**Step-by-step process to Demonstrate the continuous integration and delivery by building a Docker Jenkins Pipeline.**

* **Prerequisites Software:**

Create an Ubuntu EC2 instance and install all required software like Git, Docker, Jenkins.

1. Launch ubuntu EC2 instance and connect to it.
2. Install git using below command.

**sudo apt install git**

After installation check the git version to check if installed properly.

**git –version**

1. Install docker using below command

**sudo apt install docker.io**

After installation check the docker status by below commands,

**docker –version**

**sudo docker info**

1. As Jenkins required Java , we will first install Java using below command.

**sudo apt install fontconfig openjdk-17-jre**

Check java version by

**java –version**

1. Install Jenkins on ubuntu using below commands from Jenkins documentation.

**sudo wget -O /usr/share/keyrings/jenkins-keyring.asc** [**https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key**](https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key)

**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**

Check Jenkins status by below command

**sudo systemctl status Jenkins or sudo service jenkins status**

1. Login the Jenkins on port 8080 with public IP of instance IP and unlock Jenkins using administration password , install suggested plugins and create firsrt admin user/pwd.

* **Creating Git Hub repository for availability and version tracking of application code.**

1. Create a git hub repository ‘devops\_project’ for project to store the application code.
2. ­In Local machine, create a local repo in the folder where application code is present by using below command in git bash.

**git add.**

**git status**

**git commit -m "Initial Commit"**

1. Add the git hub repository created in point 1 as remote repository in the local repository created in point 2 using authentication token as below

**git remote add origin https://ghp\_FAreWRxmQo3YdF0SakAHuNmdFzqo0q04VLQS@github.com/ranechetanp/devops\_project.git**