

Refer Jenkins document and how we can configure Jenkins with the Github for Auto deployment

Jenkins is an open-source automation server that automates the repetitive technical tasks involved in the continuous integration and delivery of software. Jenkins is Java-based, installed from Ubuntu packages or by downloading and running its web application archive (WAR) file — a collection of files that make up a complete web application to run on a server.

Step 1 — Installing Jenkins

First, add the repository key to your system:

```
wget -q -O - https://pkg.jenkins.io/debian-stable/jenkins.io.key | sudo gpg --dearmor -o /usr/share/keyrings/jenkins.gpg
```

The gpg --dearmor command is used to convert the key into a format that apt recognizes.

Next, let's append the Debian package repository address to the server's sources.list:

```
sudo sh -c 'echo deb [signed-by=/usr/share/keyrings/jenkins.gpg]  
http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'
```

After both commands have been entered, run apt update so that apt will use the new repository.

```
sudo apt update
```

Finally, install Jenkins and its dependencies:

```
sudo apt install jenkins
```

```
Activities Terminal Mar 26 14:43 growlt216@growlt216:~  
growlt216@growlt216:~$ wget -q -O - https://pkg.jenkins.io/debian-stable/jenkins.io.key |sudo gpg --dearmor -o /usr/share/keyrings/jenkins.gpg  
growlt216@growlt216:~$ sudo sh -c 'echo deb [signed-by=/usr/share/keyrings/jenkins.gpg] http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'  
growlt216@growlt216:~$ sudo apt update  
Get:1 https://repo.prituni.com/stable/apt jammy InRelease [2,419 B]  
Hit:2 http://us.archive.ubuntu.com/ubuntu jammy InRelease  
Get:3 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]  
Get:4 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease [107 kB]  
Get:5 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [895 kB]  
Hit:6 https://linux.teamviewer.com/deb stable InRelease  
Ign:8 https://repo.mongodb.org/apt/ubuntu focal/mongodb-org/5.0 InRelease  
Hit:9 http://dl.google.com/linux/chrome/deb stable InRelease  
Hit:10 http://deb.anydesk.com all InRelease  
Get:11 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]  
Get:12 https://packages.microsoft.com/repos/ms-teams stable InRelease [5,931 B]  
Hit:13 https://repo.mongodb.org/apt/ubuntu focal/mongodb-org/5.0 Release  
Hit:15 https://ppa.launchpadcontent.net/deadsnakes/ppa/ubuntu jammy InRelease  
Hit:16 https://ftp.postgresql.org/pub/pgsql/pgadmin4/apt/jammy pgadmin4 InRelease  
Hit:17 https://ppa.launchpadcontent.net/ondrej/ppa/ubuntu jammy InRelease  
Ign:6 https://pkg.jenkins.io/debian-stable binary/ InRelease  
Get:18 https://pkg.jenkins.io/debian-stable binary/ Release [2,044 B]  
Get:19 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]  
Get:20 https://pkg.jenkins.io/debian-stable binary/ Packages [24.5 kB]  
Fetched 1,207 kB in 12s (100 kB/s)  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
10 packages can be upgraded. Run 'apt list --upgradable' to see them.  
M: http://deb.anydesk.com/dists/all/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.  
M: https://repo.mongodb.org/apt/ubuntu/dists/focal/mongodb-org/5.0/Release.gpg: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.  
M: https://ftp.postgresql.org/pub/pgsql/pgadmin4/apt/jammy/dists/pgadmin4/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.  
growlt216@growlt216:~$ sudo apt install jenkins  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following NEW packages will be installed:  
jenkins  
0 upgraded, 1 newly installed, 0 to remove and 10 not upgraded.  
Need to get 96.1 MB of archives.  
After this operation, 98.4 MB of additional disk space will be used.  
Get:1 https://pkg.jenkins.io/debian-stable binary/ jenkins 2.387.1 [96.1 MB]  
Fetched 96.1 MB in 1min 16s (1,200 kB/s)  
Selecting previously unselected package jenkins.  
(Reading database ... 285023 files and directories currently installed.)  
Preparing to unpack .../jenkins_2.387.1_all.deb ...  
Unpacking jenkins (2.387.1) ...  
Setting up jenkins (2.387.1) ...  
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /lib/systemd/system/jenkins.service.  
growlt216@growlt216:~$ sudo systemctl start jenkins.service  
growlt216@growlt216:~$ sudo systemctl status jenkins  
● jenkins.service - Jenkins Continuous Integration Server  
Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)  
Active: active (running) since Sun 2023-03-26 14:39:46 IST; 37s ago  
Main PID: 15121 (java)  
Tasks: 40 (limit: 18720)  
Memory: 1.8G
```

Step 2 — Starting Jenkins

now that Jenkins is installed, start it by using systemctl:

`sudo systemctl start jenkins.service`

Since systemctl doesn't display status output, we'll use the status command to verify that Jenkins started successfully:

