

EC2 Instance Setup Documentation

Getting Started with EC2 from the AWS Console

Logging In & Navigating EC2 Dashboard

- Log in to AWS Management Console
- Select your region (e.g., Asia, Pakistan)
- Navigate to EC2 Dashboard: Go to Services > Compute > EC2
- Click "Launch Instance" to begin setup

From AMI Selection to Security Configuration

Launching Your EC2 Instance – Step-by-Step

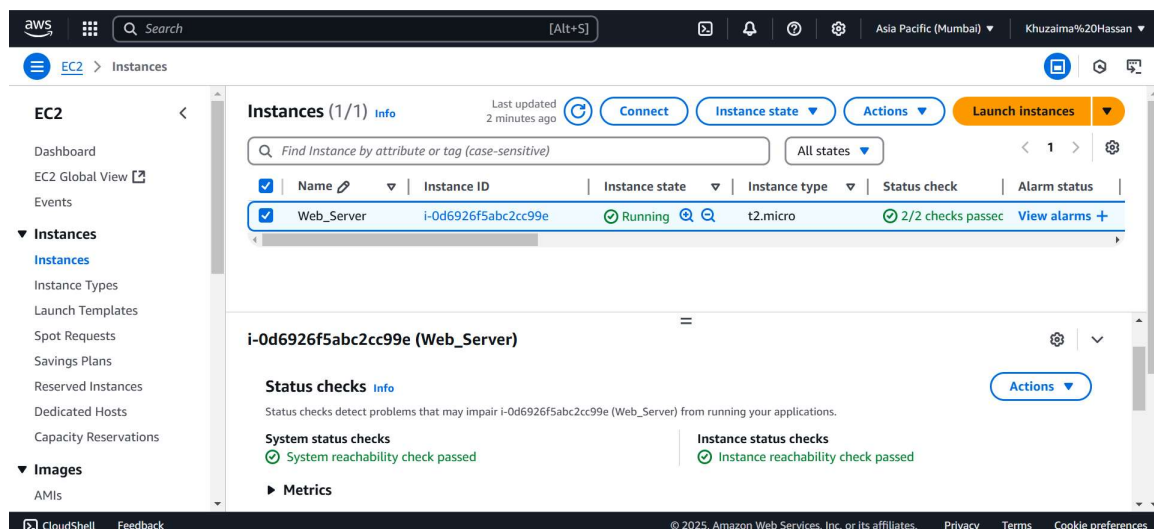
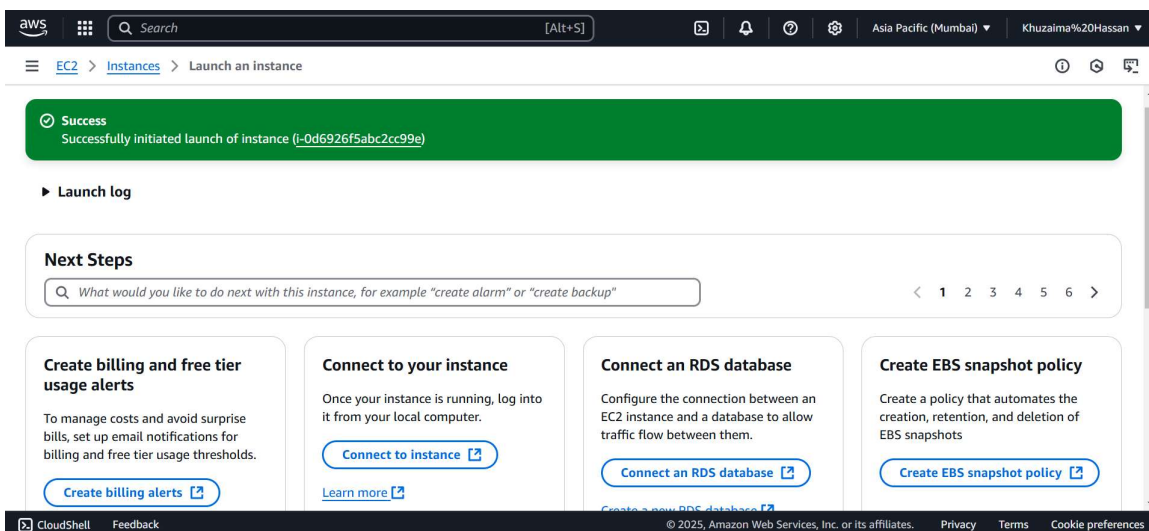
- Choose AMI: e.g., Ubuntu 22.04 LTS, Amazon Linux 2025
- Choose Instance Type: e.g., t3.micro (Free Tier)
- Add Storage: e.g., 8 GB EBS (default)
- Add Tags: Name your instance (e.g., "webserver")
- Configure Security Group:
 1. Allow SSH (22) from your IP
 2. Allow HTTP (80) for web traffic (optional)
- Review & Launch
- Create or choose an existing key pair (for SSH)

The screenshot displays the AWS Management Console interface for launching an EC2 instance. The top navigation bar shows the AWS logo, a search bar, and the current region (Asia Pacific (Mumbai)). The breadcrumb trail indicates the path: EC2 > Instances > Launch an instance. The main content area is titled 'Launch an instance' and includes a brief description of Amazon EC2. The 'Name and tags' section has a text input field containing 'Web_Server' and a link to 'Add additional tags'. The 'Application and OS Images (Amazon Machine Image)' section is expanded, showing a search bar and a 'Quick Start' tab. The 'Summary' section on the right provides a overview of the configuration: 'Number of instances' is set to 1, 'Software Image (AMI)' is Canonical, Ubuntu, 24.04, amd64, 'Virtual server type (instance type)' is t2.micro, and 'Firewall (security group)' is New security group. The 'Launch instance' button is highlighted in orange, and there is a 'Cancel' button and a 'Preview code' link.

