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## LAUNCHING OF THE INSTANCE AND THE TEMPLATE

AMAZON WEB SERVICES

AWS SERVICES



AYUSH SHAHA  
CLOUDBLITZ ,KOTHRUD  
MAYUR COLONY ,KOTHRUD

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## ➤ LAUNCHING OF EC2 AND IT'S LAUNCH OPTION:-

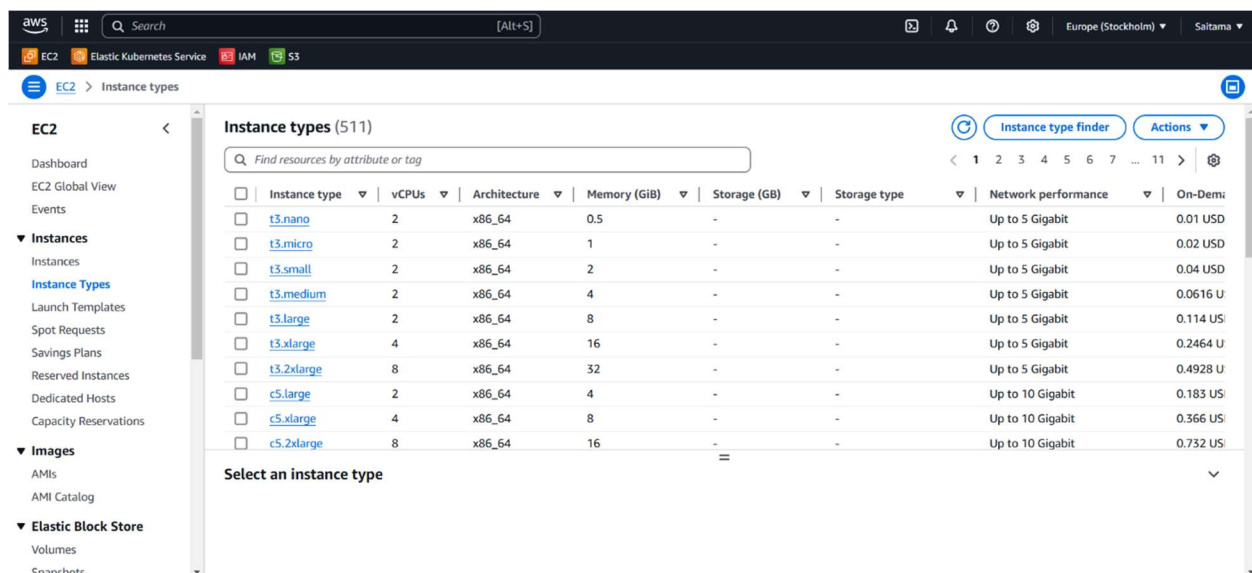
- What is the EC2 instance ?

Amazon **EC2 (Elastic Compute Cloud)** is a web service that provides **resizable** and **scalable** computing capacity in the cloud. It allows you to launch **virtual servers (instances)** and run applications without investing in physical hardware.

- What are the types of Instances?

There are 6 different types of instances, each of which you can choose according to your requirements. Each type of instance has a different hardware configuration. The following are some of the different types of Instances.

- **General purpose:-** This provides balanced computing, memory, and storage.
- **Compute optimized:-** This provides more computing compared to memory and storage.
- **Memory optimized:-** This focuses on memory rather than storage and the compute.
- **Storage optimized:-** This has more storage than compute and memory.
- **Accelerated optimized:-** This is a type of instance that provides more GPU or accelerated hardware.
- **High-performance Computing:-** These are types that are used for an application that requires low latency and high performance.



Instance type	vCPUs	Architecture	Memory (GiB)	Storage (GB)	Storage type	Network performance	On-Demand
<a href="#">t3.nano</a>	2	x86_64	0.5	-	-	Up to 5 Gigabit	0.01 USD
<a href="#">t3.micro</a>	2	x86_64	1	-	-	Up to 5 Gigabit	0.02 USD
<a href="#">t3.small</a>	2	x86_64	2	-	-	Up to 5 Gigabit	0.04 USD
<a href="#">t3.medium</a>	2	x86_64	4	-	-	Up to 5 Gigabit	0.0616 U
<a href="#">t3.large</a>	2	x86_64	8	-	-	Up to 5 Gigabit	0.114 US
<a href="#">t3.xlarge</a>	4	x86_64	16	-	-	Up to 5 Gigabit	0.2464 U
<a href="#">t3.2xlarge</a>	8	x86_64	32	-	-	Up to 5 Gigabit	0.4928 U
<a href="#">c5.large</a>	2	x86_64	4	-	-	Up to 10 Gigabit	0.183 US
<a href="#">c5.xlarge</a>	4	x86_64	8	-	-	Up to 10 Gigabit	0.366 US
<a href="#">c5.2xlarge</a>	8	x86_64	16	-	-	Up to 10 Gigabit	0.732 US

