# EC2

**Amazon Elastic Compute Cloud (EC2)** is a core component of **Amazon Web Services (AWS)**., allowing users to launch virtual machines (known as **instances**) on-demand.

## Steps to Launch an EC2 Instance from AWS Console

Step 1: Log in to AWS Console

1. Go to [AWS Management Console](https://aws.amazon.com/console/) and log in with your credentials.
2. Navigate to EC2

**Step 2: Launch a New EC2 Instance**

1. Click **Launch Instance** under the "Instances" section.
2. Enter a name for your instance.

Step 3: Choose an Amazon Machine Image (AMI)

1. Select an AMI (Amazon Machine Image).
   * You can choose Amazon Linux, Ubuntu, Windows, or any custom image.
   * For free-tier usage, select Amazon Linux 2 AMI.

Step 4: Select Instance Type

1. Choose an instance type based on your needs.
   * **t2.micro** is free-tier eligible and good for basic workloads.

Step 5: Configure Key Pair (For SSH Access)

1. Under **Key Pair**, create a new key pair or select an existing one.
2. If creating a new key, **download the private key (.pem file-Privacy-Enhanced Mail.)** and store it securely (needed for SSH login).

Step 6: Configure Network Settings

1. Select a **VPC and Subnet** (default is usually fine).

Step 8: Review and Launch

1. Review your configurations.
2. Click **Launch Instance**.

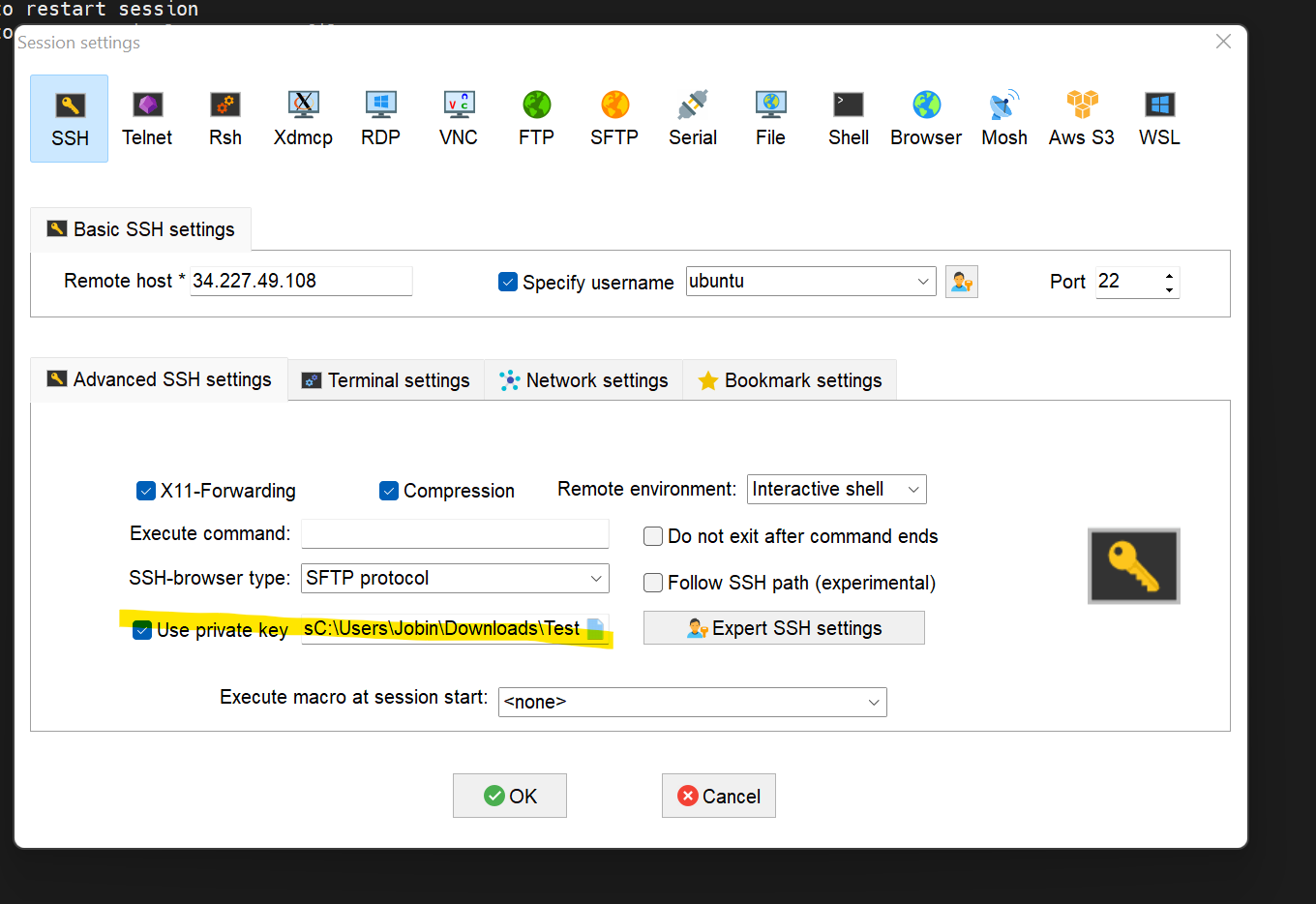
Step 10: Stop, Start, or Terminate Instance (When Done)

