

Jenkins works on master and agent architecture.

Launch 2 machines at a time.

aws

Search

[Alt+5]

EC2

Instances

Launch an instance

United States (N. Virginia)

Prashanth Reddy M

Launch an instance

Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Info

Name

Jenkins

Add additional tags

Application and OS Images (Amazon Machine Image)

Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Search our full catalog including 1000s of application and OS images

Recents

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

SUSE Linux

Debian

Browse more AMIs

Summary

Info

Number of instances

2

When launching more than 1 instance, consider EC2 Auto Scaling

Software Image (AMI)

Amazon Linux 2023 AMI 2023.6.2...read more

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year of opening an AWS

Cancel

Launch instance

Preview code

Instance type

Info

Get advice

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true Free tier eligible

On-Demand Windows base pricing: 0.0162 USD per Hour

On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour

On-Demand SUSE base pricing: 0.0116 USD per Hour

On-Demand RHEL base pricing: 0.026 USD per Hour

On-Demand Linux base pricing: 0.0116 USD per Hour

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login)

Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

jenkins

Create new key pair

Network settings

Info

Network

Info

vpc-0f0977eebd0d33f88

Edit

Network settings

Info

Network

Info

vpc-0f0977eebd0d33f88

Subnet

Info

No preference (Default subnet in any availability zone)

Auto-assign public IP

Info

Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups)

Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group

Select existing security group

We'll create a new security group called 'launch-wizard-1' with the following rules:

Allow SSH traffic from

Anywhere

0.0.0.0/0

Allow HTTPS traffic from the internet

To set up an endpoint, for example when creating a web server

Allow HTTP traffic from the internet

To set up an endpoint, for example when creating a web server

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Configure storage

Info

Advanced

1x

8

GiB

gp2

Root volume, Not encrypted

Summary

Info

Number of instances

2

When launching more than 1 instance, consider EC2 Auto Scaling

Software Image (AMI)

Canonical, Ubuntu, 22.04, amd64...read more

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

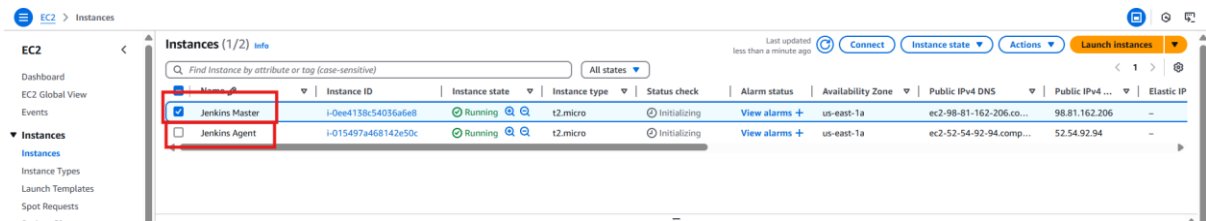
Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

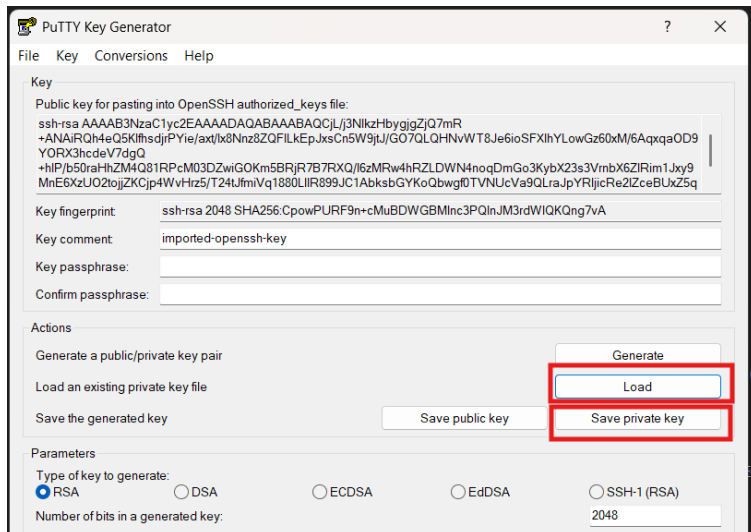
Launch instance

Preview code

Rename the machines as Master and agent



Open PuTTYgen and load the .pem key and Save as private key as .ppk



Open the Linux master machine and run the following commands

➔ ***sudo apt-get update***

Use this for updated commands or follow the bellow steps  
<https://www.jenkins.io/doc/book/installing/linux/>

