

Installing and configuring Jenkins

Downloading and installing Jenkins

Completing the previous steps enables you to download and install Jenkins on AWS. To download and install Jenkins:

1. Ensure that your software packages are up to date on your instance by using the following command to perform a quick software update:

```
[ec2-user ~]$ sudo yum update -y
```
2. Add the Jenkins repo using the following command:

```
[ec2-user ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo  
https://pkg.jenkins.io/redhat-stable/jenkins.repo
```
3. Import a key file from Jenkins-CI to enable installation from the package:

```
[ec2-user ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key  
[ec2-user ~]$ sudo yum upgrade
```
4. Install Java:

```
[ec2-user ~]$ sudo amazon-linux-extras install java-openjdk11 -y
```
5. Install Jenkins:

```
[ec2-user ~]$ sudo yum install jenkins -y
```
6. Enable the Jenkins service to start at boot:

```
[ec2-user ~]$ sudo systemctl enable jenkins
```
7. Start Jenkins as a service:

```
[ec2-user ~]$ sudo systemctl start jenkins
```

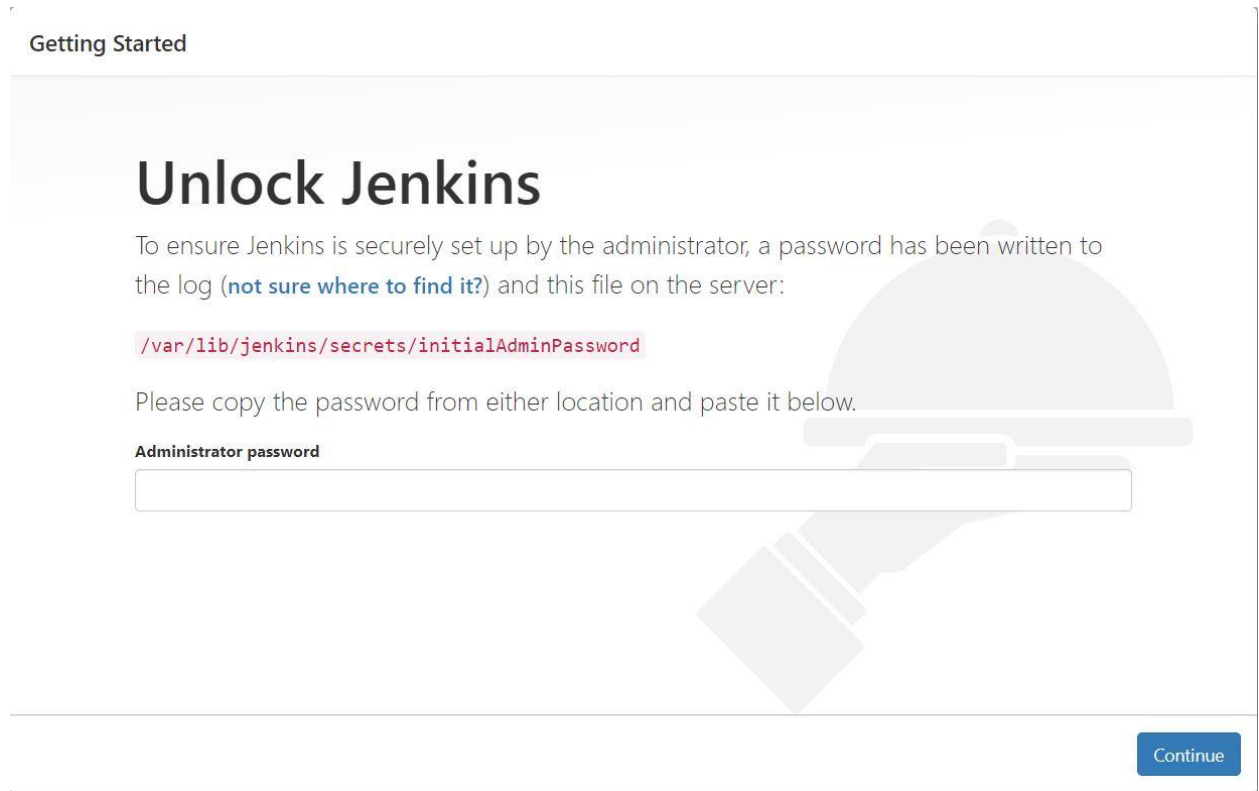
You can check the status of the Jenkins service using the command:

```
[ec2-user ~]$ sudo systemctl status jenkins
```