1. Go to **EC2 Dashboard > Instances**.
2. Select the instance and choose **Stop, Start, or Terminate**.

Why You Used Public IPv4?

Since you are connecting from **MobaXterm on your local machine (outside AWS)**, you **must use the Public IPv4** because the Private IP is only accessible within AWS.

Take this public Ip and connect thorugh ur instance from mobxterm, while configuring mobxterm we need to provide key pair(.pmem file)



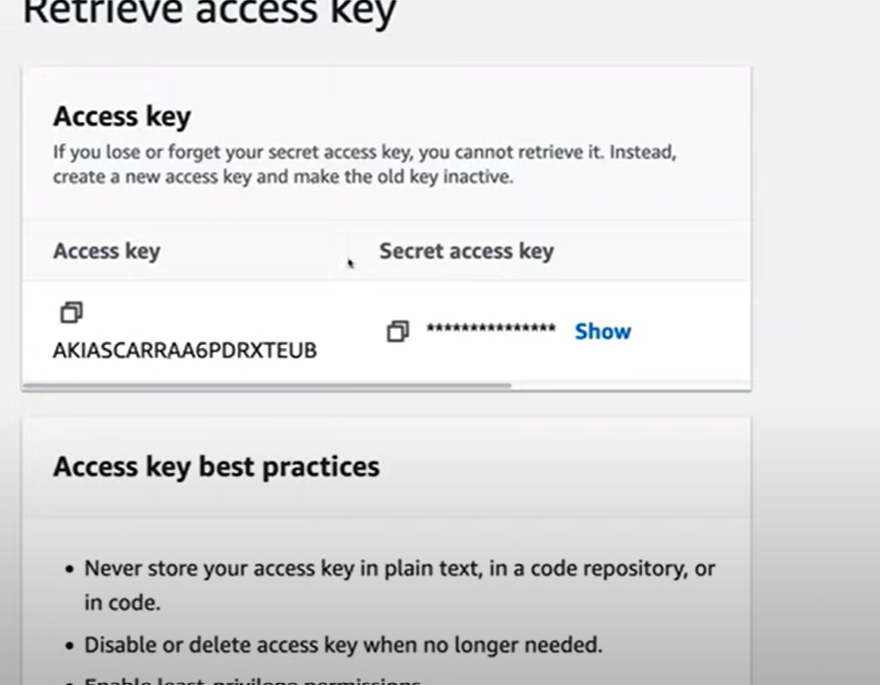
## How to Create an EC2 Instance Using AWS CLI