Install Java JDK file in your master machine

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

➔ ***java -version***

Install Jenkins in master

➔ ***sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \***  
***https://pkg.jenkins.io/debian/jenkins.io-2023.key***

➔ ***echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \***  
***https://pkg.jenkins.io/debian binary/ | sudo tee \***  
***/etc/apt/sources.list.d/jenkins.list > /dev/null***

➔ ***sudo apt-get update***

➔ ***sudo apt-get install jenkins***

Now Jenkins are installed on your machine

Open Jenkins on web portal with IP: 8080

Port 8080 is not opened in the security group, now we are open that by going to AWS Console.

The screenshot shows the AWS Management Console interface. At the top, there's a table of instances. The 'Jenkins Master' instance is selected and highlighted with a red box. Below this, the 'Security' tab is selected for the instance, also highlighted with a red box. Under 'Security details', the 'Security groups' section shows 'sg-04f501e06c9190e54 (launch-wizard-1)' highlighted with a red box. In the 'Inbound rules' table, the 'Port range' column has values 80, 22, and 443, with the '80' row highlighted by a green box. Below this, the 'sg-04f501e06c9190e54 - launch-wizard-1' security group page is shown. The 'Inbound rules' tab is selected and highlighted with a red box. At the bottom, the 'Inbound rules (3)' table is visible, and the 'Edit inbound rules' button is highlighted with a red box.

Name	Security group rule ID	Port range	Protocol	Source	Security groups	Description
-	sgr-0fab7172612ea4d10	80	TCP	0.0.0.0/0	launch-wizard-1	-
-	sgr-058e7411da98933bf	22	TCP	0.0.0.0/0	launch-wizard-1	-
-	sgr-097325f2187dec109	443	TCP	0.0.0.0/0	launch-wizard-1	-

Name	Security group rule ID	IP version	Type	Protocol	Port range	Source	Description
-	sgr-0fab7172612ea4d10	IPv4	HTTP	TCP	80	0.0.0.0/0	-
-	sgr-058e7411da98933bf	IPv4	SSH	TCP	22	0.0.0.0/0	-
-	sgr-097325f2187dec109	IPv4	HTTPS	TCP	443	0.0.0.0/0	-

Add the rule and save

## Edit inbound rules [info](#)

Inbound rules control the incoming traffic that's allowed to reach the instance.

**Inbound rules** [info](#)

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	
sgr-0fab7172612ea4d10	HTTP	TCP	80	Custom	<input type="text" value="0.0.0.0/0"/>	<a href="#">Delete</a>
sgr-058e7411da98933bf	SSH	TCP	22	Custom	<input type="text" value="0.0.0.0/0"/>	<a href="#">Delete</a>
sgr-097325f2187dec109	HTTPS	TCP	443	Custom	<input type="text" value="0.0.0.0/0"/>	<a href="#">Delete</a>
-	All TCP	TCP	0 - 65535	Anywh...	<input type="text" value="0.0.0.0/0"/>	<a href="#">Delete</a>

[Add rule](#)

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

[Cancel](#) [Preview changes](#) [Save rules](#)

sg-04f501e06c9190e54 - launch-wizard-1

[Actions](#)

### Details

Security group name  
[launch-wizard-1](#)

Security group ID  
[sg-04f501e06c9190e54](#)

Description  
[launch-wizard-1](#) created 2025-03-08T08:18:36.755Z

VPC ID  
[vpc-0f0977eebd0d33f88](#)

Owner  
[412381734381](#)