Configuring Jenkins

Jenkins is now installed and running on your EC2 instance. To configure Jenkins:

1. Connect to `http://<your_server_public_DNS>:8080` from your browser. You will be able to access Jenkins through its management interface:



Getting Started

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

2. As prompted, enter the password found in **/var/lib/jenkins/secrets/initialAdminPassword**.
 - a. Use the following command to display this password:

```
[ec2-user ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
```
3. The Jenkins installation script directs you to the **Customize Jenkins page**. Click **Install suggested plugins**.
4. Once the installation is complete, the **Create First Admin User** will open. Enter your information, and then select **Save and Continue**.

Getting Started

Create First Admin User

Username:

admin

Password:

.....

Confirm password:

.....

Full name:

E-mail address:

Jenkins 2.263.1

Skip and continue as admin

Save and Continue

5. On the left-hand side, select **Manage Jenkins**, and then select **Manage Plugins**.
6. Select the **Available** tab, and then enter **Amazon EC2 plugin** at the top right.
7. Select the checkbox next to **Amazon EC2 plugin**, and then select **Install without restart**.

Plugin Manager

Updates Available Installed Advanced

Q Amazon EC2

Install	Name ↓	Released
<input checked="" type="checkbox"/>	Amazon EC2 1.68 Cloud Providers Cluster Management Agent Management spotinst aws This plugin integrates Jenkins with Amazon EC2 or anything implementing the EC2 API's such as an Ubuntu.	3 mo 15 days ago
<input type="checkbox"/>	Amazon Elastic Container Service (ECS) / Fargate 1.41 Cluster Management Agent Management aws Use Amazon EC2 Container Service to provide elastic agents. This plugin is up for adoption! We are looking for new maintainers. Visit our Adopt a Plugin initiative for more information.	3 mo 11 days ago
<input type="checkbox"/>	Amazon EC2 Container Service plugin with autoscaling capabilities 1.0 Cluster Management Agent Management Use Amazon EC2 Container Service to provide elastic slaves.	6 yr 0 mo ago

Install without restart

Download now and install after restart

Update information obtained: 1 hr 51 min ago

Check now

- Once the installation is done, select **Back to Dashboard**.
- Select **Configure a cloud** if there are no existing nodes or clouds.