### 1.1 Types of Instances

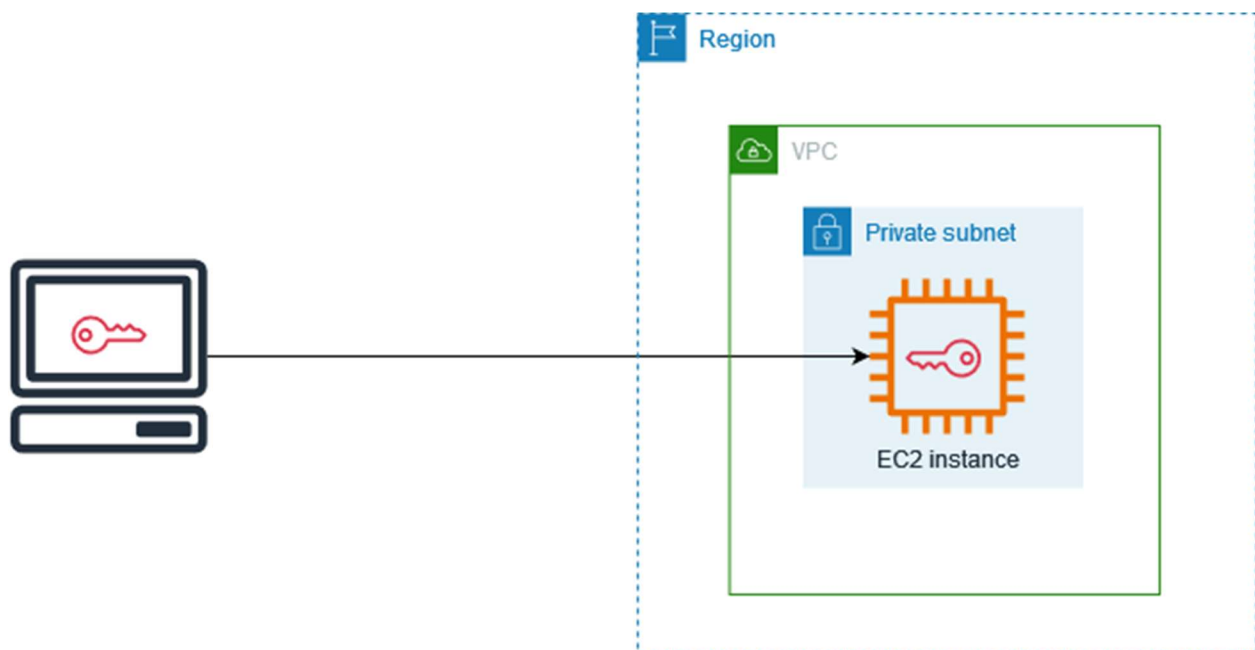
- What is the AMI?

An AMI stands for 'Amazon Machine Image' there are several Images available on it each image has some predefined configurations, and with the packages installed, you can even create your own images, which are called the **creation of templates** In the AMI option is four tabs

- Quick start,
- Created Images: this contains the images created by us.
- AWS marketplace: contains different images and has some predefined configurations,
- Community: this contains the images that are created by the community and are updated regularly.

- What is a Key pair?