Inbound rules count  
4 Permission entries

Outbound rules count  
1 Permission entry

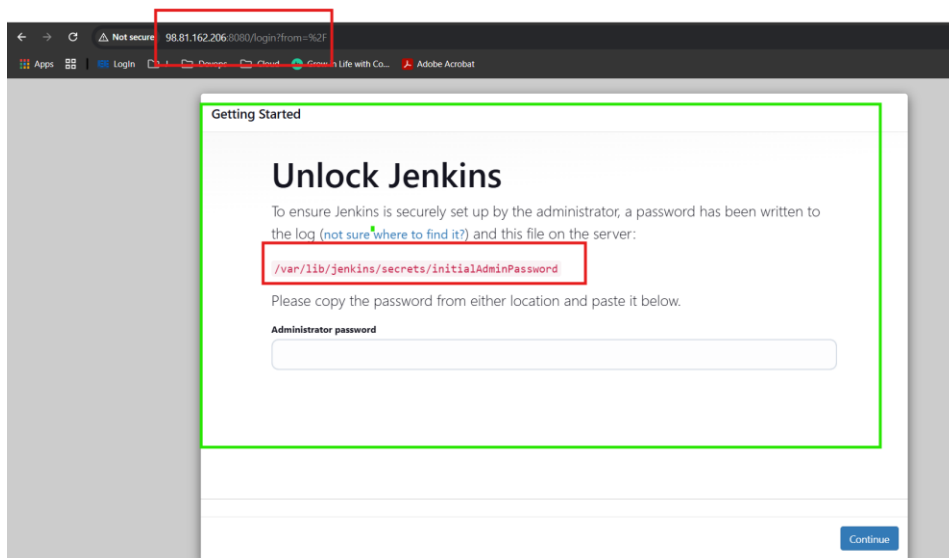
[Inbound rules](#) | [Outbound rules](#) | [Sharing - new](#) | [VPC associations - new](#) | [Tags](#)

### Inbound rules (4)

<input type="checkbox"/>	Name	Security group rule ID	IP version	Type	Protocol	Port range	Source	Description
<input type="checkbox"/>	-	sgr-0fab7172612ea4d10	IPv4	HTTP	TCP	80	0.0.0.0/0	-
<input type="checkbox"/>	-	sgr-058e7411da98933bf	IPv4	SSH	TCP	22	0.0.0.0/0	-
<input type="checkbox"/>	-	sgr-0d7e9b0d2de5350ae	IPv4	All TCP	TCP	0 - 65535	0.0.0.0/0	-
<input type="checkbox"/>	-	sgr-097325f2187dec109	IPv4	HTTPS	TCP	443	0.0.0.0/0	-

Enter IP address:8080 in the web browser you see the following page

Like ***http://98.81.162.206:8080/***

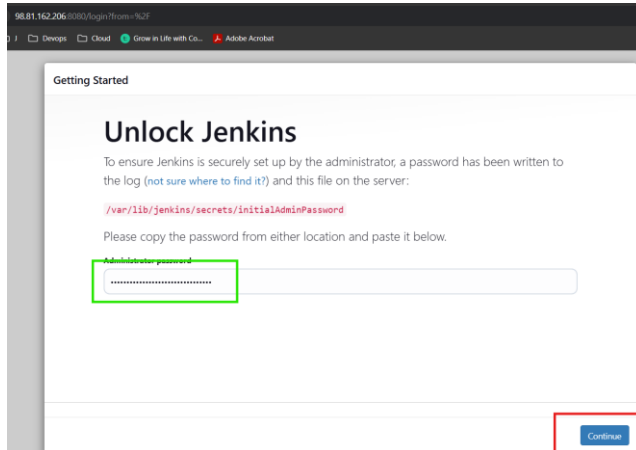


Copy the folder path and extract the password  
***/var/lib/jenkins/secrets/initialAdminPassword***