+ New Item

👤 People

📅 Build History

🤖 Project Relationship

🔍 Check File Fingerprint

⚙️ Manage Jenkins

👤 My Views

📁 Job Config History

🌊 Open Blue Ocean

🔒 Lockable Resources

📁 New View

Build Queue ^

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

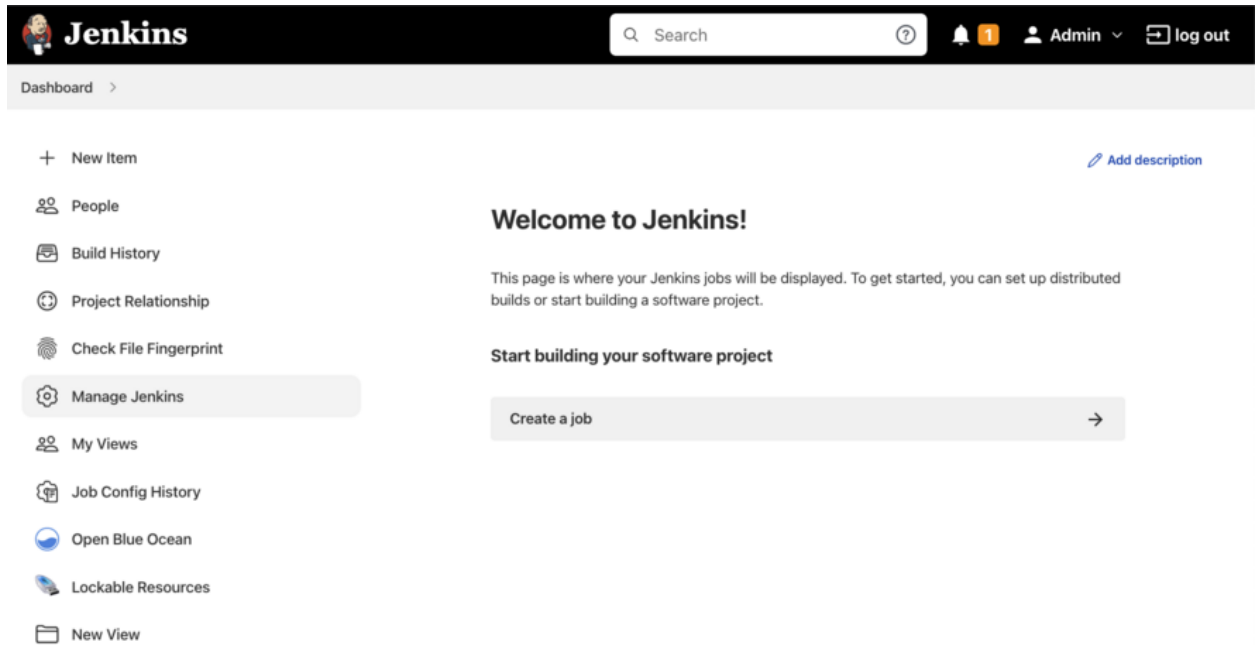
Set up an agent →

Configure a cloud →

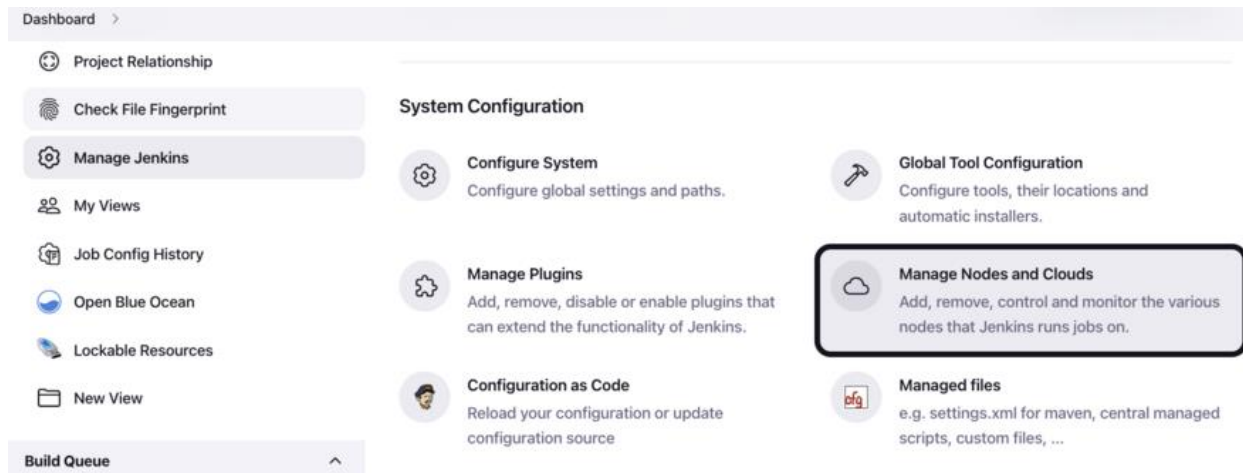
Learn more about distributed builds ↗

✎ Add description

- If you already have other nodes or clouds set up, select **Manage Jenkins**.



- a. After navigating to **Manage Jenkins**, select **Configure Nodes and Clouds** from the left hand side of the page.



- b. From here, select **Configure Clouds**.



