

# Setting up AWS EC2 with Ubuntu, Docker, and a Public IP

Follow these steps to quickly set up a basic server environment on Amazon Cloud (AWS).

## Step 1: Log in to AWS Console

- Visit <https://console.aws.amazon.com>
- Log in using your AWS account credentials.

## Step 2: Create an EC2 Instance

- From the AWS console, search for and select **EC2**.
- In the EC2 Dashboard, click **Instances** → **Launch instances**.

## Step 3: Select Ubuntu Server

- Under **Name and tags**, give your server a recognizable name (e.g., "MyUbuntuServer").
- Under **Application and OS Images (Amazon Machine Image)**, select **Ubuntu Server 22.04 LTS**. (or 24.04 LTS)
- Leave other settings at default unless instructed otherwise.

## Step 4: Configure Security Settings

- Under **Network settings**, select **Create security group**.
- Ensure that at least the following ports are allowed:
  - **SSH (22)** for secure access to your server.
  - Add custom rules if needed, for example:
    - HTTP (80)
    - HTTPS (443)
- Click **Launch instance**.

## Step 5: Connect to Your Instance

- After your instance launches, click on its name to see details.
- Locate the **Public IPv4 address**; this is your public IP address.

## Step 6: Access Your Instance via SSH

- Open your terminal or command prompt.
- Connect using SSH (replace your-key.pem with the path to your downloaded AWS key file, and public-ip-address with your actual public IP):

```
chmod 400 your-key.pem
ssh -i your-key.pem ubuntu@public-ip-address
```

## Step 7: Install Docker on Ubuntu

Follow [Ubuntu | Docker Docs](#)

### You're all set!

You now have:

- Ubuntu Server 22.04 running on AWS
- Docker installed
- A public IP address to access your server remotely

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## Secure Base64 Encoding via Linux Console

### Step 1: Open your Linux terminal.

### Step 2: Execute the following command (replace `api_key` and `secret_key` with your real keys):

```
echo -n "api_key:secret_key" | base64
```

#### Example:

If your keys are:

- API Key: abc123
- Secret Key: xyz789

Then run:

```
echo -n "abc123:xyz789" | base64
```

#### Output will look like:

```
YWJjMTIzOnh5ejc4OQ==
```

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#### How it works securely:

- `echo -n` prevents adding a newline at the end of the text, which ensures correct encoding.
- `base64` is a built-in utility that encodes the data right on your system without internet exposure.

You can then safely use this encoded string as your Basic Auth token:

Authorization: Basic YWJjMTIzOnh5ejc4OQ==

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