`sudo systemctl status jenkins`

Step 3 — Opening the Firewall

`sudo ufw allow 8080`

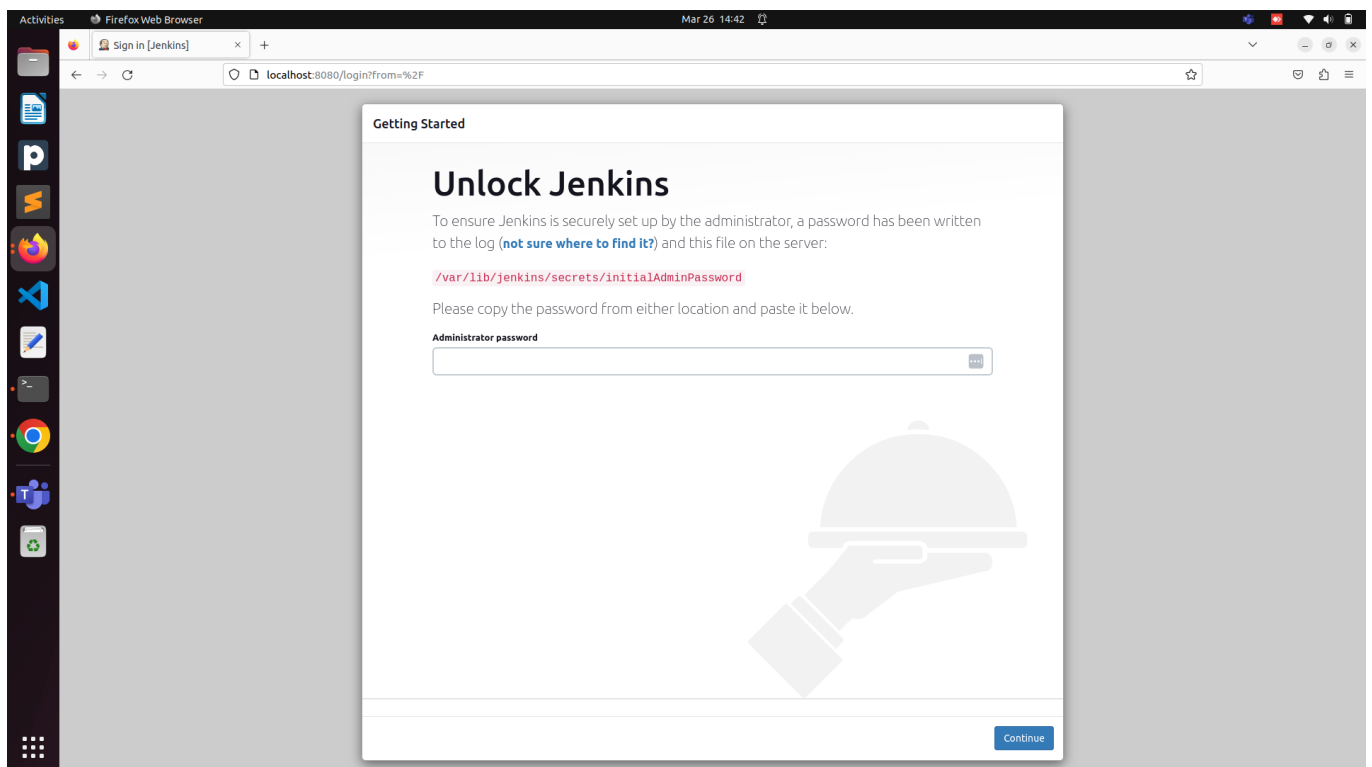
```
Activities Terminal Mar 26 14:44 growlt216@growlt216: -
Selecting previously unselected package jenkins.
(Reading database ... 285023 files and directories currently installed.)
Preparing to unpack .../jenkins_2.387.1_all.deb ...
Unpacking jenkins (2.387.1) ...
Setting up jenkins (2.387.1) ...
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /lib/systemd/system/jenkins.service.
growlt216@growlt216:~$ sudo systemctl start jenkins.service
growlt216@growlt216:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2023-03-26 14:39:46 IST; 37s ago
     Main PID: 15123 (java)
       Tasks: 60 (limit: 18728)
      Memory: 1.8G
         CPU: 42.104s
    CGroup: /system.slice/jenkins.service
            └─15123 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Mar 26 14:39:25 growlt216 jenkins[15123]: 774f4fee3bdc473ba7b97a85f0b20a6d
Mar 26 14:39:25 growlt216 jenkins[15123]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Mar 26 14:39:25 growlt216 jenkins[15123]: *****
Mar 26 14:39:25 growlt216 jenkins[15123]: *****
Mar 26 14:39:40 growlt216 jenkins[15123]: 2023-03-26 09:09:40.421+0000 [id=68] INFO h.m.DownloadService$Downloadable#load: Obtained the updated data file for hudson.tasks.Maven.MavenInsta
Mar 26 14:39:40 growlt216 jenkins[15123]: 2023-03-26 09:09:40.422+0000 [id=68] INFO hudson.util.Retrier#start: Performed the action check updates server successfully at the attempt #1
Mar 26 14:39:46 growlt216 jenkins[15123]: 2023-03-26 09:09:46.178+0000 [id=58] INFO Jenkins.InitReactorRunners$ifonAttained: Completed initialization
Mar 26 14:39:46 growlt216 jenkins[15123]: 2023-03-26 09:09:46.189+0000 [id=24] INFO hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and running
Mar 26 14:39:46 growlt216 systemd[1]: Started Jenkins Continuous Integration Server.
lines 1-20/20 (END)
growlt216@growlt216:~$ sudo ufw allow 8080
Rule added
Rule added (v6)
growlt216@growlt216:~$ sudo ufw status
Status: active

To Action From
--
80/tcp ALLOW Anywhere
22/tcp ALLOW Anywhere
443/tcp ALLOW Anywhere
5432/tcp ALLOW Anywhere
3306/tcp ALLOW Anywhere
9000 ALLOW Anywhere
8080 ALLOW Anywhere
80/tcp (v6) ALLOW Anywhere (v6)
22/tcp (v6) ALLOW Anywhere (v6)
443/tcp (v6) ALLOW Anywhere (v6)
5432/tcp (v6) ALLOW Anywhere (v6)
3306/tcp (v6) ALLOW Anywhere (v6)
9000 (v6) ALLOW Anywhere (v6)
8080 (v6) ALLOW Anywhere (v6)
growlt216@growlt216:~$
```