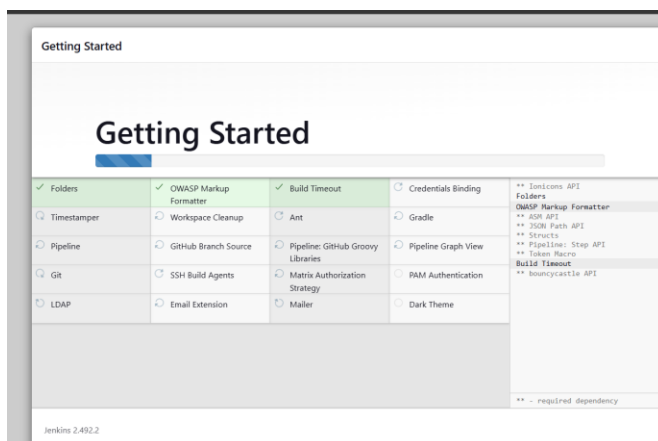
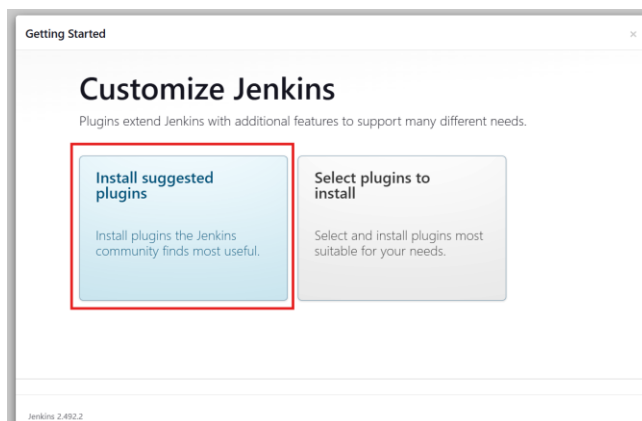
→ ***sudo cat /var/lib/jenkins/secrets/initialAdminPassword***

```
ubuntu@ip-172-31-21-29:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
3eb0cbe5dc044242a51dae1e49t9tt7a
ubuntu@ip-172-31-21-29:~$
```

