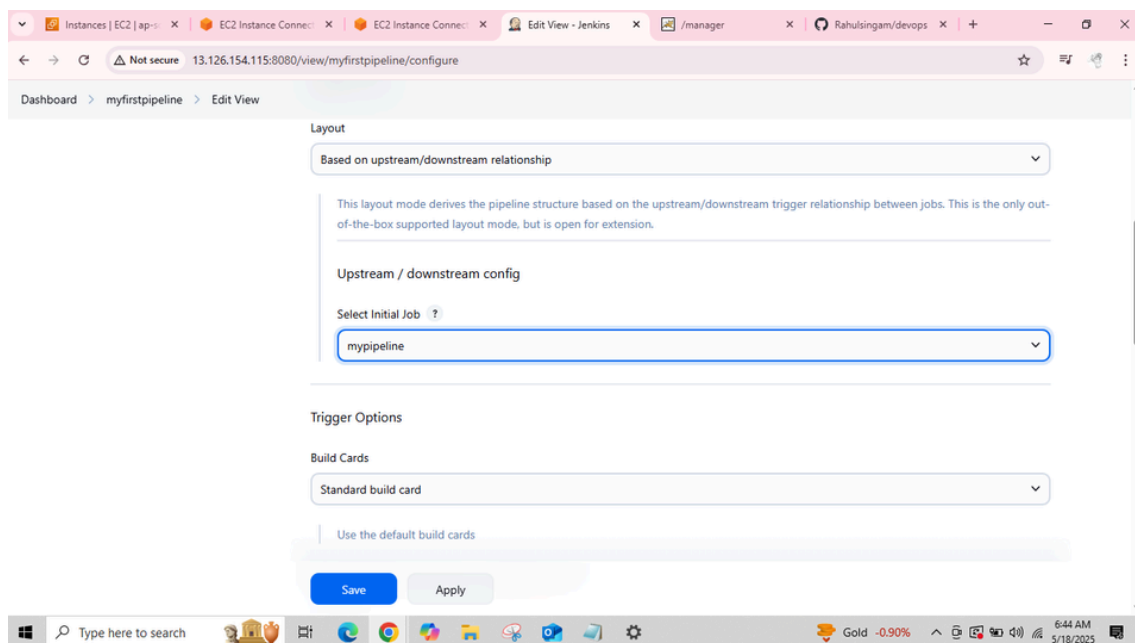
If we need pipeline view :

- Go to manage jenkins – add plugins – install **build pipeline**.
- Navigate to dashboard click **New View**.

Ex:



- In that go to pipeline – Pipeline flow – select initial job – **mypipeline** and save it.



- Run the job then we get pipeline view.