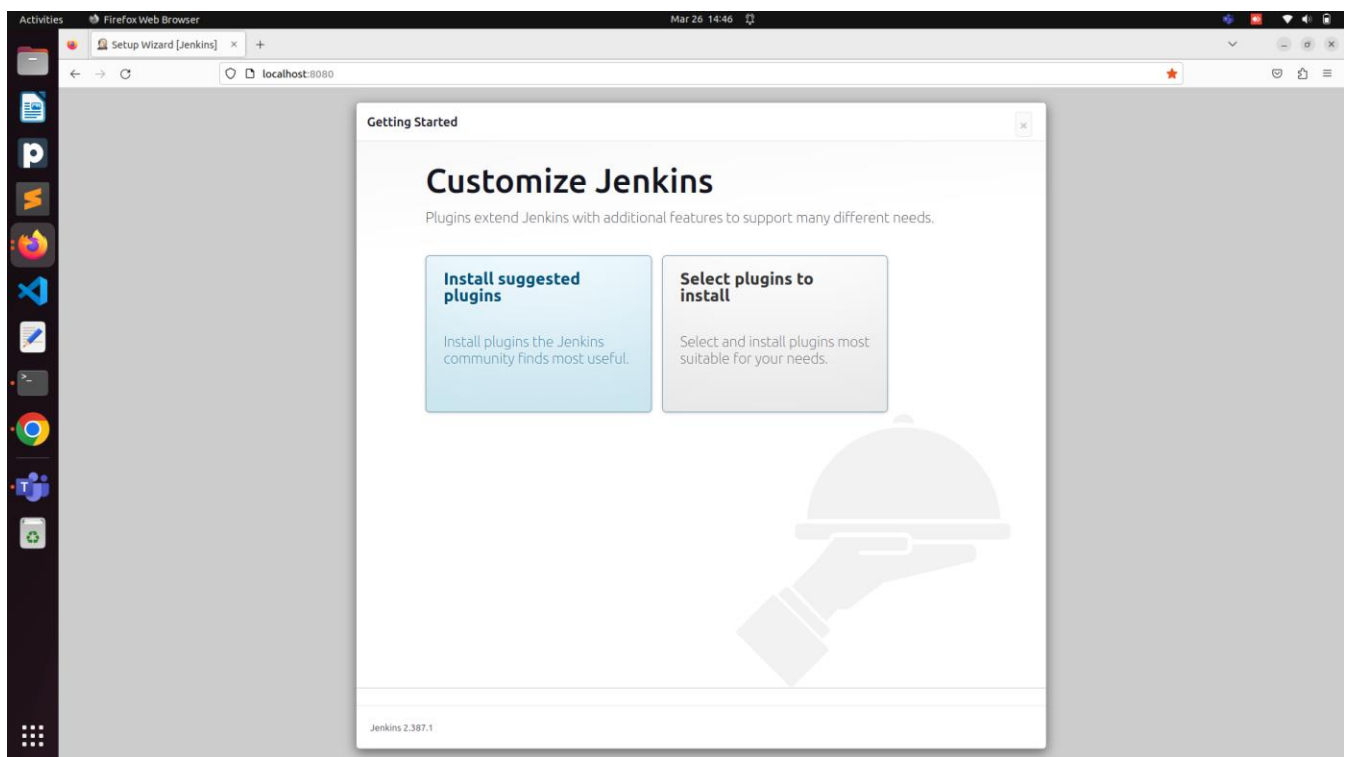
Step 4 — Setting Up Jenkins

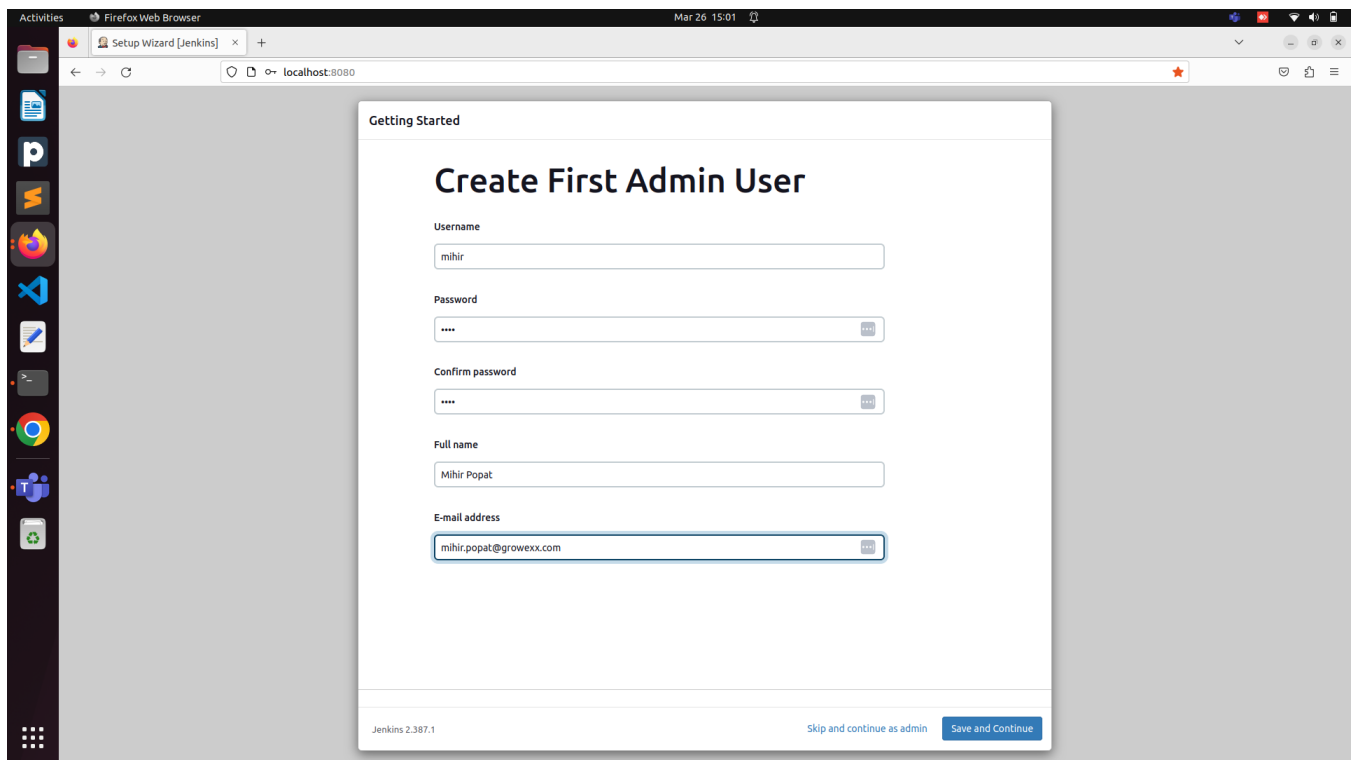
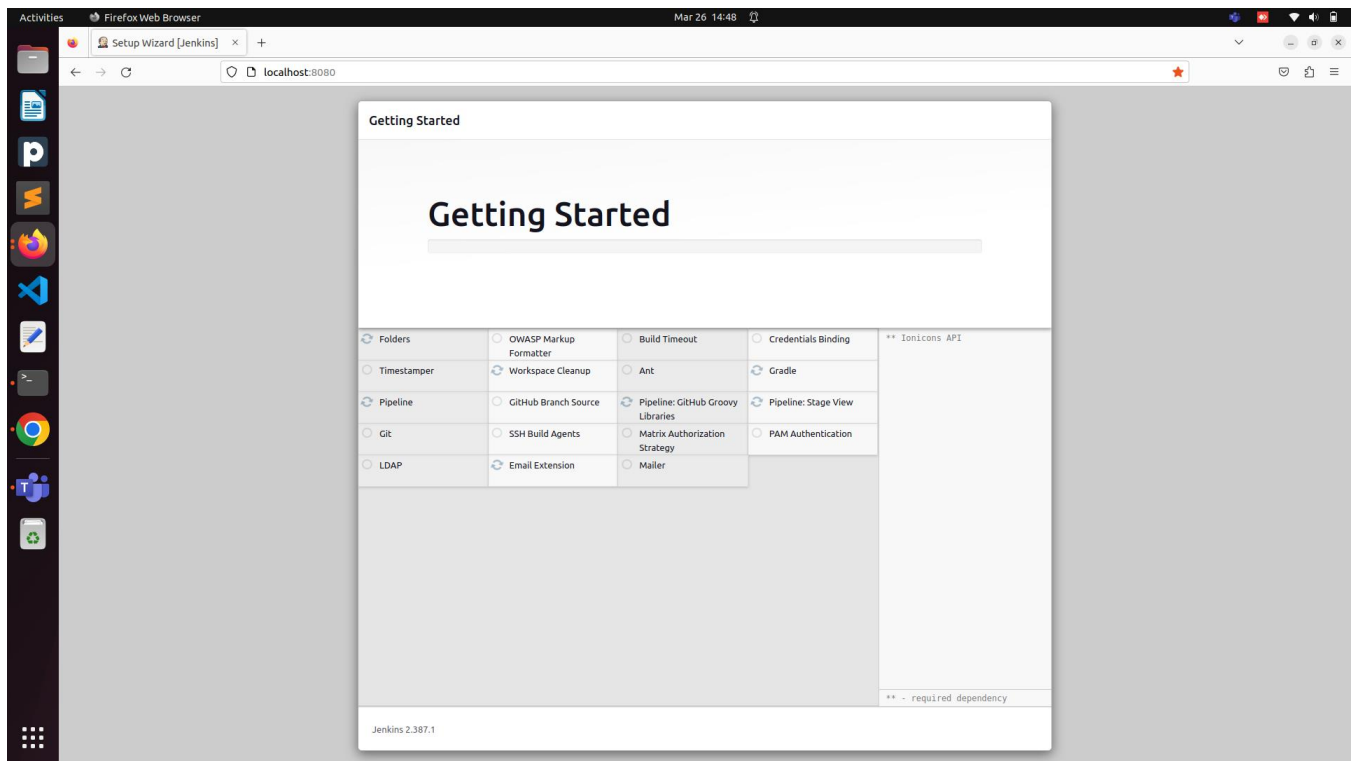
To set up your installation, visit Jenkins on its default port, 8080, using your server domain name or IP address: `http://your_server_ip_or_domain:8080`