Copy the password and paste in the web browser



Click on Install suggested plugins



Summit your details and continue

Getting Started

## Create First Admin User

Username  
prashanth

Password  
\*\*\*\*\*

Confirm password  
\*\*\*\*\*

Full name  
Prashanth Reddy Mamidipalli

E-mail address  
mpdev03@gmail.com

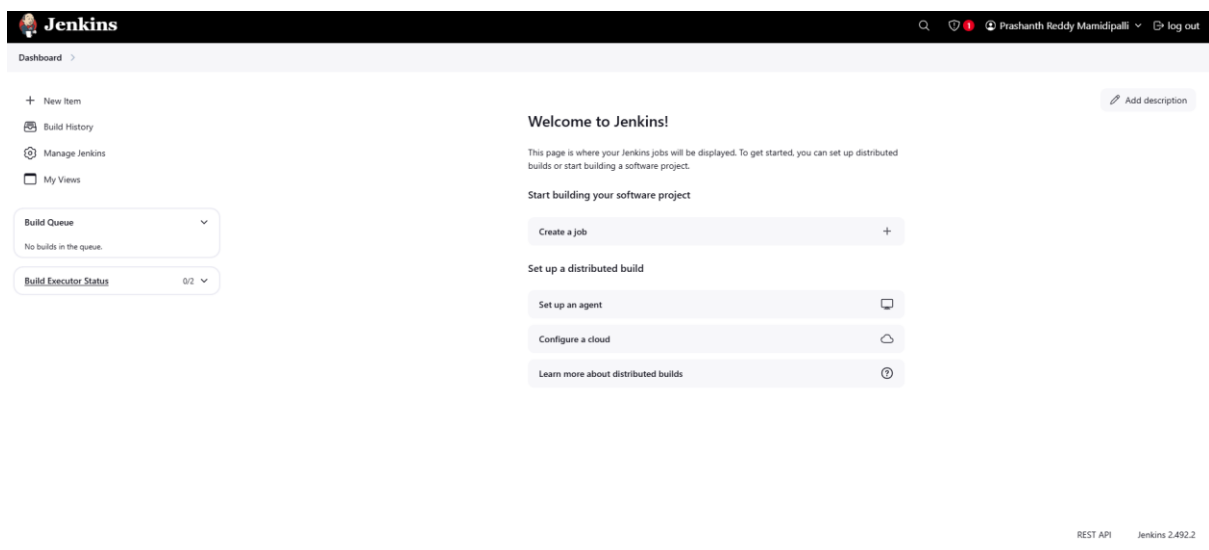
Jenkins 2.492.2

Skip and continue as admin

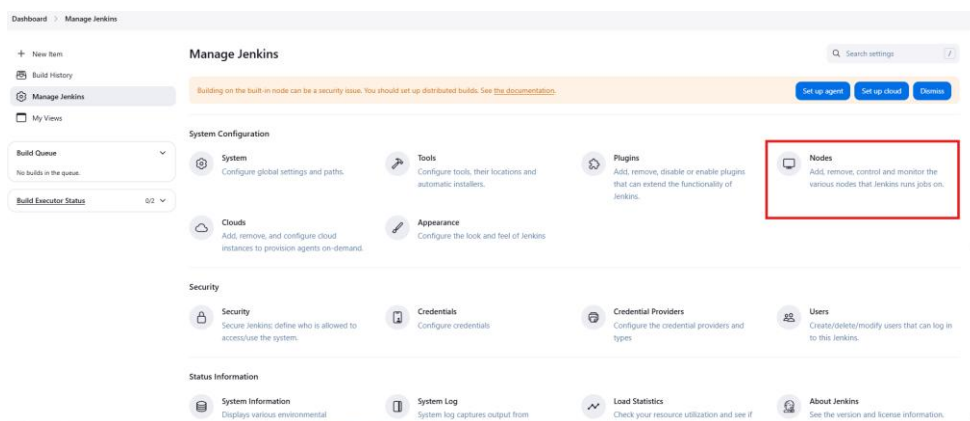
Save and Continue

Click on **save and finish** and **Start Jenkins**

You can see the web page like this



The screenshot shows the Jenkins Dashboard interface. At the top, there's a header with the Jenkins logo and a user profile for 'Prashanth Reddy Mamidipalli'. The main content area is divided into two columns. The left column contains a sidebar with links to 'New Item', 'Build History', 'Manage Jenkins', and 'My Views'. Below these are two status boxes: 'Build Queue' showing 'No builds in the queue' and 'Build Executor Status' showing '0/2'. The right column features a 'Welcome to Jenkins!' message, followed by instructions on how to get started. It includes a 'Start building your software project' section with a 'Create a job' button, and a 'Set up a distributed build' section with buttons for 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'. At the bottom right, there's a footer with 'REST API' and 'Jenkins 2.492.2'.



**Nodes**

+ New Node Configure Monitors ↻

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
🖨️	<a href="#">Built-in Node</a>	Linux (amd64)	In sync	4.97 GB	0 B	4.97 GB	0ms ⚙️
	Data obtained	17 min	17 min	17 min	17 min	17 min	17 min

**Build Queue** ▾  
No builds in the queue.

**Build Executor Status** 0/2 ▾

## Open Agent Linux in CLI

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive) All states

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
Jenkins Master	i-0ee4138c54036a6e8	Running	t2.micro	Initializing	View alarms +	us-east-1a	ec2-98-81-162-206.co...	98.81.162.206	-
Jenkins Agent	i-015497a468142e50c	Running	t2.micro	Initializing	View alarms +	us-east-1a	ec2-52-54-92-94.comp...	52.54.92.94	-

i-015497a468142e50c (Jenkins Agent)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary Info

Instance ID i-015497a468142e50c

IPv6 address -

Hostname type IP name: ip-172-31-31-17.ec2.internal

Answer private resource DNS name IPv4 (A) -

Public IPv4 address copied

Public IPv4 address 52.54.92.94 | open address

Instance state Running

Private IP DNS name (IPv4 only) ip-172-31-31-17.ec2.internal

Instance type t2.micro

Private IPv4 addresses 172.31.31.17

Public IPv4 DNS ec2-52-54-92-94.compute-1.amazonaws.com | open address

Elastic IP addresses -

Open the Linux Agent machine and run the following commands

➔ ***sudo apt-get update***

Install Java JDK file in your Agent machine

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

➔ ***java -version***

```
ubuntu@ip-172-31-31-17:~$ sudo apt install fontconfig openjdk-17-jre -y
Reading package lists... Done

ubuntu@ip-172-31-31-17:~$ java -version
openjdk version "17.0.14" 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-122.04.1, mixed mode, sharing)
ubuntu@ip-172-31-31-17:~$
```

Dashboard > Manage Jenkins > Nodes

Nodes

+ New Node Configure Monitors

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	4.97 GiB	0 B	4.97 GiB	0ms
	Data obtained	17 min	17 min	17 min	17 min	17 min	17 min

Build Queue No builds in the queue.

