

Slip: 1

Q

Q.1 Explain how to create a key pair for accessing your EC2 instance. What is the purpose of the key pair and how does it enhance the security of your instances?



Creating a Key Pair for EC2 Instance (Practical steps).

Step 1) Login to AWS Management Console

Go to AWS console

Navigate to EC2 Dashboard

Step 2) Create Key Pair

i) In the EC2 dashboard, click Key Pairs

Link (Under Network & Security)

ii) Click Create Key Pair

iii) Enter a name (e.g. myKeyPair)

iv) Choose Key Pair type

RSA or ED25519 (RSA is more common)

v) Choose Private key file format:

.pem (for Linux / Mac OS X)

vi) Create Key pair

A private key file (MyKeyPair.pem) is automatically download to your system.

Step 3) Set file Permission (Linux Mac)

chmod 400 mykeyPair.pem
This ensures only you can read the key file

Step 4) Use key Pair to connect

Launch an EC2 instance & select mykeyPair
in the Keypairs (Login) Section

Connect Using SSH:

ssh -i "mykeyPair.pem" ec2-user@<public IP of
EC2>

Q2. For security reasons, you want to limit SSH
access to your EC2 instance to only office
IP address. How would you modify the inbound rule of
your security group to achieve this? What
steps would you follow to ensure that only
your office IP address can connect via SSH?

S-1) Identify Your Office Public IP Address

Open a browser on your office network

visit <https://whatismyipaddress.com/> or

1. if config.me

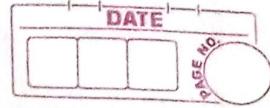
Note down your public IP (e.g. 203.0.11.3.25)

S-2). Open the EC2 Security Group.

① Log in to AWS management console

Go to EC2 dashboard → instances

Select your instance & find its Security



Group (Under Networking tab)

(iv) click on the Security group name to open its settings

S-3) Modify inbound Rules

i) Go to click the Inbound rules tab.

ii) Click Edit inbound rules → Add rule

iii) Configure as:

Type : SSH

Protocol : TCP

Port Range : 22

Source : My IP

iv) Remove any existing rule that allows
0.0.0.0/0 (open to all IP)

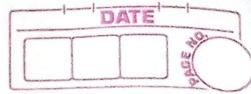
v) Save rules

S-4) Test the Connection

From your office system:

ssh -i "mykeypair.pem" ec2-user@Public-IP-of-
EC2

From another network (e.g. home or mobile)
SSH should be blocked



* Purpose : Q1) Purpose of Key Pair :

- ① Authenticate Securely : Instead of using a password to access your instance, you use a private key. The server verifies your identity using the matching public key.
- ② Encrypt the Connection : During SSH connections, key pairs help encrypt data, ensuring no one can intercept sensitive information during transmission.