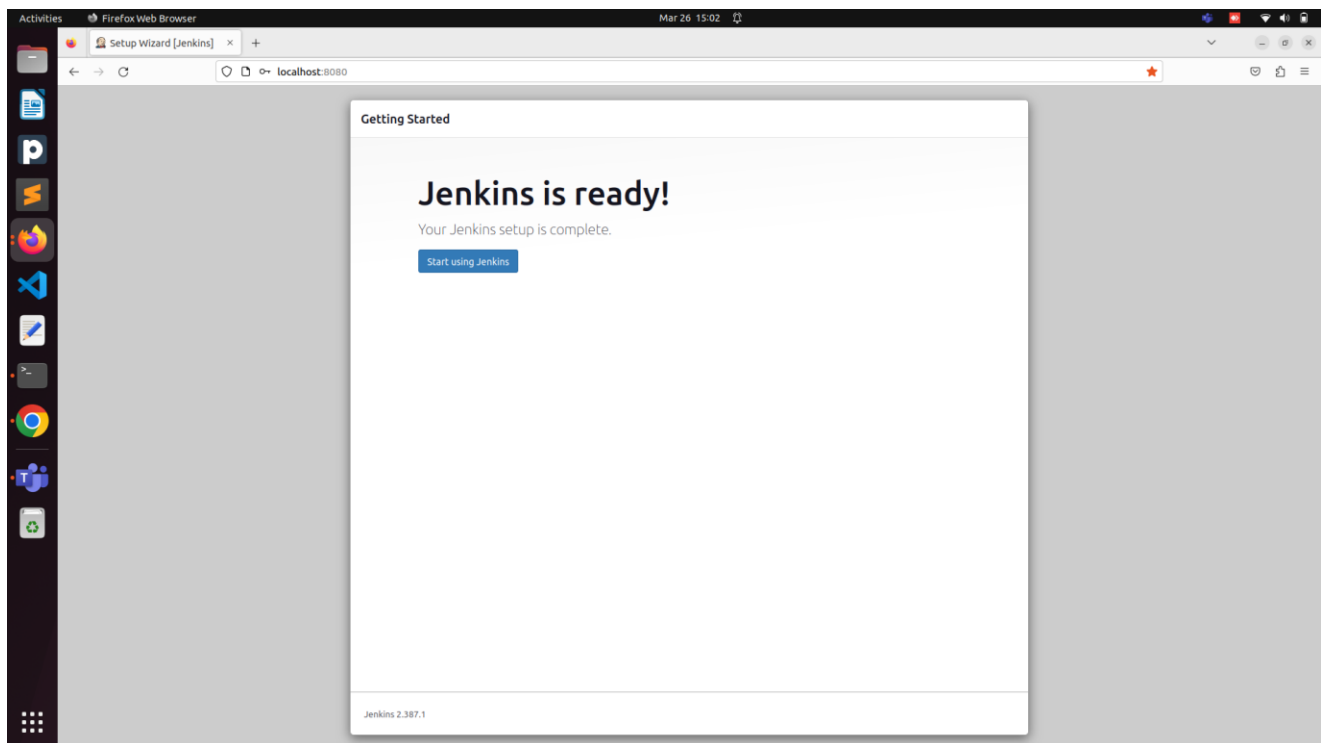
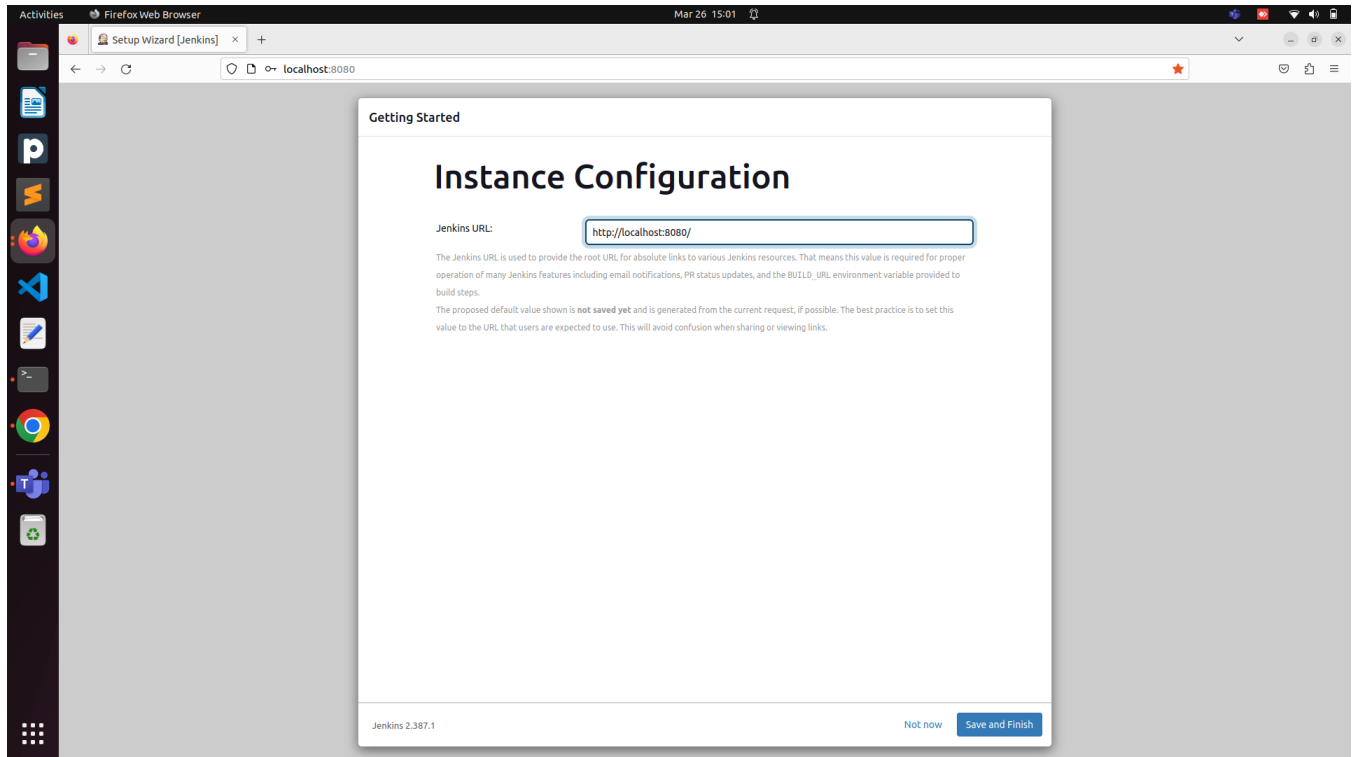