Build Executor Status 0/2

Icons: S M L

Legend

Dashboard > Manage Jenkins > Nodes > New node

New node

Node name Agent1

Type Permanent Agent

Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply — for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc.

Create



Dashboard > Manage Jenkins > Nodes >

Name <sup>?</sup>  
Agent1

Description <sup>?</sup>  
New Jenkins Agent

Plain text [Preview](#)

Number of executors <sup>?</sup>  
1

Remote root directory <sup>?</sup>  
/home/ubuntu/folder1

**An internal error occurred during form field validation (HTTP 403). Please reload the page and if the problem persists, ask the administrator for help.**

Labels <sup>?</sup>  
Jenkins

Usage <sup>?</sup>  
Use this node as much as possible

Launch method <sup>?</sup>  
Launch agents via SSH

Host <sup>?</sup>  
52.54.92.94

Credentials <sup>?</sup>  
- none -

[+ Add](#)

Jenkins cannot be found

Host Key Verification Strategy <sup>?</sup>  
Known hosts file Verification Strategy

## Jenkins Credentials Provider: Jenkins

### Add Credentials

Scope <sup>?</sup>  
Global credentials (unrestricted)

Kind <sup>?</sup>  
SSH Username with private key

Scope <sup>?</sup>  
Global (Jenkins, nodes, items, all child items, etc)

ID <sup>?</sup>  
ubuntu

Description <sup>?</sup>  
Jenkins

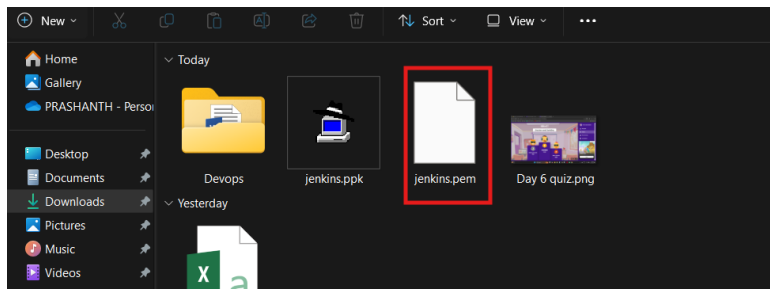
Username <sup>?</sup>  
ubuntu

☐ Treat username as secret <sup>?</sup>

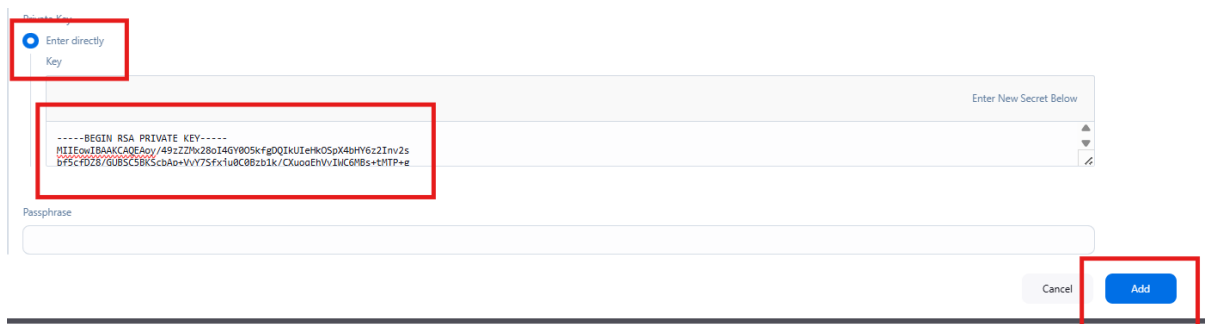
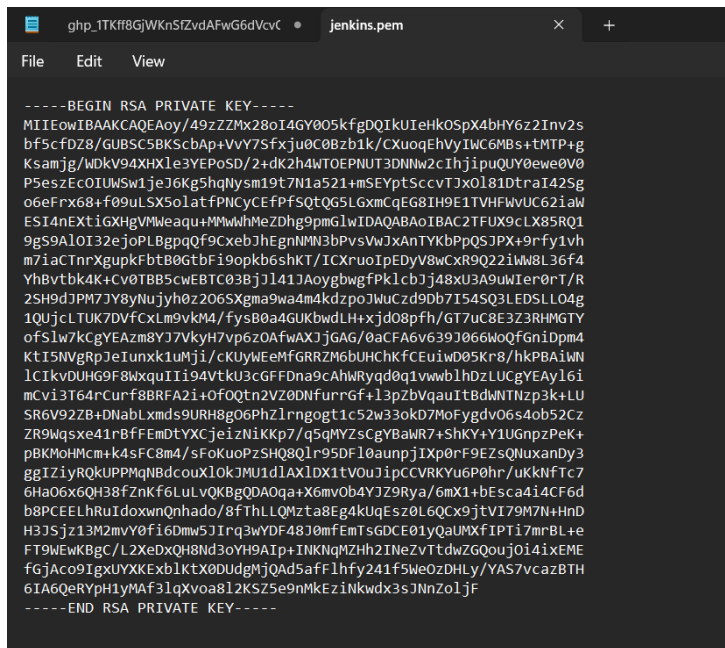
Private key <sup>?</sup>  
☒ Enter directly