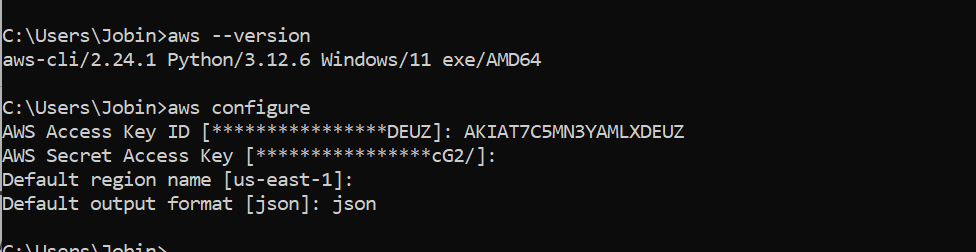
**Install AWS CLI** (if not installed)

* Download and install: [AWS CLI Installation Guide](https://docs.aws.amazon.com/cli/latest/userguide/install-cliv2.html)
* Check installation:  
  aws --version

An **AWS Access Key** is required when using AWS CLI, SDKs, or APIs to authenticate and interact with AWS services.

Log in to AWS Console→ Navigate to Security Credentials→Create a New Access Key→Copy the **Access Key ID** and **Secret Access Key** (you won’t see the Secret again!).