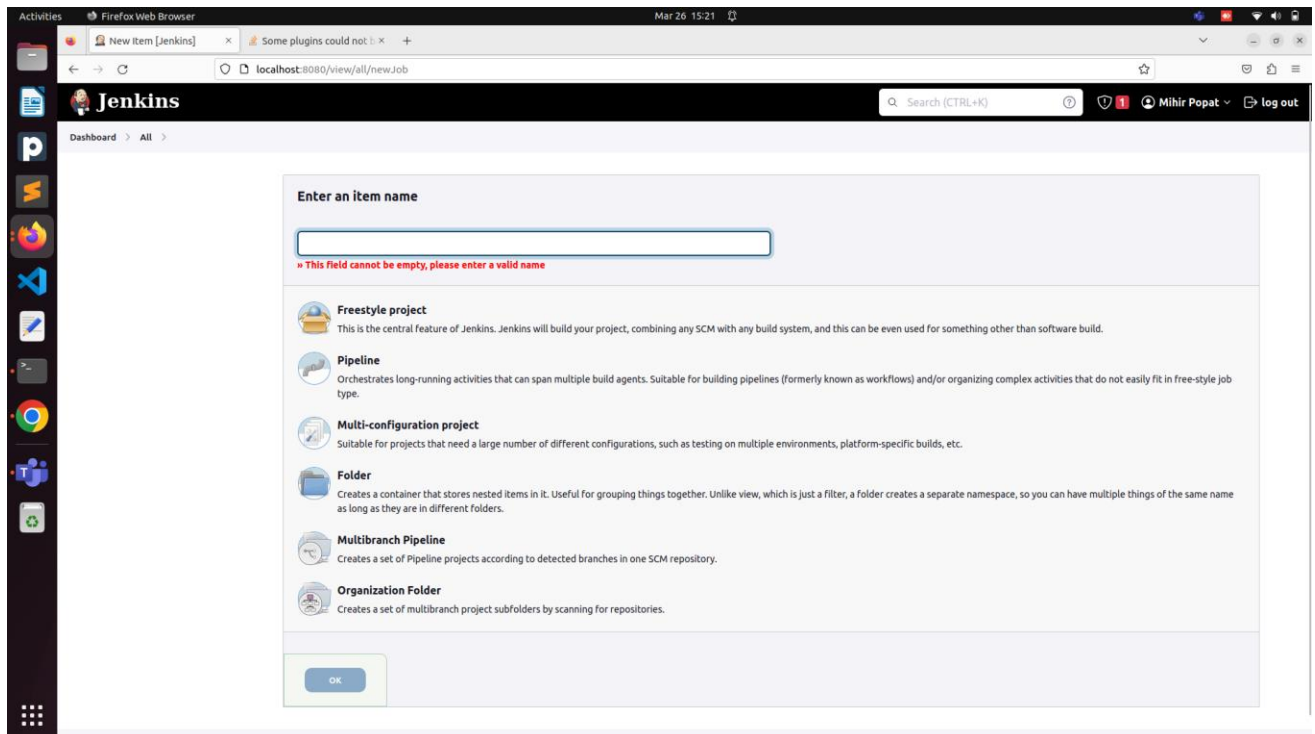
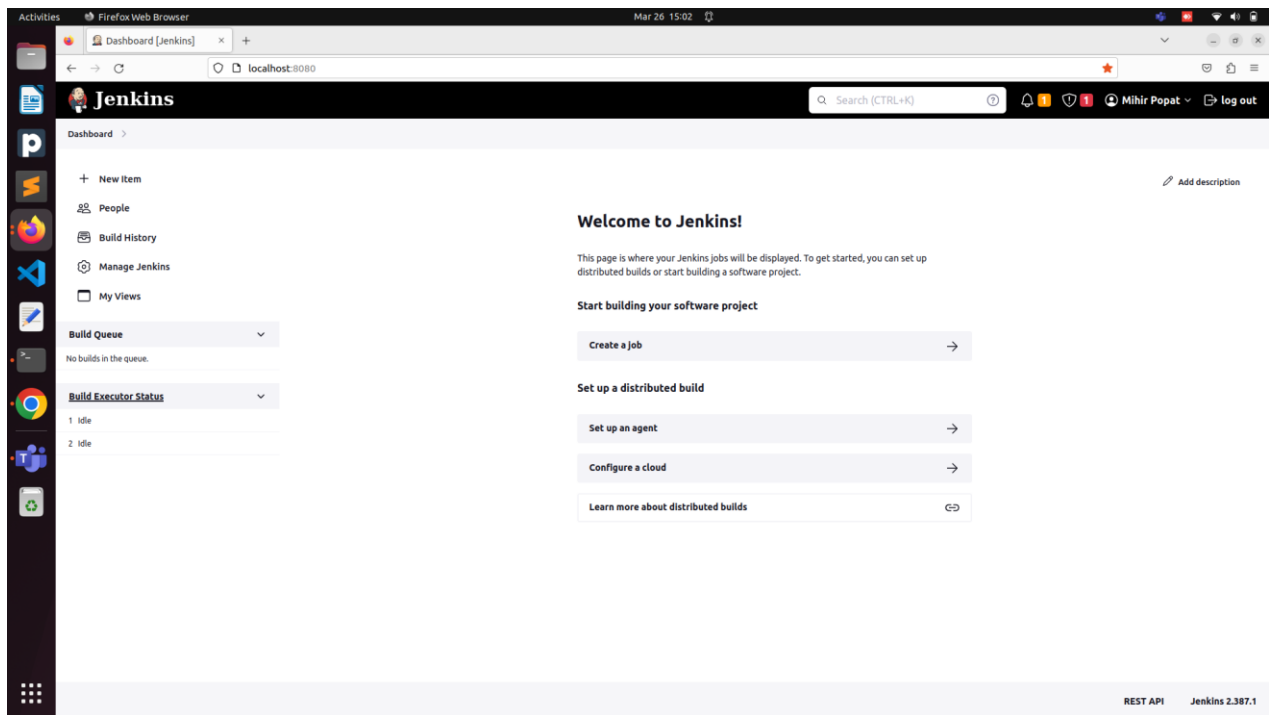
```
sudo cat /var/lib/jenkins/secrets/initialAdminPassword
```

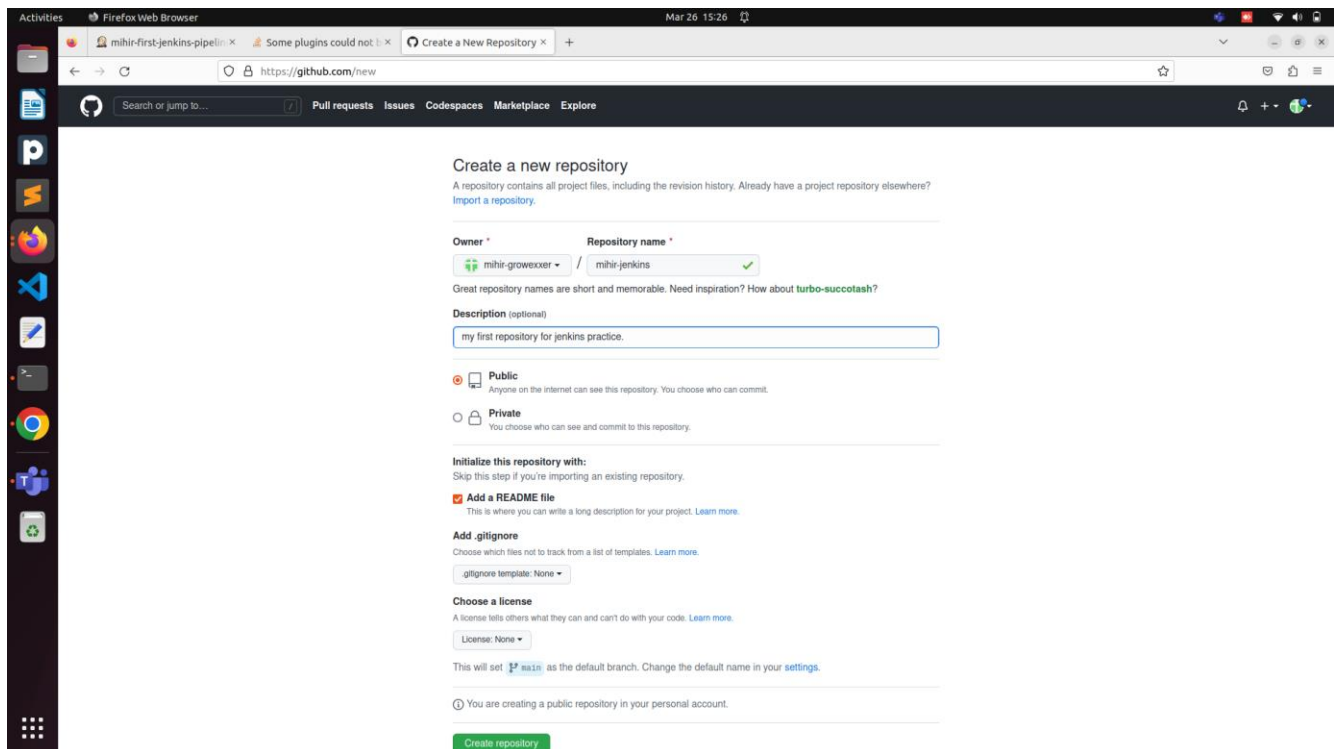
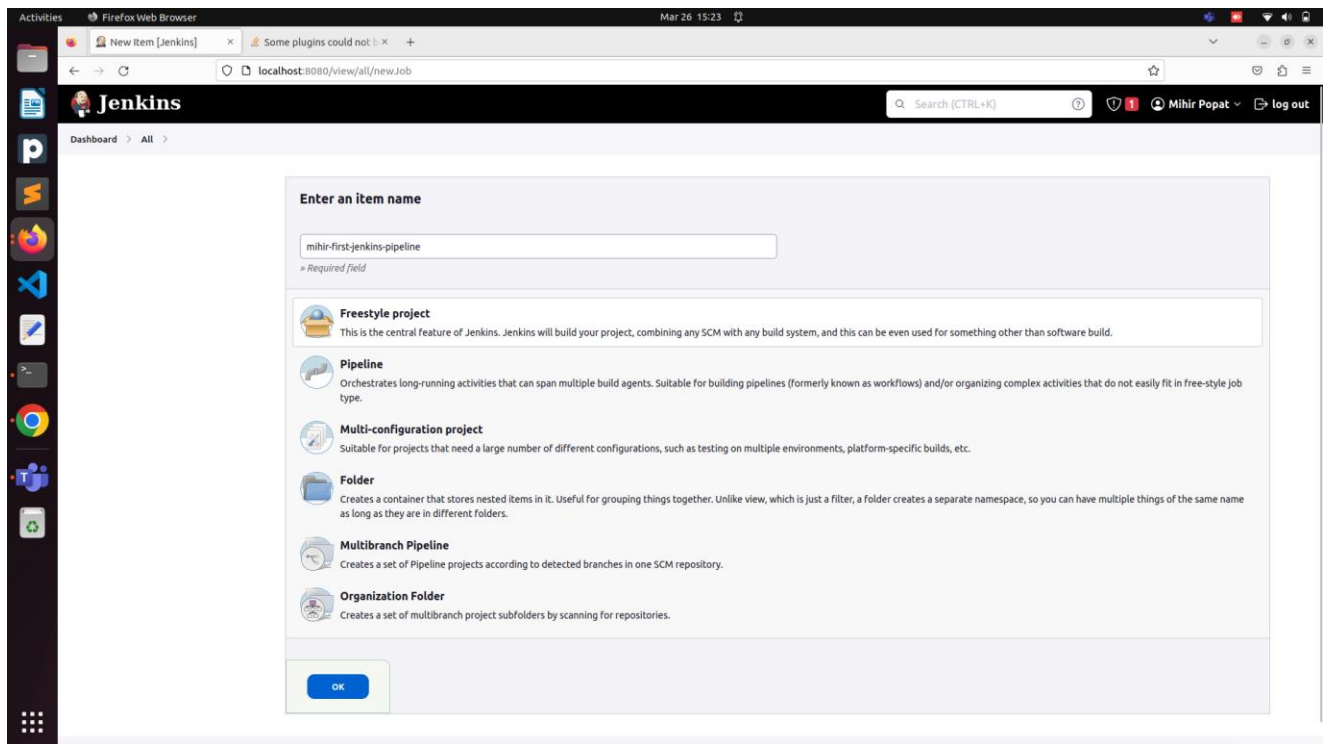
```
growlt216@growlt216:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
774f4f6e3bdc473ba7b97a85f0b20a6d
growlt216@growlt216:~$
```