Key <sup>?</sup>

Open your .pem file copy the code



Open it in the notepad and copy the private key



Launch agents via SSH

Host ?

52.54.92.94

An internal error occurred during form field validation (HTTP 403). Please reload the page and if the problem persists, ask the administrator for help.

Credentials ?

ubuntu (Jenkins)

+ Add

An internal error occurred during form field validation (HTTP 403). Please reload the page and if the problem persists, ask the administrator for help.

Host Key Verification Strategy ?

Non verifying Verification Strategy

Advanced

Availability ?

Keep this agent online as much as possible

Node Properties

☐ Disable deferred wipeout on this node ?

☐ Disk Space Monitoring Thresholds

☐ Environment variables

☐ Tool Locations

Save

Nodes

Clouds

Build Queue

No builds in the queue

Build Executor Status

☐ Built-In Node 0/2

☐ Agent1 0/1

Nodes

New Node

Configure Monitors

Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
Agent1	Linux (amd64)	In sync	N/A	0 B	N/A	164ms
Built-In Node	Linux (amd64)	In sync	4.77 GB	0 B	4.77 GB	0ms
Data obtained		0.2 sec	0.12 sec	3.4 sec	65 ms	3.4 sec

0.13 sec

Icon S M L

Legend

## New Item

Enter an item name

Git\_project

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.



### Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.



### Multi-configuration project

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.



### Folder

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.



### Multibranch Pipeline

Creates a set of Pipeline projects according to detected branches in one SCM repository.