Managing and Connecting to Your EC2 Instance

Post-Launch – Instance State & Access

- After launch, go back to EC2 Dashboard > Instances
- View:
 1. Instance State (running, stopped, terminated)
 2. Public IPv4, instance ID, AMI ID, etc.
- Common Actions:
 1. Start/Stop: Pause/restart your server
 2. Terminate: Permanently delete instance



Creating, Using & Securing Key Pairs

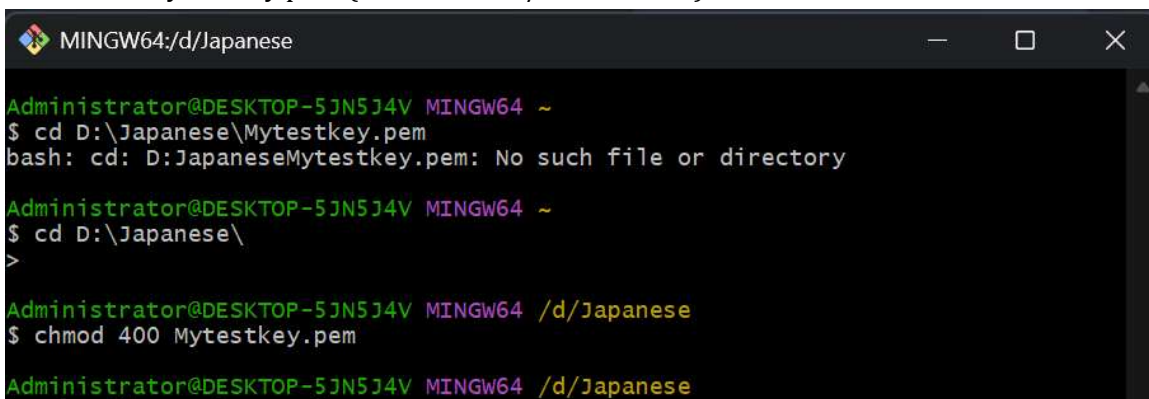
Creating Key Pairs in AWS:

- Go to EC2 Dashboard > Key Pairs > Create key pair
- Choose format: .pem (for OpenSSH/Linux) or .ppk (for PuTTY/Windows)
- Choose algorithm: RSA (widely used), ED25519 (faster, newer)
- Download the private key immediately (cannot be retrieved later)

Secure the Key File:

Run this below command:

`chmod 400 your-key.pem` (restricts read/write access)



```
Administrator@DESKTOP-5JN5J4V MINGW64 ~
$ cd D:\Japanese\Mytestkey.pem
bash: cd: D:\Japanese\Mytestkey.pem: No such file or directory

Administrator@DESKTOP-5JN5J4V MINGW64 ~
$ cd D:\Japanese\
>

Administrator@DESKTOP-5JN5J4V MINGW64 /d/Japanese
$ chmod 400 Mytestkey.pem

Administrator@DESKTOP-5JN5J4V MINGW64 /d/Japanese
```

Set Up Git to Work with EC2 via SSH

Installing Git on Your Local Machine

Download and Install Git:

Windows: <https://git-scm.com/download/win>

Mac: Install using Homebrew: `brew install git`

Linux Ubuntu:

- `sudo apt update`
- `sudo apt install git`

Verify Installation:

- `git --version`

Connect to EC2 Using SSH Command in Git Bash

Steps to Connect:

1. Open Git Bash (Windows) or Terminal (Mac/Linux)
2. Navigate to the directory where your .pem is saved
3. Set permissions for key (first time only): `chmod 400 your-key.pem`
4. Use SSH to connect:
`ssh -i "your-key.pem" ec2-user@<your-public-ip>`

Connection to EC2 Instance:

```
Administrator@DESKTOP-5JN5J4V MINGW64 /d/Japanese
$ ssh -i "Mytestkey.pem" ubuntu@15.207.221.214
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1024-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Sun Apr 27 11:51:44 UTC 2025

System load:  0.0               Processes:           103
Usage of /:   24.9% of 6.71GB   Users logged in:    0
Memory usage: 19%              IPv4 address for enx0: 172.31.2.27
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-2-27:~$ |
```

Exiting the Instance:

```
ubuntu@ip-172-31-2-27:~$ exit
logout
Connection to 15.207.221.214 closed.

Administrator@DESKTOP-5JN5J4V MINGW64 /d/Japanese
$
```