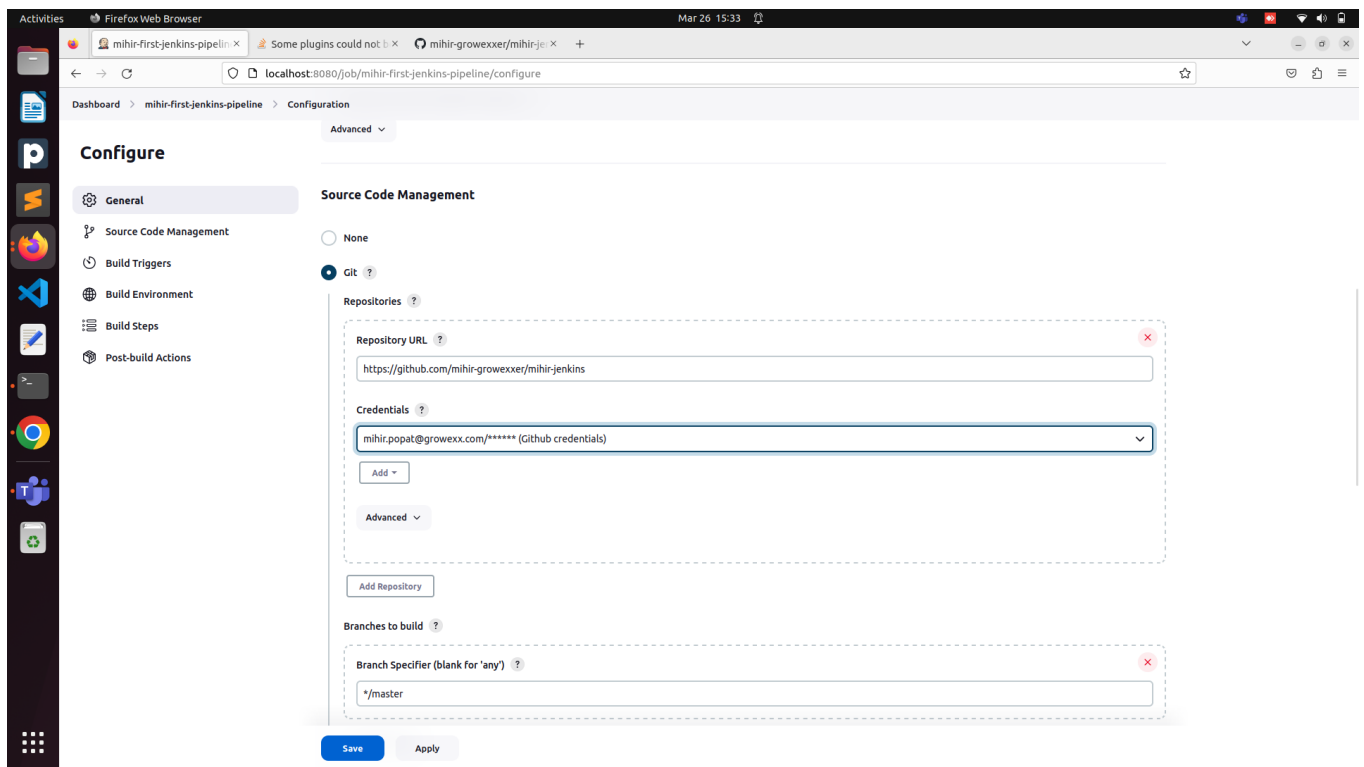
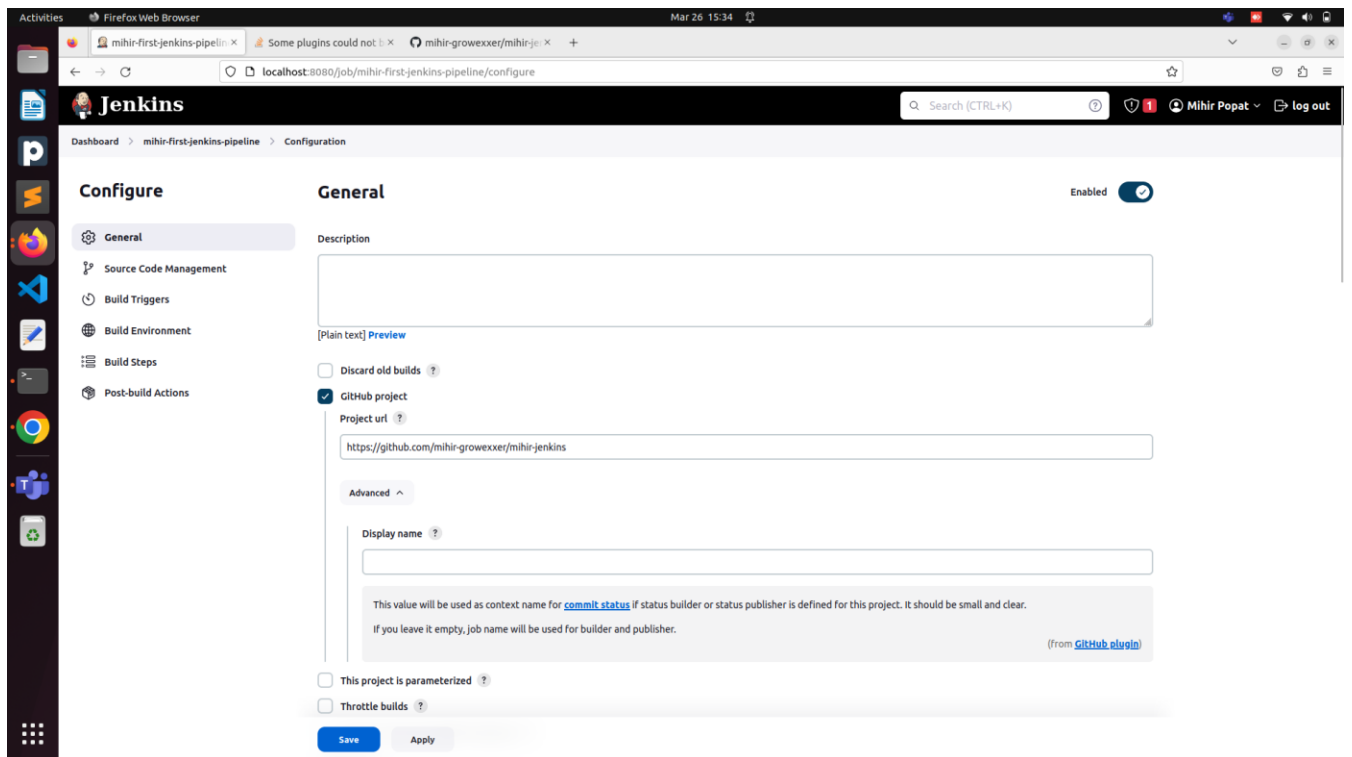