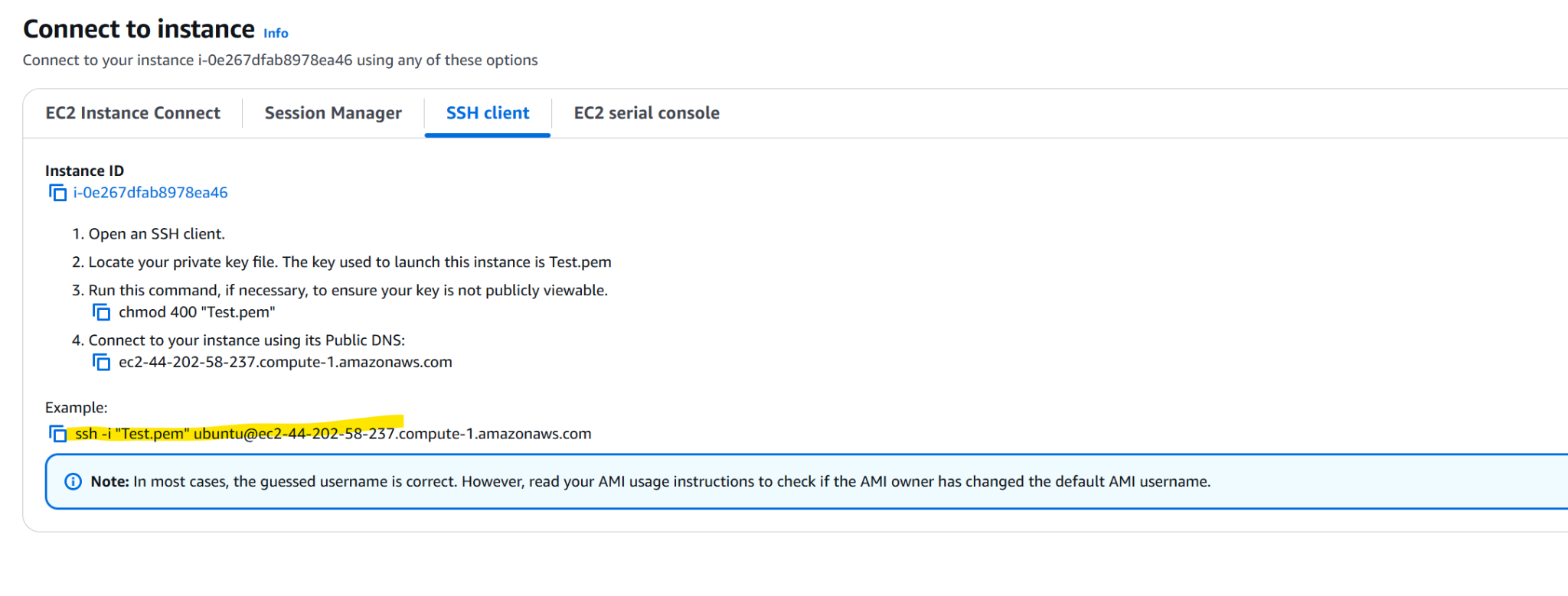




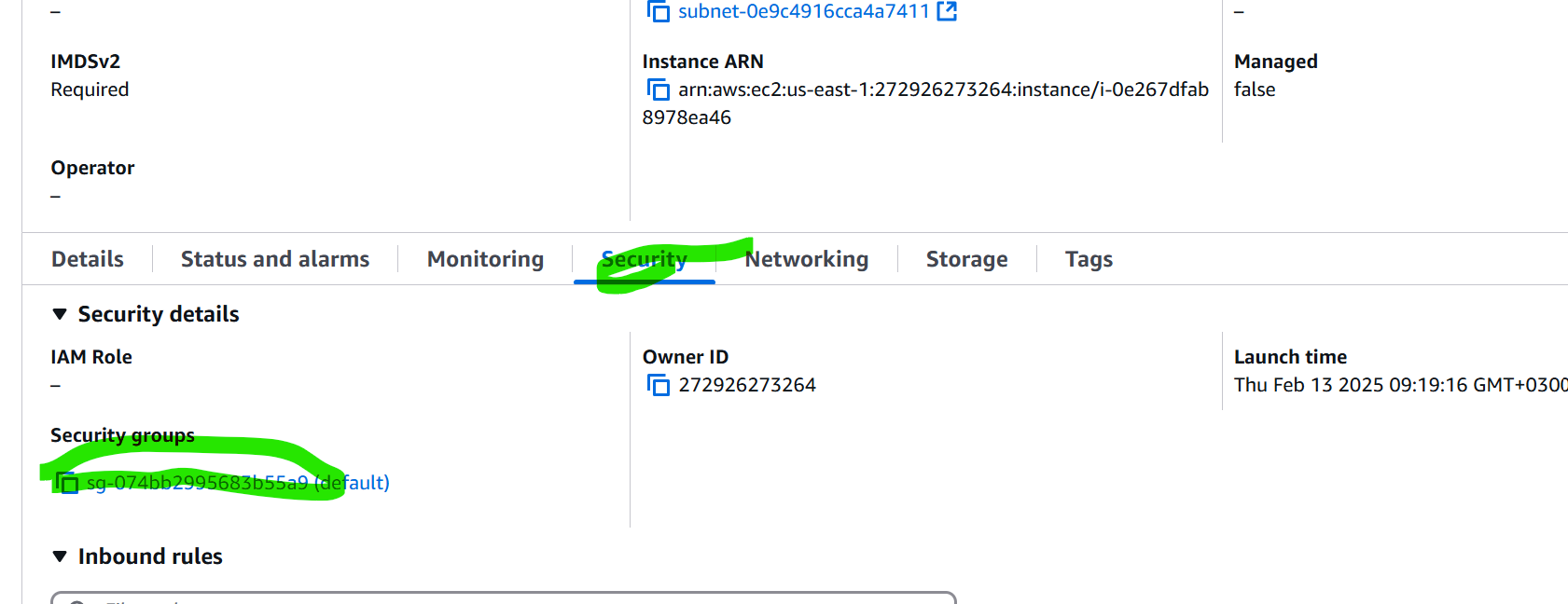
Find an Amazon Machine Image (AMI) ID u can take it from amazon console

aws ec2 run-instances --image-id ami-xxxxxxxxxxxxxx # Replace with your AMI ID --count 1 --instance-type t2.micro \ # Or any other instance type of your choice --key-name MyKeyPair \ # Replace with your key pair name

