**JENKINS TASK-01:**

**1.Install Jenkins and run Jenkins on port number 8081:**

Navigate to ec2 in aws and launch a instance.

Instance type is t2-xlarge to have a large memory.

New key pair added.A screenshot of a computer

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VPC is default and existing security groups updated as well.

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I have updated my EBS as 20 GB for my storage.A screenshot of a computer

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Instance launched successfully.

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Let’s connect to cli through Public ip and install java-17 version.

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Install the Jenkins package and rpm keys. Use the command below.

**sudo wget -O /etc/yum.repos.d/jenkins.repo** [**https://pkg.jenkins.io/redhat-stable/jenkins.repo**](https://pkg.jenkins.io/redhat-stable/jenkins.repo)

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Installation of Jenkins package and rpm keys are done and we need to import keys. Use command below.

**sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key**

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Now, we shall proceed with installing Jenkins

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Installation is successful. We shall start and enable the package.

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Now Jenkins is active and shall verify if the port is working as excepted.

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Deployment location of Jenkins is /var/lib/Jenkins

We require the password to login into Jenkins, so we need to change directory to Secrets and cat the initial password and we’ll be able to login.

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Password updated and logged in successfully.

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Now, this is the last part of this task- to change the port number and verify if 8080 to 8081 port number works on browser?

**Default location of file is /usr/lib/systemd/system/Jenkins.service**

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AI-generated content may be incorrect.**Changed the port number and updated the vi.

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Now, the port number changed to **8081** and verified in browser. We were able to login and updated the credentials and logged in.

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**2.Secure Jenkins server:**

This is the 1st step once connected to port 8080 in website. Click on suggested plugins and continue.

Create a username 🡪 password 🡪 provide an email address and continue.

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Now we can securely login into the Jenkins finally.

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Let’s verify if the initial password is automatically deleted from the deployment location.

Deployment locationis: **var/lib/Jenkins**

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Now change directory to cd secrets to verify if the intial password is avaialble!!

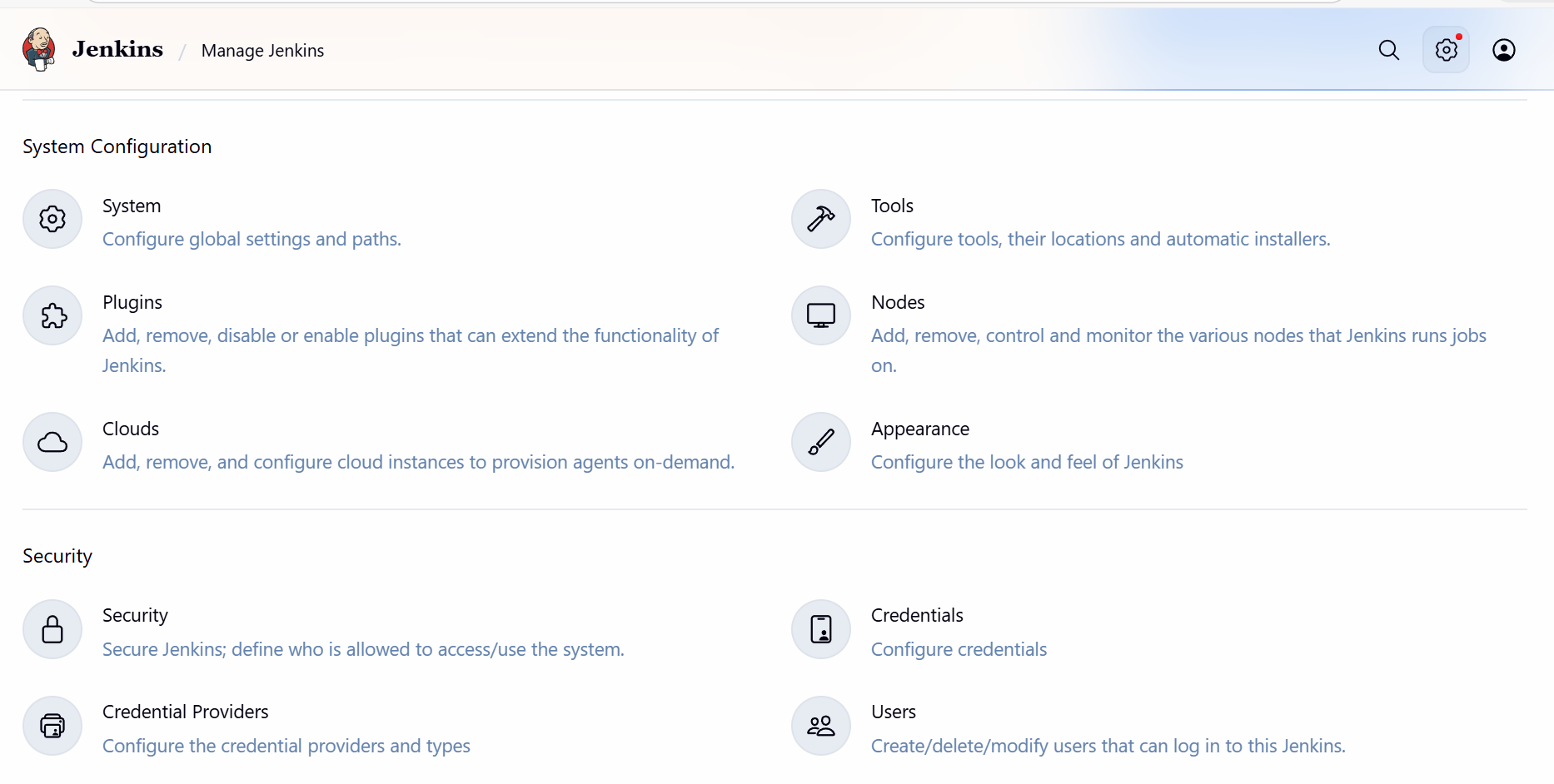
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**Success**- The initial password is automatically removed.