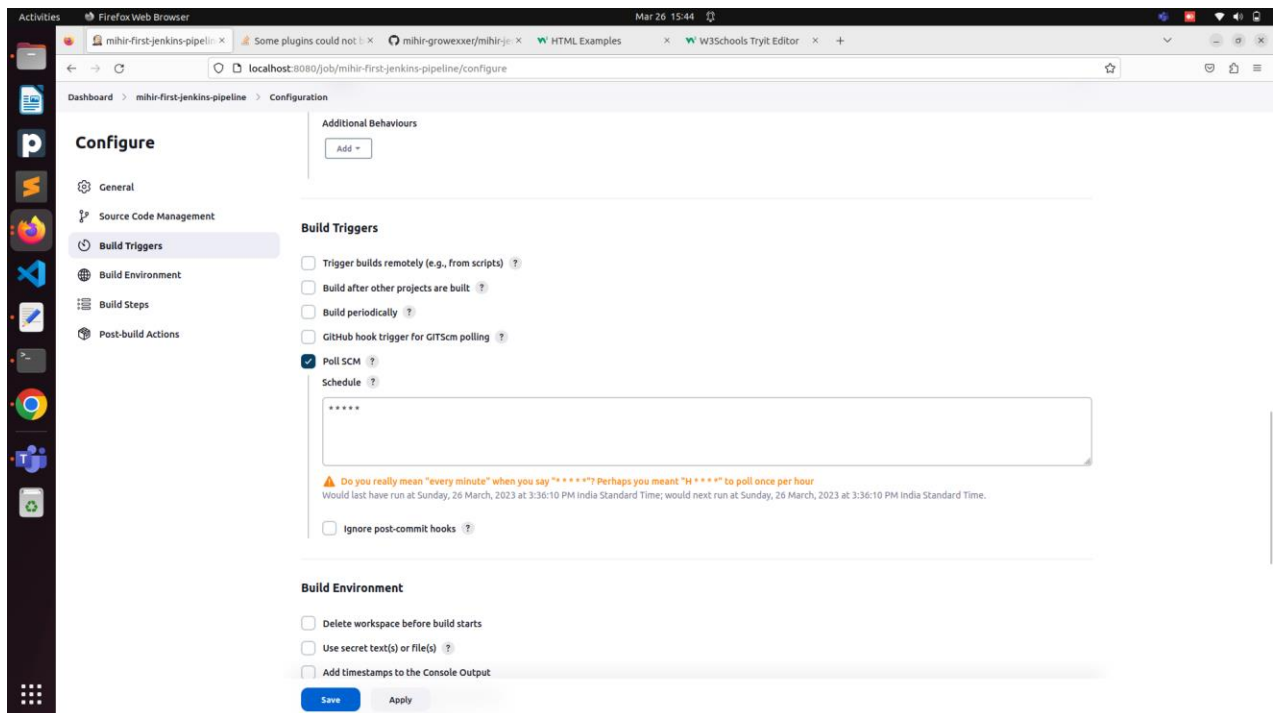
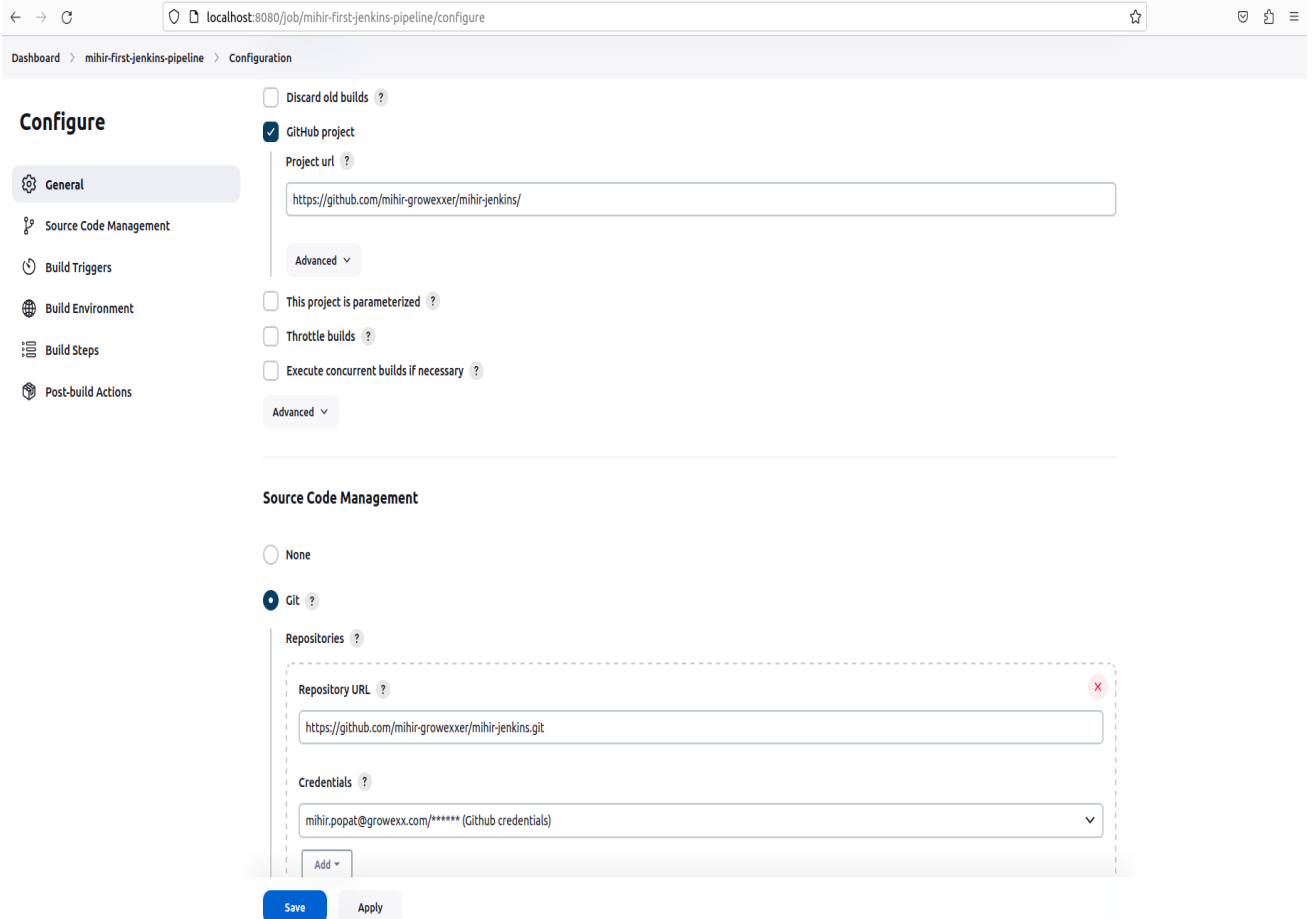












- General
- Source Code Management
- Build Triggers
- Build Environment
- Build Steps**
- Post-build Actions

Build Steps

≡

Execute shell ?