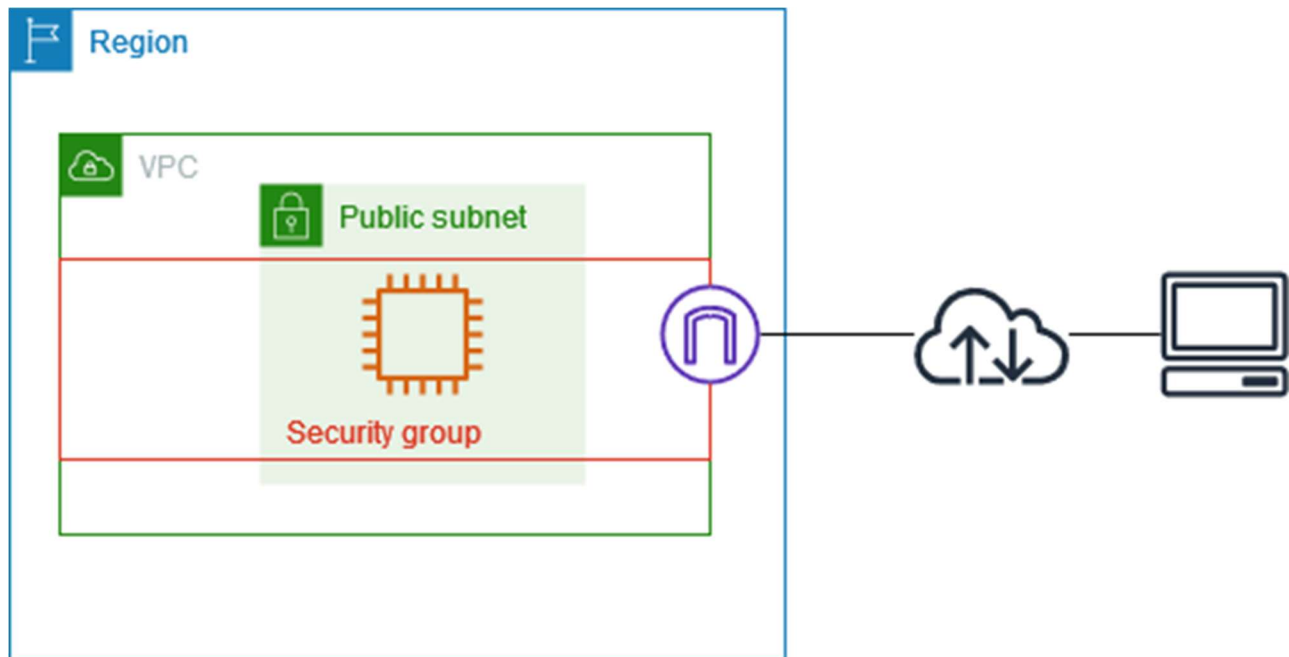
A **Key Pair** in AWS is a combination of a **public key** and a **private key** used for securely accessing **EC2 instances**.



1.2 Structure of the Key Pair

- What is a security group?

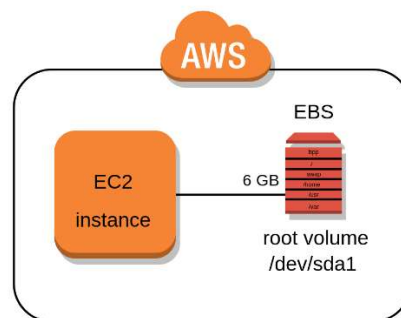
The security group is nothing but it is like a firewall that allows or decides which type of traffic is allowed to take the information or access the server. The traffic that is approaching the server is called the **Inbound traffic** and the Traffic that is coming out of the instance/server is called the **outbound rule**.



1.2 Structure of the Security Group

- What is the EBS volume for?

Amazon EBS is the block storage, which is an Elastic Block Store that is attached to the instance



for the booting purpose and storage purpose .

## ➤ STEPS FOR LAUNCHING THE INSTANCE:-

1. Enter the **Name** for Instance
2. Select **AMI**

The screenshot shows the AWS Management Console interface for launching an EC2 instance. The page is titled 'Launch an instance' and includes a breadcrumb trail: EC2 > Instances > Launch an instance. A summary panel on the right shows the current configuration: 1 instance, Amazon Linux 2023 AMI 2023.6.2... (ami-08b1d20c6a69a7100), t3.micro instance type, New security group, and 1 volume(s) - 8 GiB. The main section is 'Application and OS Images (Amazon Machine Image)'. It features a search bar and a 'Quick Start' tab. Under 'Quick Start', there are tiles for various operating systems: Amazon Linux, macOS, Ubuntu, Windows, Red Hat, SUSE Linux, and Debian. The 'Amazon Linux' tile is selected. Below the tiles, it says 'Amazon Machine Image (AMI)'. The bottom of the page shows the footer with '© 2025, Amazon Web Services, Inc. or its affiliates.' and links for Privacy, Terms, and Cookie preferences.