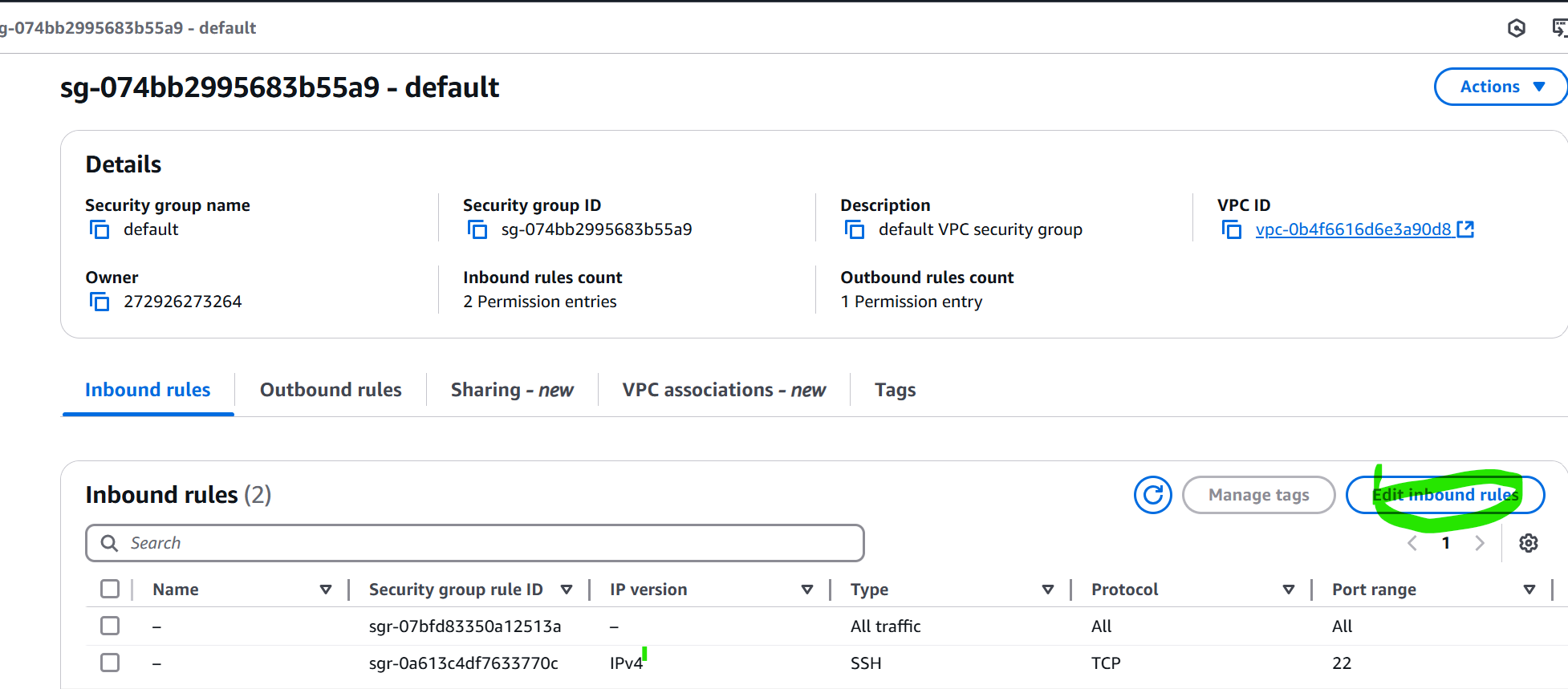
aws ec2 run-instances --image-id ami-04b4f1a9cf54c11d0 --count 1 --instance-type t2.micro --key-name Test

After this your EC2 instances will be created and u can connect from console,  
If you want to connect from terminal like CMD go to connect there click on SSH client copy the below command and run it  