✕

Command

See [the list of available environment variables](#)

```
#!/bin/sh  
echo "this is working"
```

Advanced ▾

Add build step ▾

Post-build Actions

Add post-build action ▾

Save Apply

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL AZURE
growlt216@growlt216:~$ gh auth login
? What account do you want to log into? GitHub.com
? You're already logged into github.com. Do you want to re-authenticate? No
growlt216@growlt216:~$ gh repo create
? What would you like to do? Create a new repository on GitHub from scratch
? Repository name mihir-jenkins
? Description this is the repository for jenkins
? Visibility Public
? Would you like to add a .gitignore? No
? Would you like to add a license? No
? This will create "mihir-jenkins" as a public repository on GitHub. Continue? Yes
✓ Created repository mihir-growexxer/mihir-jenkins on GitHub
? Clone the new repository locally? Yes
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint: git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint: git branch -m <name>
Initialized empty Git repository in /home/growlt216/mihir-jenkins/.git/
growlt216@growlt216:~$ cd mihir-jenkins
growlt216@growlt216:~/mihir-jenkins$ echo "mihirrepo" >> README.md
growlt216@growlt216:~/mihir-jenkins$ git init
Reinitialized existing Git repository in /home/growlt216/mihir-jenkins/.git/
growlt216@growlt216:~/mihir-jenkins$ git add .
growlt216@growlt216:~/mihir-jenkins$ git commit -m "this is my third commit"
[master (root-commit) 2ee20aa] this is my third commit
1 file changed, 1 insertion(+)
create mode 100644 README.md
growlt216@growlt216:~/mihir-jenkins$ git branch -M main
growlt216@growlt216:~/mihir-jenkins$ git remote add origin https://github.com/mihir-growexxer/mihir-jenkins.git
error: remote origin already exists.
growlt216@growlt216:~/mihir-jenkins$ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 232 bytes | 232.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/mihir-growexxer/mihir-jenkins.git
 * [new branch] main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
growlt216@growlt216:~/mihir-jenkins$ git add .
growlt216@growlt216:~/mihir-jenkins$ git commit -m "this is my fourth commit"
[main 390ac97] this is my fourth commit
1 file changed, 10 insertions(+)
create mode 100644 index.html
growlt216@growlt216:~/mihir-jenkins$ git branch -M main
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL AZURE
Reinitialized existing Git repository in /home/growlt216/mihir-jenkins/.git/
growlt216@growlt216:~/mihir-jenkins$ git add .
growlt216@growlt216:~/mihir-jenkins$ git commit -m "this is my third commit"
[master (root-commit) 2ee20aa] this is my third commit
1 file changed, 1 insertion(+)
create mode 100644 README.md
growlt216@growlt216:~/mihir-jenkins$ git branch -M main
growlt216@growlt216:~/mihir-jenkins$ git remote add origin https://github.com/mihir-growexxer/mihir-jenkins.git
error: remote origin already exists.
growlt216@growlt216:~/mihir-jenkins$ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 232 bytes | 232.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/mihir-growexxer/mihir-jenkins.git
 * [new branch] main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
growlt216@growlt216:~/mihir-jenkins$ git add .
growlt216@growlt216:~/mihir-jenkins$ git commit -m "this is my fourth commit"
[main 390ac97] this is my fourth commit
1 file changed, 10 insertions(+)
create mode 100644 index.html
growlt216@growlt216:~/mihir-jenkins$ git branch -M main
growlt216@growlt216:~/mihir-jenkins$ git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 365 bytes | 365.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/mihir-growexxer/mihir-jenkins.git
 2ee20aa..390ac97 main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
growlt216@growlt216:~/mihir-jenkins$ git add .
growlt216@growlt216:~/mihir-jenkins$ git commit -m "this is my fifth commit"
[main 7313ae1] this is my fifth commit
1 file changed, 10 insertions(+)
create mode 100644 index2.html
growlt216@growlt216:~/mihir-jenkins$ git branch -M main
growlt216@growlt216:~/mihir-jenkins$ git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 389 bytes | 389.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/mihir-growexxer/mihir-jenkins.git
 390ac97..7313ae1 main -> main
Branch 'main' set up to track remote branch 'main' from 'origin'.
growlt216@growlt216:~/mihir-jenkins$
```

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#36'

Polling Log

Git Build Data

Previous Build

Next Build

Console Output

```
Started by an SCM change
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/mihr-first-jenkins-pipeline
The recommended git tool is: NONE
using credential 9bf7d4d2-33c5-4889-8cbb-0c9f2c7335d8
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/mihr-first-jenkins-pipeline/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/mihr-growexxer/mihr-jenkins.git # timeout=10
Fetching upstream changes from https://github.com/mihr-growexxer/mihr-jenkins.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_ASKPASS to set credentials Github credentials
> git fetch --tags --force --progress -- https://github.com/mihr-growexxer/mihr-jenkins.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 390ac97bebb6bc488450eca413b7d7c8ce8753fe (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 390ac97bebb6bc488450eca413b7d7c8ce8753fe # timeout=10
Commit message: "this is my fourth commit"
First time build. Skipping changelog.
[mihr-first-jenkins-pipeline] $ /bin/sh /tmp/jenkins14621777067318169389.sh
this is working
Finished: SUCCESS
```

- Status
- Changes
- Console Output**
- View as plain text
- Edit Build Information
- Delete build '#37'
- Polling Log
- Git Build Data
- Previous Build

✓

Console Output

```
Started by an SCM change
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/mihir-first-jenkins-pipeline
The recommended git tool is: NONE
using credential 9bf7d4d2-33c5-4889-8cbb-8c9f2c7335d8
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/mihir-first-jenkins-pipeline/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/mihir-growexxer/mihir-jenkins.git # timeout=10
Fetching upstream changes from https://github.com/mihir-growexxer/mihir-jenkins.git
> git --version # timeout=10
> git --version # 'git version 2.34.1'
using GIT_ASKPASS to set credentials Github credentials
> git fetch --tags --force --progress -- https://github.com/mihir-growexxer/mihir-jenkins.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 7313e819070c3ac7aa8c715a14e739c2761e91d6 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 7313e819070c3ac7aa8c715a14e739c2761e91d6 # timeout=10
Commit message: "this is my fifth commit"
> git rev-list --no-walk 390ac97bebb6bc488450eca413b7d7c8ce8753fe # timeout=10
[mihir-first-jenkins-pipeline] $ /bin/sh /tmp/jenkins16438912227490730406.sh
this is working
Finished: SUCCESS
```

Search or jump to...

Pull requests

Issues

Codespaces

Marketplace

Explore

mihir-growexxer / mihir-jenkins

Public

Pin

Unwatch 1

Fork 0

Star 0

<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

main 1 branch 0 tags

Go to file

Add file

<> Code

mihir-growexxer

this is my fifth commit

7313e81 1 hour ago 3 commits

README.md

this is my third commit

1 hour ago

index.html

this is my fourth commit

1 hour ago

index2.html

this is my fifth commit

1 hour ago

README.md

mihirrepo

About

this is the repository for jenkins

Readme

0 stars

1 watching

0 forks

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No packages published

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