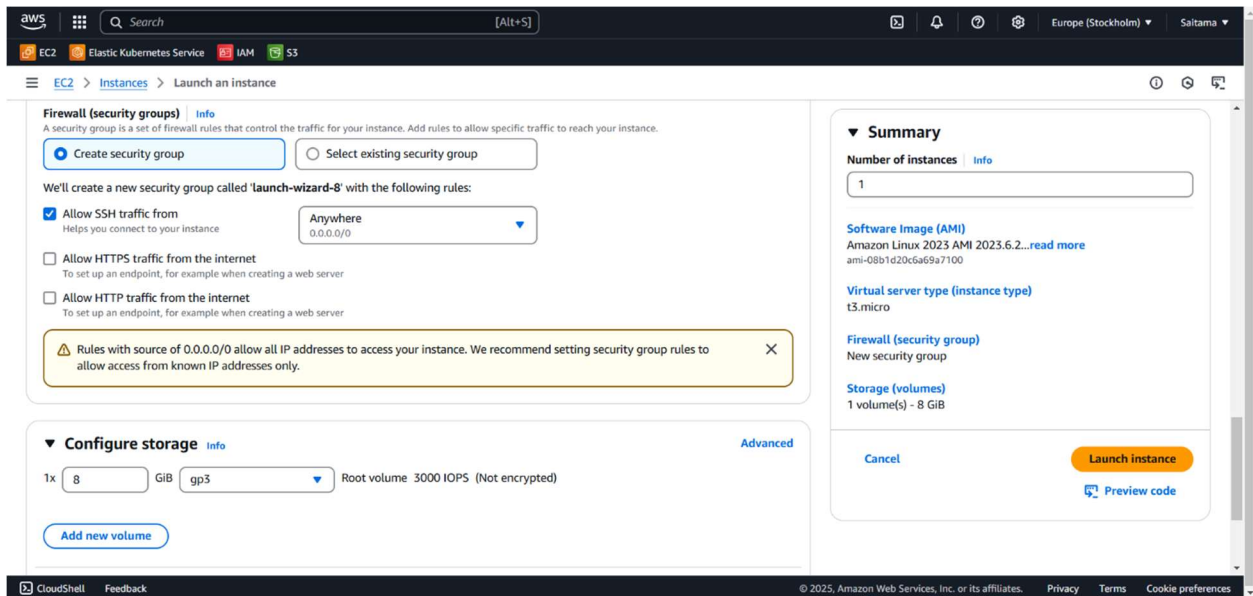
3. Select the **type of the instance**.
4. Select the **Key pair**.

The screenshot shows the AWS Management Console interface for launching an EC2 instance, continuing from the previous step. The page is titled 'Launch an instance' and includes a breadcrumb trail: EC2 > Instances > Launch an instance. The 'Instance type' section is active, showing 't3.micro' as the selected instance type. It provides details: Family: t3, 2 vCPU, 1 GiB Memory, Current generation: true, and pricing information. There is a 'Free tier eligible' badge and a 'Compare instance types' link. The 'Key pair (login)' section is also active, showing a 'Key pair name - required' dropdown menu with 'Select' as the current choice. There is a 'Create new key pair' link. The 'Network settings' section is visible at the bottom, showing 'Network' as 'vpc-052b9ea253d08a91e' and 'Subnet' as 'No preference (Default subnet in any availability zone)'. The summary panel on the right remains the same as in the previous screenshot. The bottom of the page shows the footer with '© 2025, Amazon Web Services, Inc. or its affiliates.' and links for Privacy, Terms, and Cookie preferences.

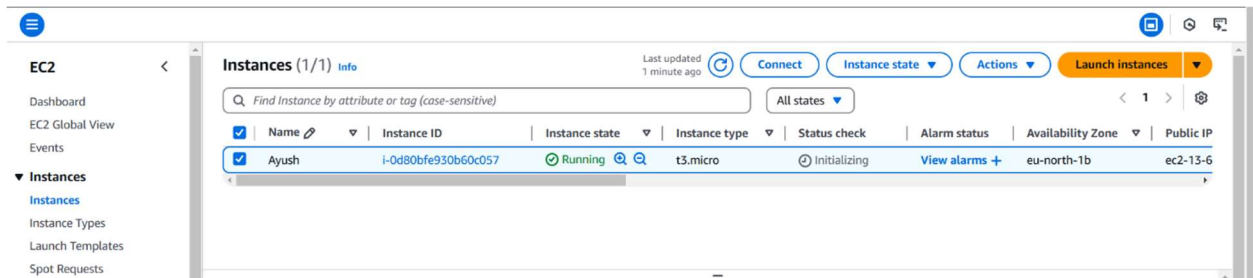
5. Select / Edit the security group.

