

Jenkins installation in AWS

Step 1 :-

Create an instance in AWS cloud with AWS linux

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 OS [Add additional tags](#)

AWS linux image

Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux

aws Mac ubuntu Microsoft Red Hat SUS

[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI Free tier eligible

ami-0d63de463e6604d0a (64-bit (x86), uefi-preferred) / ami-007766fc294fad510 (64-bit (Arm), uefi)

Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Amazon Linux 2023 AMI 2023.3.20240131.0 x86_64 HVM kernel-6.1

Select instance type . As Jenkins is little heavy use t2.medium.

▼ Instance type [Info](#) | [Get advice](#)

Instance type

t2.medium

Family: t2 2 vCPU 4 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0496 USD per Hour
On-Demand Windows base pricing: 0.0676 USD per Hour
On-Demand RHEL base pricing: 0.1096 USD per Hour
On-Demand SUSE base pricing: 0.1496 USD per Hour

☐ All generations
[Compare instance types](#)

Additional costs apply for AMIs with pre-installed software

Select key pair –

▼ 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*

test1

[Create new key pair](#)

Launch instance

Software Image (AMI)

Amazon Linux 2023 AMI 2023.3.2...[read more](#)

ami-0d63de463e6604d0a

Virtual server type (instance type)

t2.medium

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Cancel

Launch instance

[Review commands](#)

Go to the security groups and allow All traffic and IPv4

Any state				
<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type
<input checked="" type="checkbox"/>	jenkins OS	i-030cb2efc721ec78d	Running	t2.medium

Instance: i-030cb2efc721ec78d (jenkins OS)

Details | Status and alarms **New** | Monitoring | **Security** | Net

▼ **Security details**

IAM Role
—

Owner ID
590184097687

Security groups
sg-012780d2cab579db1 (launch-wizard-4)

Inbound rules Info

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	
sgr-095e3efc9a438c315	SSH	TCP	22	Cus... 0.0.0.0/0		Delete
—	All traffic	All	All	Any... 0.0.0.0/0		Delete

Then go and connect the instance

Connect to instance Info

Connect to your instance i-030cb2efc721ec78d (jenkins OS) using any of these options

EC2 Instance Connect | Session Manager | SSH client | EC2 serial console

Instance ID
i-030cb2efc721ec78d (jenkins OS)

Connection Type

☒ **Connect using EC2 Instance Connect**
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

☐ **Connect using EC2 Instance Connect Endpoint**
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address
52.66.243.159

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.
ec2-user

Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel **Connect**

Step :-2
Give the root
power sudo su -
root

```
[ec2-user@ip-172-31-4-188 ~]$ sudo su -  
Last login: Sat May 4 09:53:59 UTC 2024 on pts/1  
[root@ip-172-31-4-188 ~]#
```

Step 3:-

Install java

yum install java-17-amazon-corretto -y

```
[root@ip-172-31-4-188 ~]# yum install java-17-amazon-corretto -y  
Last metadata expiration check: 0:02:13 ago on Sat May 4 09:53:51 2024.  
Dependencies resolved.  
=====
```

Package	Arch	Version	Repository	Size
---------	------	---------	------------	------

```
=====
```

Installing:

java-17-amazon-corretto	x86_64	1:17.0.11+9-1.amzn2023.1	amazonlinux	187 k
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Installing dependencies:

Check java

version java

--version

```
[root@ip-172-31-4-188 ~]# java --version  
openjdk 17.0.11 2024-04-16 LTS  
OpenJDK Runtime Environment Corretto-17.0.11.9.1 (build 17.0.11+9-LTS)  
OpenJDK 64-Bit Server VM Corretto-17.0.11.9.1 (build 17.0.11+9-LTS, mixed mode, sharing)  
[root@ip-172-31-4-188 ~]#
```

Step 4:-

Goto the url

<https://www.jenkins.io/doc/book/installing/linux/#red->

[hat-](#)

[centos](#) Follow the steps

Step 5:-

```
wget -O /etc/yum.repos.d/jenkins.repo \  
https://pkg.jenkins.io/redhat-stable/jenkins.r  
epo
```

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```
[root@ip-172-31-4-188 yum.repos.d]# wget -O /etc/yum.repos.d/jenkins.repo \
https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-05-04 10:08:07-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.154.133, 2a04:4e42:24::6
45
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.154.133|:443... connect
ed.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

/etc/yum.repos.d/jenkins.repo 100%[=====] 85 --.-KB/s in 0s

2024-05-04 10:08:07 (6.57 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/8
5]

[root@ip-172-31-4-188 yum.repos.d]# |
```

Step 6:

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

```
[root@ip-172-31-4-188 yum.repos.d]# rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[root@ip-172-31-4-188 yum.repos.d]#
```

Step 7:-

`yum upgrade -y`

```
[root@ip-172-31-4-188 yum.repos.d]# yum upgrade -y
Jenkins-stable 255 kB/s | 28 kB 00:00
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-4-188 yum.repos.d]#
```

Step 8:-

`yum install jenkins -y`

