

# Create a job in Jenkins

## 1. Launch an EC2 Instance

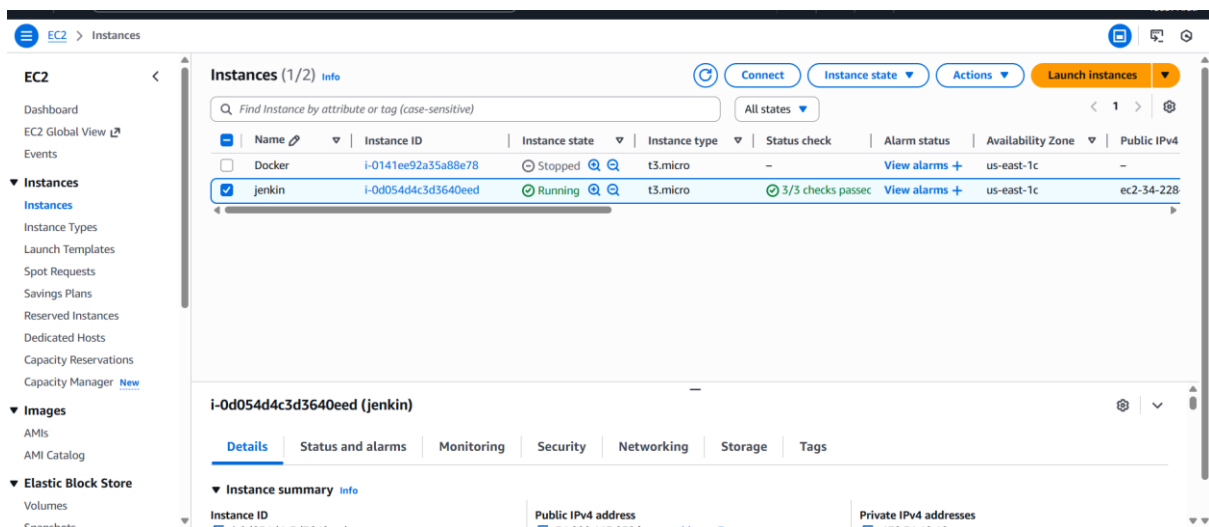
### Security Group:

- Allow SSH (22) from your IP
- Allow Custom TCP (8080) from your IP (for Jenkins)

Launch the instance

## 2. Connect to the EC2 Instance

ssh -i your-key.pem ec2-user@<EC2-PUBLIC-IP>



## 3. Install Java (Required for Jenkins)

```
sudo yum update -y
```

```
sudo yum install java-17-amazon-corretto -y
```

Verify: java -version

## 4. Install Jenkins on EC2

```
sudo yum install jenkins -y
```

```
sudo systemctl start jenkins
```

```
sudo systemctl enable jenkins
```

```
sudo systemctl status jenkins
```

## 5. Access Jenkins UI


Open browser : http://<EC2-PUBLIC-IP>:8080

Get admin password : sudo cat /var/lib/jenkins/secrets/initialAdminPassword

Install Suggested Plugins

Create Admin User

**Note : If already installed then just sign in to Jenkins.**



### Sign in to Jenkins


Username

Password

☐ Keep me signed in

Sign in

## 6. Create a Jenkins Job (on EC2)

**Jenkins**

[+ New Item](#)

[Build History](#)

Build Queue

No builds in the queue.

Build Executor Status

0/2

Search

Settings

Profile

Add description

### Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

#### Start building your software project

Create a job

#### Set up a distributed build

Set up an agent

Configure a cloud

Learn more about distributed builds

## New Job

- Click New Item
- Enter Job Name
- Select Freestyle Project
- Click OK

## New Item

Enter an item name

First-Job

Select an item type



## Freestyle project

Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

OK

## Build Step

### Add build step → Execute shell

## Configure

General

Source Code Management

Triggers

Build Steps

Post-build Actions

## Triggers

Set up automated actions that start your build based on specific events, like code changes or scheduled times.

☐ Trigger builds remotely (e.g., from scripts) ?☐ Build after other projects are built ?☐ Build periodically ?☐ Poll SCM ?

## Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

+ Add build step

Filter

Execute Windows batch command

Execute shell

Invoke top-level Maven targets

+ Add post-build action

Completes, like sending notifications, archiving artifacts, or triggering other jobs.

Save

Apply

## Que. First\_job

- 1) **create 2 users as ram and sita**  
sudo useradd ram  
sudo useradd sita
- 2) **create 2 groups as cloud and devops**
- 3) **add ram in cloud add sita in devops**

## Configure

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

- ☐ Trigger builds remotely (e.g., from scripts) ?
- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☐ Poll SCM ?

### Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

Execute shell ?

Command

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

```
sudo useradd sita
sudo groupadd cloud
sudo groupadd devops
sudo gpasswd -a ram cloud
sudo gpasswd -a sita devops
```

Advanced ▾

Save

Apply



Status

Changes

Workspace

Build Now

Configure

Delete Project

Rename

## First-Job

## Permalinks

Builds >



No builds

## 7. Switch to Root or a Sudo User

SSH into your EC2 instance:

Sudo -i

vim /etc/sudoers

### Grant Jenkins Sudo Access

jenkins ALL=(ALL) NOPASSWD: ALL

:wq!

