

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>
```

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links like Dashboard, EC2 Global View, Events, Instances (selected), Images, and Elastic Block Store. The main area has a header with 'Instances (1/2) Info' and buttons for Connect, Instance state, Actions, and Launch instances. Below is a table with columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IPv4. Two rows are listed: 'Docker' (Stopped, t3.micro, us-east-1c, ec2-34-228) and 'jenkin' (Running, t3.micro, 3/3 checks passed, us-east-1c, ec2-34-228). Below the table, a detailed view for the 'jenkin' instance is shown with tabs for Details, Status and alarms, Monitoring, Security, Networking, Storage, and Tags. Under Details, there's an 'Instance summary' section with tabs for Info, Instance ID, Public IPv4 address, and Private IPv4 addresses.

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

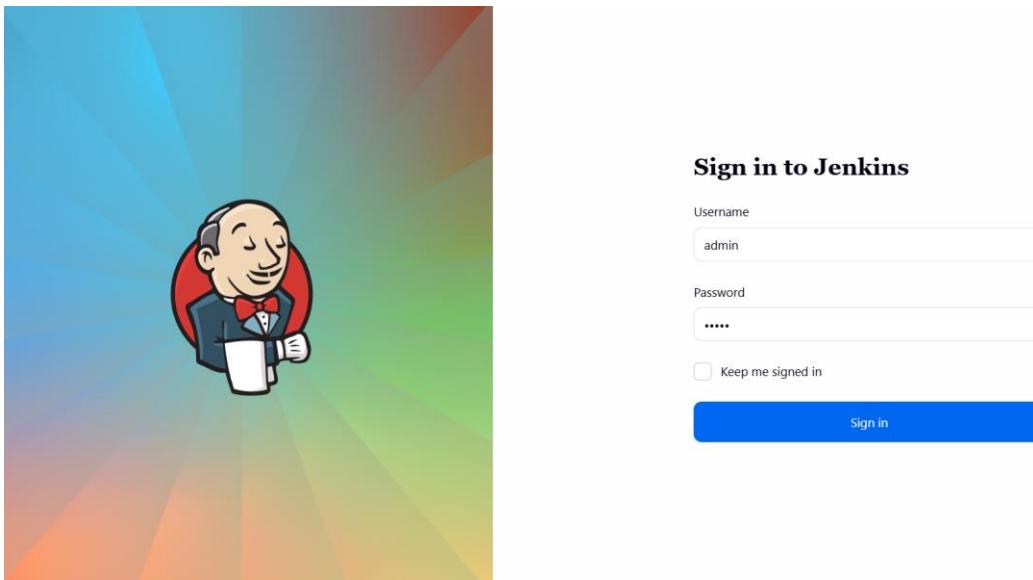
Open browser : `http://<EC2-PUBLIC-IP>:8080`

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.



6. Create a Jenkins Job (on EC2)

The image shows the Jenkins dashboard. At the top, there are links for "New Item" and "Build History". Below that is a "Welcome to Jenkins!" message. A "Build Queue" section shows "No builds in the queue." A "Build Executor Status" section shows "0/2". In the center, there's a "Start building your software project" button and a "Create a job" button. Below these are sections for "Set up a distributed build" with options for "Set up an agent", "Configure a cloud", and a link to "Learn more about distributed builds".

New Job

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

Jenkins / All / New Item

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

Jenkins / First-Job / Configure

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

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**

 Jenkins / First-Job / Configure

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**

 Jenkins / First-Job

 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 screenshot shows the Jenkins dashboard. At the top, there are links for 'New Item' and 'Build History'. Below that is a search bar and a 'Add description' button. A navigation bar with tabs 'All' and '+' is present. On the left, there are two sections: 'Build Queue' (empty) and 'Build Executor Status' (0/2). The main area displays a table for the 'First-Job' build. The columns are 'S' (Status), 'W' (Last Success), 'Name' (First-Job), 'Last Success' (2 min 51 sec #1), 'Last Failure' (N/A), and 'Last Duration' (0.41 sec). Below the table is a horizontal scroll bar. At the bottom, there are icons for 'S' (Success), 'M' (Medium), and 'L' (Large).

9. Build run successfully

The screenshot shows the Jenkins console output for the 'First-Job' build. The left sidebar has links for 'Status', 'Changes', 'Console Output' (which is selected), 'Edit Build Information', and 'Delete build #1'. The right panel shows the console log:

```
Started by user Arati Yadav
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/First-Job
[First-Job] $ /bin/sh -xe /tmp/jenkins8307866070587133645.sh
+ sudo useradd ram
+ sudo useradd sita
+ sudo groupadd cloud
+ sudo groupadd devops
+ sudo gpasswd -a ram cloud
Adding user 'ram' to group 'cloud'
+ sudo gpasswd -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 screenshot shows the 'New Item' dialog in Jenkins. The title is 'New Item'. It asks for an item name ('second-job') and an item type ('Freestyle project'). A note says: 'If you want to create a new item from other existing, you can use this option: Copy from'. There is a text input field for 'Type to autocomplete'. At the bottom is a blue 'OK' button.

Configure

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

Triggers

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

Build History

All	+				
S	W	Name	Last Success	Last Failure	Last Duration
(checkmark)	(sun)	First-job	38 min #1	N/A	0.41 sec
(checkmark)	(sun)	second-job	12 sec #1	N/A	0.27 sec

Build Executor Status

No builds in the queue.

Icon: S M L

Build run successfully

Status

Console

Started by user Arati Yadav
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/second-job
[second-job] \$ /bin/sh -x /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

Download **Copy** **View as plain text**

A Jenkins job named Third-Job

Jenkins / All / New Item

New Item

Enter an item name
Third-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.

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

Copy from
Type to autocomplete

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+rwx project
```

Build ran successfully

Jenkins / Third-job / #5

Status Changes Console

Console Output

Edit Build Information Delete build '#5' Previous Build

```
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+rwx project
Finished: SUCCESS
```