Jenkins

Dashboard > Nodes >

↑ Back to Dashboard

⚙ Manage Jenkins

+ New Node

☁ Configure Clouds

⚙ Node Monitoring

Build Queue



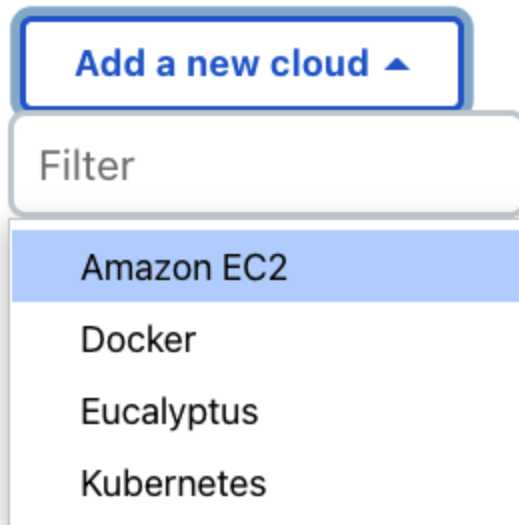
Build Executor Status



built-in node (0 of 1 executors busy)

11. Select **Add a new cloud**, and select **Amazon EC2**. A collection of new fields appears.

Configure Clouds



12. Click **Add** under Amazon EC2 Credentials

A screenshot of the Jenkins 'Configure Clouds' page. The top navigation bar shows the Jenkins logo and a search bar. Below the navigation bar, there are links for 'Back to Dashboard' and 'Manage Nodes'. The main content area is titled 'Configure Clouds' and shows a form for adding a new cloud. The form is for 'Amazon EC2' and has a 'Name' field. Below the 'Name' field, there is a red error message: 'No name is specified'. Below the error message, there is a section for 'Amazon EC2 Credentials' with a help icon. The text below this section reads: 'AWS IAM Access Key used to connect to EC2. If not specified, implicit authentication mechanisms are used (IAM roles...)'. Below this text is a dropdown menu with the option '- none -'. At the bottom of the form, there is a blue button labeled '+ Add' which is highlighted with a red box. Below the '+ Add' button, there is a checkbox labeled 'Use EC2 instance profile to obtain credentials' with a help icon.

a. From the Jenkins Credentials Provider, select AWS Credentials as the **Kind**.

Jenkins Credentials Provider: Jenkins

Add Credentials

Domain

Global credentials (unrestricted)

Kind

AWS Credentials

Scope ?

Global (Jenkins, nodes, items, all child items, etc)

ID ?

- b. Scroll down and enter in the IAM User programmatic access keys with permissions to launch EC2 instances and select **Add**.

ID ?

Description ?

Access Key ID ?

Secret Access Key

IAM Role Support

Advanced...

Add

Cancel

- c. Scroll down to select your region using the drop-down, and select **Add** for the EC2 Key Pair's Private Key.

☐ Use EC2 instance profile to obtain credentials ?

Alternate EC2 Endpoint

Used to populate the available regions dropdown. Only set this if you're using a different EC2 endpoint (i.e. operating in govcloud).

The regions will be populated once the keys above are entered.

Region ?
us-east-1

EC2 Key Pair's Private Key ?

- none -

+ Add

No ssh credentials selected

- d. From the Jenkins Credentials Provider, select SSH Username with private key as the Kind and set the Username to `ec2-user`.

Add Credentials

Domain

Global credentials (unrestricted)

Kind

SSH Username with private key

Scope ?

Global (Jenkins, nodes, items, all child items, etc)

ID ?

Description ?

Username

ec2-user

- e. Scroll down and select **Enter Directly** under Private Key, then select **Add**.

Private Key

☒ Enter directly

Key

No Stored Value

Add

Passphrase

Add

Cancel

- f. Open the private key pair you created in the [creating a key pair](#) step and paste in the contents from "-----BEGIN RSA PRIVATE KEY-----" to "-----END RSA PRIVATE KEY-----". Select **Add** when completed.

Private Key

☒ Enter directly

Key

Enter New Secret Below

Passphrase

Add

Cancel

- g. Scroll down to "Test Connection" and ensure it states "Success". Select **Save** when done

Success

Test Connection

AMIs

List of AMIs to be launched as agents

Add

Add a new cloud ▾

Save

Apply