**Note: Jenkins can run sudo without password**

**Required for automated builds**

```
#Defaults:%sudo env_keep += "EDITOR"

# Completely harmless preservation of a user preference.
#Defaults:%sudo env_keep += "GREP_COLOR"

# While you shouldn't normally run git as root, you need to with etckeeper
#Defaults:%sudo env_keep += "GIT_AUTHOR_* GIT_COMMITTER_*"

# Per-user preferences; root won't have sensible values for them.
#Defaults:%sudo env_keep += "EMAIL DEBEMAIL DEBFULLNAME"

# "sudo scp" or "sudo rsync" should be able to use your SSH agent.
#Defaults:%sudo env_keep += "SSH_AGENT_PID SSH_AUTH_SOCK"

# Ditto for GPG agent
#Defaults:%sudo env_keep += "GPG_AGENT_INFO"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root ALL=(ALL:ALL) ALL
jenkins ALL=(ALL:ALL) NOPASSWD:ALL
# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d
:wq!
```

## 8. A Jenkins job named First-Job

The Jenkins dashboard shows a list of builds. The 'First-Job' build is highlighted, indicating it is successful. The build status is 'S' (Success), and the last success time is '2 min 51 sec'. The last failure is 'N/A', and the last duration is '0.41 sec'.

S	W	Name	Last Success	Last Failure	Last Duration
✓	☀	First-Job	2 min 51 sec	N/A	0.41 sec

## 9. Build run successfully

The console output shows the build process for 'First-Job' build #1. The build was started by user 'Arati Yadav' and ran as 'SYSTEM'. It built in the workspace '/var/lib/jenkins/workspace/First-Job'. The build script executed the following commands:

```

[First-Job] $ /bin/sh -xe /tmp/jenkins8307866070587133645.sh
+ sudo useradd ram
+ sudo useradd sita
+ sudo groupadd cloud
+ sudo groupadd devops
+ sudo gpsswd -a ram cloud
Adding user ram to group cloud
+ sudo gpsswd -a sita devops
Adding user sita to group devops
Finished: SUCCESS


```

1) Remove users from group ram and sita

2) delete group cloud and devops

3) delete users

The 'New Item' form in Jenkins is shown. The 'Enter an item name' field contains 'second-job'. The 'Select an item type' dropdown is set to 'Freestyle project'. The description for 'Freestyle project' is: 'Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.' Below the form, there is a section for 'Copy from' with a text input field and an 'OK' button.



Jenkins

second-job

Configure

General

Source Code Management

Triggers

Build Steps

Post-build Actions

☐ Trigger builds remotely (e.g., from scripts) ?

☐ Build after other projects are built ?

☐ Build periodically ?

☐ Poll SCM ?

Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

Execute shell ?

Command

See the list of available environment variables


```
sudo groupdel cloud
sudo groupdel devops
sudo userdel -r ram
sudo userdel -r sita
```

Advanced

Save

Apply

## A Jenkins job named Second-Job



Jenkins

+ New Item

Build History









Build Queue

No builds in the queue.

Build Executor Status


0/2

All

S	W	Name	Last Success	Last Failure	Last Duration
		First-Job	38 min 	N/A	0.41 sec 
		second-job	12 sec 	N/A	0.27 sec 

Icons: S M L

## Build run successfully



Jenkins

second-job

#1

Status

Changes

Console Output

Edit Build Information

Delete build '#1'

Console

Download

Copy

View as plain text

Started by user Arati Yadav

Running as SYSTEM

Building in workspace /var/lib/jenkins/workspace/second-job

[second-job] \$ /bin/sh -xe /tmp/jenkins12346489748491919960.sh

+ sudo groupdel cloud

+ sudo groupdel devops

+ sudo userdel -r ram

userdel: ram mail spool (/var/mail/ram) not found

userdel: ram home directory (/home/ram) not found


+ sudo userdel -r sita

userdel: sita mail spool (/var/mail/sita) not found

userdel: sita home directory (/home/sita) not found

Finished: SUCCESS


## A Jenkins job named Third-Job

 **Jenkins** / All / New Item

### New Item

Enter an item name

Select an item type

 **Freestyle project**  
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

If you want to create a new item from other existing, you can use this option:

Copy from

OK

### 1) create directory named as Project

```
sudo mkdir -p project
```

### 2) Create user named as Robert

```
sudo useradd Robert
```


### 3) make user as a owner of directory


```
sudo chown Robert:Robert project
```


### 4) give the rw permission to user


```
sudo chmod u+rw project
```


### Build ran successfully


 **Jenkins** / Third-job / #5


 Status

 Changes

 Console Output

 Edit Build Information

 Delete build '#5'

 Previous Build

### Console

```
Started by user Arati Yadav
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/Third-job
[Third-job] $ /bin/sh -xe /tmp/jenkins5379402870378894512.sh
+ sudo mkdir -p project
+ sudo chown Robert:Robert project
+ sudo chmod u+rw project
Finished: SUCCESS
```