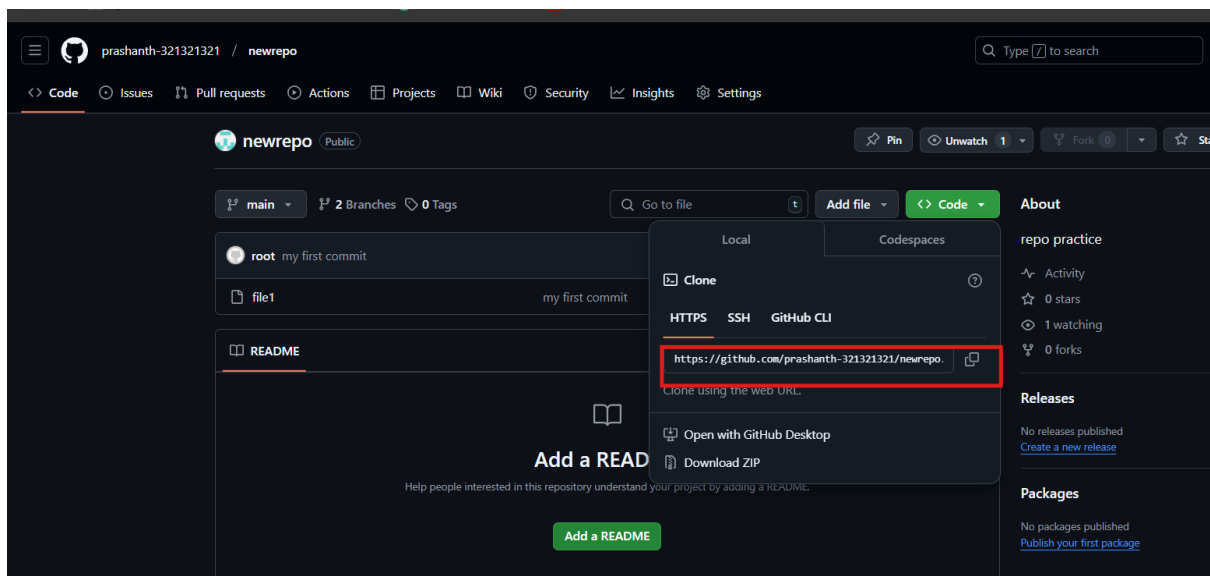
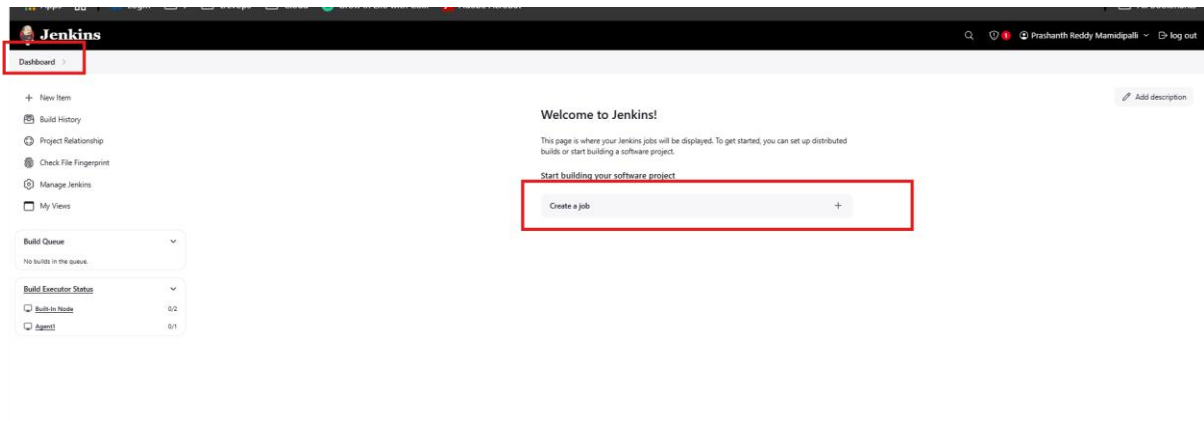


### Organization Folder

Creates a set of multibranch project subfolders by scanning for repositories.

OK

Now agent is added, we create a git project



Dashboard > Git > Configuration

Configure

General

Source Code Management

Triggers

Environment

Build Steps

Post-build Actions

General

Description

New Project

Plain text Preview

☐ Discard old builds ?

☒ GitHub project

Project url ?

https://github.com/prashanth-321321321/newrepo.git

Advanced

☐ This project is parameterized ?

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

☒ Restrict where this project can be run ?

Label Expression ?

Agent1

Enabled

Source Code Management

Connect and manage your code repository to automatically pull the latest code for your builds.

☐ None

☒ Git ?

Repositories ?

Repository URL ?

https://github.com/prashanth-321321321/newrepo.git

☒ An Internet connection is required during form field validation (402 ? 403). Please reload the page and if the problem persists, ask the administrator for help.

Credentials ?

ubuntu (Jenkins)

+ Add

Advanced

Add Repository

Branches to build ?

branch specifier (blank for 'any') ?

\*/main

Add Branch

Repository browser ?

(Auto)

Save

Apply

Jenkins

Dashboard > Git >

Status

</> Changes

Workspace

Build Now

Configure

Delete Project

GitHub

Rename

Git

New Project

Permalinks

Buils

No builds