6. Check the **volume** attached.

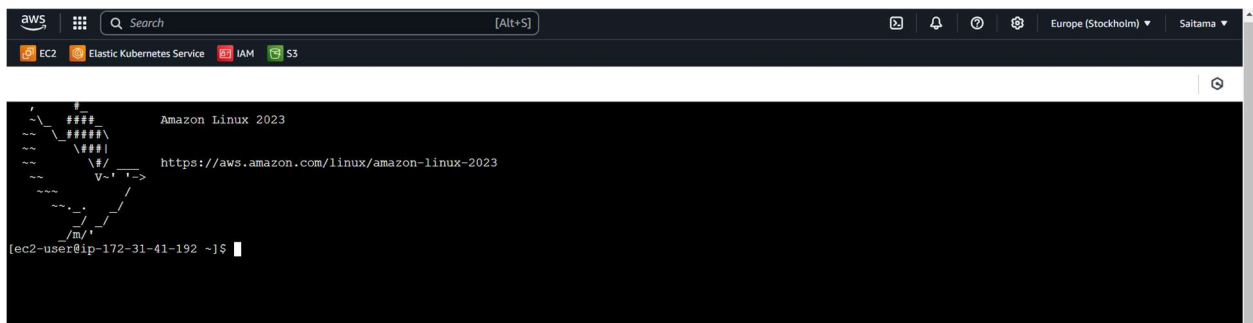
7. Launch Instance.



7. Now select the instance and connect.



8. After the establishment of connection now you can hit the command.



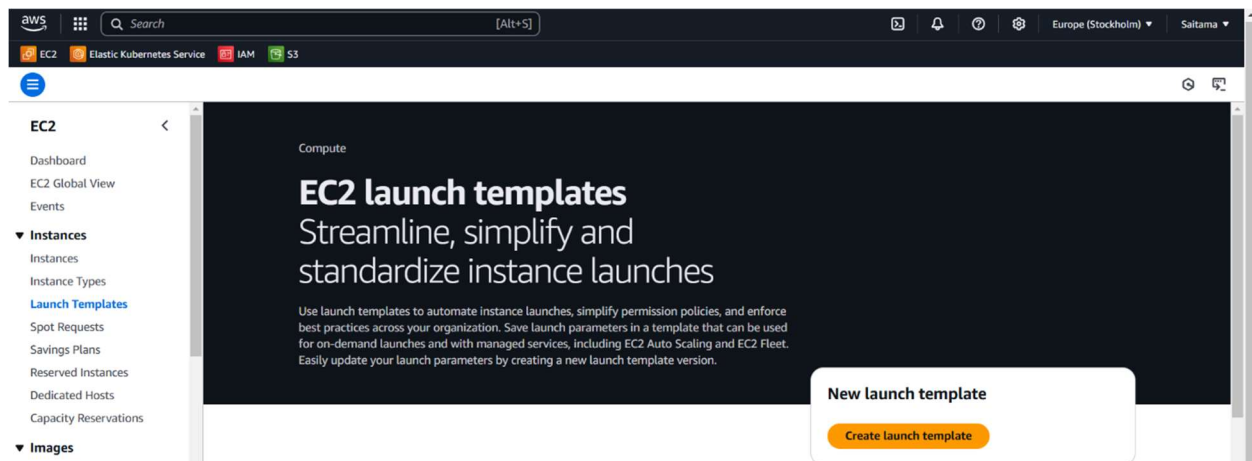
## ➤ WHAT IS A TEMPLATE AND STEPS FOR LAUNCHING IT:-

- What is a template?

A template is nothing but the exact replica of the instance at the time of creating the image with the help of the template, we can create an exact copy of the instance with the same configurations and it can be even used for the backup.

- STEPS FOR LAUNCHING THE TEMPLATE:-

1. Click on the launch template
2. Create a launch template
3. Enter the name of the Template



4. Select the configuration and key if needed
5. Create a template