**3.Create users called DevOps, Testing in Jenkins with Limited access:**

Navigate to Jenkins 🡪Manage Jenkins and select “Users”



Click on the “Create User”

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Create our 1st user- Devops

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**Devops** user created.

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Create our 2nd user

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Created our 2nd user- Testing successfully.

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Now, we shall Install plugins to provide limited access to Devops and Testing.

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Search for- Role-based Authorization Strategy and Install.

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Always, go back to the top page, do not restart Jenkins.

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Verified by going back to the plugins and search under Installed Plugins

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Navigate to Manage Jenkins 🡪 select Security 🡪 Authorization and select Project-based Matrix Authorization Strategy.

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Now, we added 2 users to the Project-based Matrix Authorization Strategy and provided just access to “Job” except delete option.

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**4.Configure labels and restrict the jobs to execute based on label only:**

Navigate to Plugins and select available plugins.

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Search for Node and Label parameter 🡪Install

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Installed successfully.

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Navigate to System 🡪 Edit a message- Devops

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Select the option as “Only build jobs with label expression matching this node.

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Remember- always, we need to install the plugin before creating a job as per requirement.

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Create a job now and enter a item name- Devops\_Team and choose Freestyle Project.

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Update the Label as Devops as we updated earlier in Security under Nodes.

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Navigate to GitHub and search for sabear\_simplecutomerapp and copy the ssh and paste in the Repository URL.

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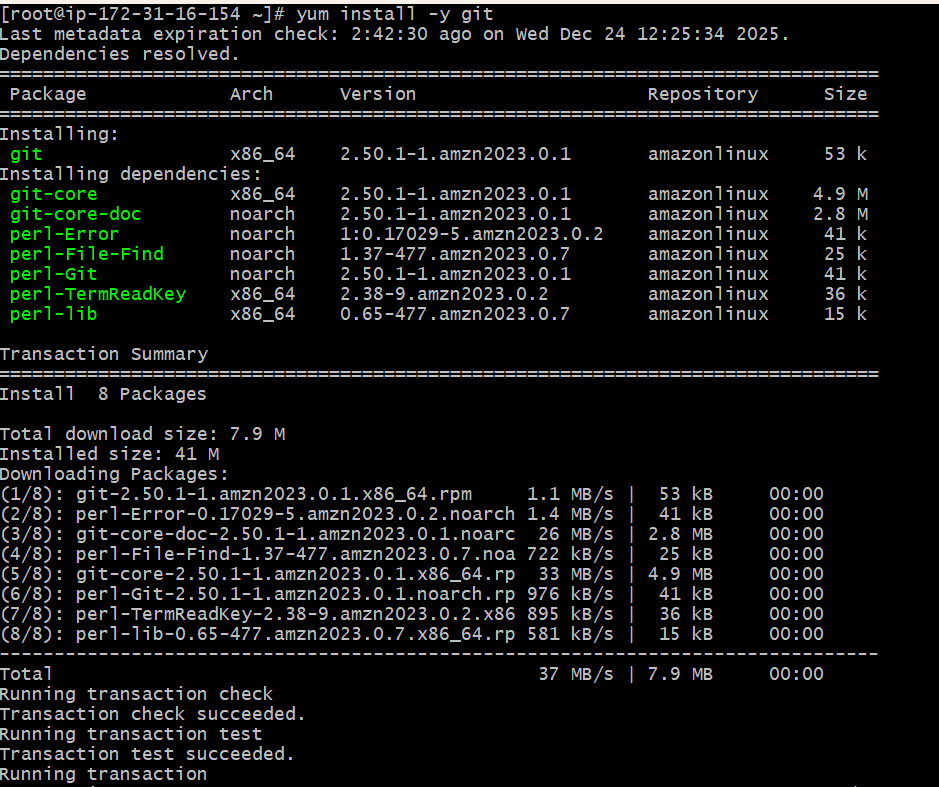
Yet, got an error Failed to connect, because git is not installed in ec2 server where we have Jenkins installed.

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Let’s install git by using command- yum install -y git

**Success-** We can see the git is installed.



Now the error is not appearing once git installed and 🡪Save

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We shall now start Build and check the status.

Success- now the console output says Success.

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Status is good and run time is displayed.

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We can verify the node is working as expected.

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**5.Create Three sample jobs using the below URL.**[**https://github.com/betawins/Techie\_horizon\_Login\_app.git**](https://github.com/betawins/Techie_horizon_Login_app.git)**:**

Create 3 jobs to configure and execute.

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Attached the repo link to the Job and save.

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Verified in the status- Ready for execute.

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Second job ready.

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Third Job ready

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