**Create EC2:**

**Step 1: Sign in to AWS Management Console**

* Navigate to the [AWS Management Console](https://aws.amazon.com/console/) and sign in with your AWS account credentials.

**Step 2: Open the EC2 Dashboard**

* After logging in, use the search bar at the top of the console to search for "EC2". Click on the EC2 option that appears in the dropdown menu to open the EC2 Dashboard.

**Step 3: Launch Instance**

* In the EC2 Dashboard, look for the "Instances" section in the navigation pane on the left side. Click on "Instances".
* Click the “Launch instances” button to start the process of creating a new EC2 instance.

**Step 4: Choose an Amazon Machine Image (AMI)**

* You will be presented with a list of AMIs, which are pre-configured templates for your instance that package the bits you need for your server (including the operating system and additional software).
* Select an AMI that fits your requirements. You can choose from Amazon Linux, Ubuntu, Microsoft Windows, and more.

**Step 5: Choose an Instance Type**

* Next, you'll need to choose an instance type, which determines the hardware of the host computer used for your instance. Each type provides different computing and memory capabilities.
* Select an instance type based on the requirements of your application. For general purposes, a "t2.micro" instance type is a good starting point, as it is eligible for the AWS Free Tier.
* Click “Next: Configure Instance Details” to proceed.

**Step 6: Configure Instance Details**

* Configure the instance to your specifications. You can specify the number of instances, the network, and the subnet. If you're just getting started or testing, many of the default settings will be sufficient.
* You can also enable auto-scaling within this section.
* After configuring the instance details, click “Next: Add Storage”.

**Step 7: Add Storage**

* You can add or modify the storage (volumes) attached to your instance. By default, the AMI you selected will have a root volume with a default size. You can adjust this size or add additional volumes if needed.
* Click “Next: Add Tags” to proceed.

**Step 8: Add Tags**

* Tags are key-value pairs that you can attach to AWS resources. They can help you organize and identify your instances. For example, you can create a tag with the key "Name" and the value as the name you want to give your instance.
* After adding tags, click “Next: Configure Security Group”.

**Step 9: Configure Security Group**

* A security group acts as a virtual firewall that controls the traffic for one or more instances. You can create a new security group or select an existing one.
* Ensure you open ports relevant to your application. For a web server, you might open TCP ports 80 (HTTP) and 443 (HTTPS).
* Click “Review and Launch” to proceed.

**Step 10: Review and Launch**

* Review your instance configuration. Make any necessary adjustments by going back to the previous steps.
* Click the “Launch” button. You will be prompted to select a key pair. If you don't have one, you can create a new key pair. Download and save this key pair, as it's necessary to connect to your instance securely.
* After selecting (or creating) your key pair, check the acknowledgment box, and then click “Launch Instances”.

**Connect to EC2 with instance connect:**

**Step 1: Navigate to Your Instances**

In the EC2 Dashboard, find the "Instances" section in the navigation pane on the left side and click on "Instances". This will display a list of your EC2 instances.

**Step 2: Select Your Instance**

From the list of instances, click on the instance you wish to connect to. Make sure the instance is in a running state.

**Step 3: Instance Connect**

With the instance selected, click on the “Connect” button at the top of the page.

In the connection options, select "EC2 Instance Connect (browser-based SSH connection)".

**Step 4: Provide SSH User Name**

You will be prompted to enter a username. For Amazon Linux, the default username is usually ec2-user. Enter the username and click “Connect”.

**Connect to EC2 with SSH:**

**Step 1: Prepare Your Private Key File**

Locate the .pem file for the key pair you associated with your EC2 instance. If you're on a Linux or macOS system, set the correct permissions on your private key file to make it not publicly viewable by running the following command in your terminal:

bash

chmod 400 /path/to/your-key-pair.pem

Replace /path/to/your-key-pair.pem with the actual path to your .pem file.

**Step 2: Obtain Your Instance's Public DNS or IP Address**

Navigate to the AWS Management Console and open the EC2 Dashboard.

In the navigation pane on the left, click on "Instances" to view your running instances.

Select the instance you wish to connect to and find the "Public DNS (IPv4)" or "IPv4 Public IP" in the description panel at the bottom.

**Step 3: Connect via SSH**

Open a terminal on your local machine.

Use the SSH command to initiate a connection to your instance. The general form of the command is:

bash

ssh -i /path/to/your-key-pair.pem ec2-user@your-instance-public-dns

Replace /path/to/your-key-pair.pem with the path to your .pem file.

Replace your-instance-public-dns with your instance's Public DNS (IPv4) or IPv4 Public IP address.

The default username is ec2-user for Amazon Linux AMI and ubuntu for Ubuntu AMI. Ensure you're using the correct username for your instance's OS.

**Step 4: Accept the Host Key**

The first time you connect to your EC2 instance, you'll be prompted to accept the host's EC2 instance SSH key. Type "yes" and press Enter to continue connecting.