```
[root@ip-172-31-4-188 yum.repos.d]# yum install jenkins -y
Last metadata expiration check: 0:01:08 ago on Sat May 4 10:10:33 2024.
Dependencies resolved.
=====
Package           Architecture Version           Repository      Size
=====
Installing:
jenkins            noarch          2.440.3-1.1      jenkins         89 M
=====
```

Step 9:-

systemctl start jenkins

systemctl enable Jenkins

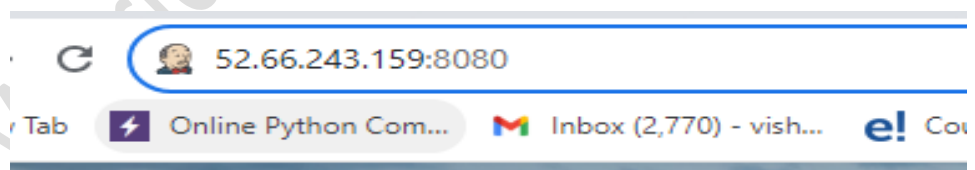
```
[root@ip-172-31-4-188 yum.repos.d]# systemctl start jenkins
[root@ip-172-31-4-188 yum.repos.d]# systemctl enable jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service →
/usr/lib/systemd/system/jenkins.service.
[root@ip-172-31-4-188 yum.repos.d]#
```

Step 10:-

systemctl status Jenkins

```
[root@ip-172-31-4-188 yum.repos.d]# systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; prese
   Active: active (running) since Sat 2024-05-04 10:14:28 UTC; 1min 16s ago
   Main PID: 26262 (java)
     Tasks: 45 (limit: 4659)
    Memory: 1.2G
       CPU: 39.827s
   CGroup: /system.slice/jenkins.service
           └─26262 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/
```

Go to the browser and paste the public key of instance with 8080 port



public_ip_of_instance:8080

Now unlock the jenkins tool with password

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log (not sure where to find it?) and this file on the server:

`/var/lib/jenkins/secrets/initialAdminPassword`

Please copy the password from either location and paste it below.

Administrator password

Continue

We have two ways to get password First is the see in status command

```
[root@ip-172-31-4-188 yum.repos.d]# systemctl status jenkins
• jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
   Active: active (running) since Sat 2024-05-04 10:14:28 UTC; 5min ago
     Main PID: 26262 (java)
       Tasks: 47 (limit: 4659)
      Memory: 1.2G
         CPU: 43.354s
    CGroup: /system.slice/jenkins.service
            └─26262 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

May 04 10:14:09 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: 4c231bf2d2cb4a19be8a66763e6c8063
May 04 10:14:09 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
May 04 10:14:09 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: *****
May 04 10:14:09 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: *****
May 04 10:14:09 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: *****
May 04 10:14:28 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: 2024-05-04 10:14:28.412+0000 [id=31] INFO jenkins.InitReactorRunn
May 04 10:14:28 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: 2024-05-04 10:14:28.425+0000 [id=24] INFO hudson.lifecycle.Lifecyc
May 04 10:14:28 ip-172-31-4-188.ap-south-1.compute.internal systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
May 04 10:14:29 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: 2024-05-04 10:14:29.155+0000 [id=49] INFO h.m.DownloadService$Dow
May 04 10:14:29 ip-172-31-4-188.ap-south-1.compute.internal jenkins[26262]: 2024-05-04 10:14:29.156+0000 [id=49] INFO hudson.util.Retrier$stap
```

Second is goto the this folder with cat command

`/var/lib/jenkins/secrets/initialAdminPassword`

Please copy the password from either location and paste it below.

cat /var/lib/jenkins/secrets/initialAdminPassword

```
[root@ip-172-31-4-188 yum.repos.d]# cat /var/lib/jenkins/secrets/initialAdminPassword
4c231bf2d2cb4a19be8a66763e6c8063
[root@ip-172-31-4-188 yum.repos.d]#
```

Step 11:- we need to install the plugins for that we click on install the plugins

Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

Install suggested plugins

Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

Getting Started

✓ Folders	✓ OWASP Markup Formatter	✗ Build Timeout	✓ Credentials Binding
✓ Timestampers	✓ Workspace Cleanup	✓ Ant	✓ Gradle
✓ Pipeline	🔗 GitHub Branch Source	🔗 Pipeline: GitHub Groovy Libraries	🔗 Pipeline: Stage View
🔗 Git	🔗 SSH Build Agents	🔗 Matrix Authorization Strategy	🔗 PAM Authentication
🔗 LDAP	🔗 Email Extension	✓ Mailer	

Gradle

- ** Pipeline: Milestone Step
- ** Pipeline: Build Step
- ** Variant
- ** Pipeline: Groovy Libraries
- ** Pipeline: Stage Step
- ** Joda Time API
- ** Pipeline: Model API
- ** Pipeline: Declarative Extension Points API
- ** Branch API
- ** Pipeline: Multibranch
- ** Pipeline: Stage Tags Metadata
- ** Mina SSHD API :: Common
- ** Mina SSHD API :: Core
- ** Git client
- ** Pipeline: Input Step
- ** Pipeline: Declarative

Then fill the details

Username :- vimal

Password : root@123

Create First Admin User

Username

vimal

Password

.....

Confirm password

.....

Full name

Save and continue

Instance Configuration

Jenkins URL:

http://52.66.243.159:8080/

The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the BUILD_URL environment variable provided to build steps.

The proposed default value shown is not saved yet and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.

Then start Jenkins -

Jenkins is ready!

Your Jenkins setup is complete.

Start using Jenkins

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