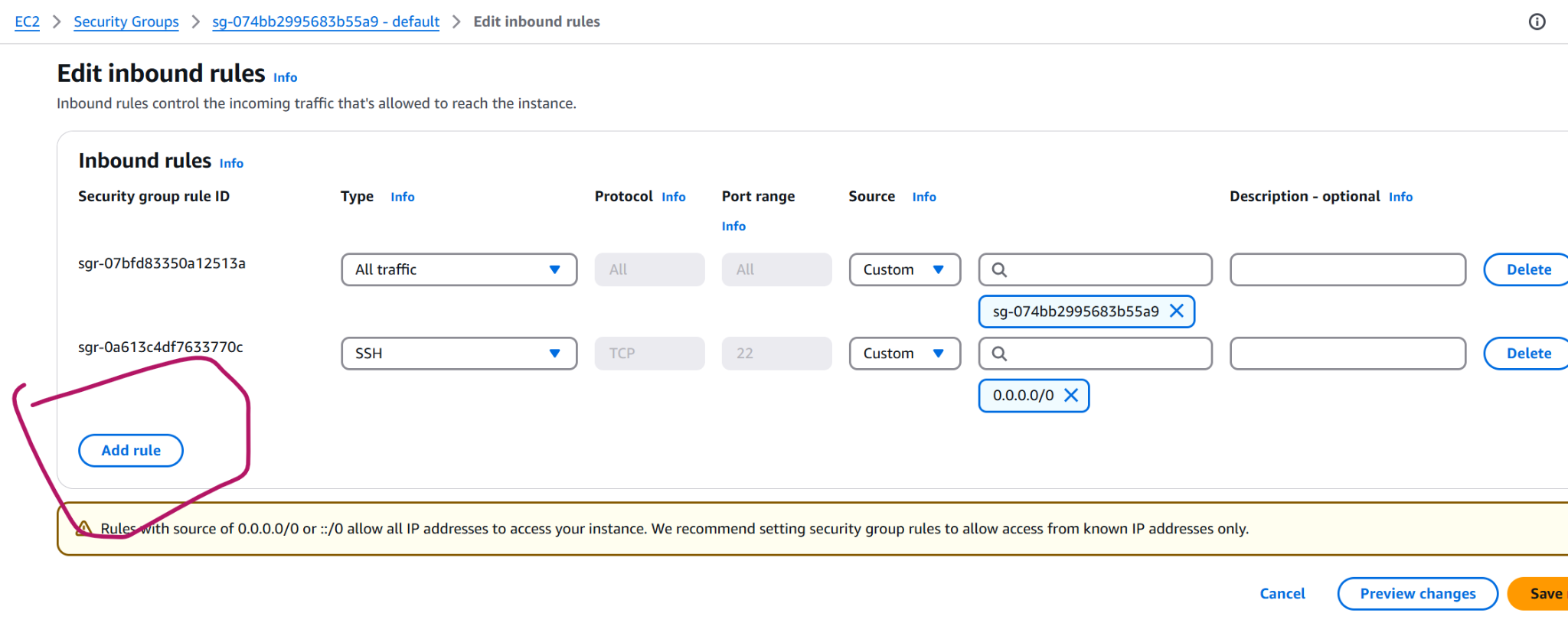
Open your instance → click on security



Edit inbound rules



Add rule, here already added **SSH (port 22)**.**SSH (port 22)** is the most commonly used port for remote access, especially for **Linux-based instances**



Method 1: Install AWS CLI Manually in mobxterm

Use the official AWS installation method:

1️⃣ **Download the AWS CLI installer**

bash

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curl "https://awscli.amazonaws.com/awscli-exe-linux-x86\_64.zip" -o "awscliv2.zip"

2️⃣ **Unzip the package**

bash

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sudo apt install unzip -y # Install unzip if not available

unzip awscliv2.zip

3️⃣ **Run the installer**

bash

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sudo ./aws/install

4️⃣ **Verify installation**

bash

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aws --version

You should see output like:

bash

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aws-cli/2.x.x Python/3.x.x Linux/x86\_64

vim aws\_resource\_tracker.sh

echo "print list s3 buckets"

aws s3 ls

echo "print list EC2 instances"

aws ec2 describe-instances

echo "print lambda"

aws lambda list-functions