AWS

Cloud Computing:

- Cloud computing is to access the computing resource via the internet.
- Hosted by provides like Aws, Azure and Gcp.
- Pay-as-you-go Pricing Model.
- No upfront costs or maintance needed.

Features:

On-demand self-service is a feature of cloud computing that allows users to automatically provision and manage computing resources (like servers, storage, and applications)

Broad network access is a key characteristic of cloud computing, allowing services to be accessed over the internet from a wide range of devices, such as smartphones, laptops, and tablets.

Resource pooling in cloud computing refers to the provider's ability to serve multiple customers using a shared pool of computing resources, such as storage, processing power, and memory.

Rapid elasticity is a cloud computing feature that allows resources to be automatically scaled up or down based on demand.

Different Service Models:

- **Infrastructure as a Service** is a cloud computing model that provides virtualized computing resources over the internet, including servers, storage, and networking.
- It allows users to rent infrastructure on a pay-as-you-go basis to maintain physical hardware.
- **Platform as a Service** is a cloud computing model that provides a platform allowing developers to build, deploy, and manage applications without managing the underlying infrastructure.
- **Software as a Service** is a cloud computing model where software applications are delivered over the internet on a subscription basis. Users can access and use the software through a web browser without needing to install or maintain it on their own devices.

Cloud Computing Deployment Models:

- A **public cloud** is a cloud computing environment where services and infrastructure are owned and operated by a third-party provider, such as AWS, Microsoft Azure, or Google Cloud. Over the internet on a pay-per-use basis.
- A **private cloud** is a cloud computing environment that is used exclusively by one organization.
- A **hybrid cloud** is a computing environment that combines both private and public cloud services, allowing data and applications to be shared between them and on primes to datacentre or public cloud.
- A **multicloud** is a cloud strategy where an organization uses multiple cloud services from different providers to meet various needs, without necessarily integrating them.

Instance Definition:

- An **Amazon EC2 instance** is a virtual server in Amazon's Elastic Compute Cloud (EC2) that provides scalable compute capacity for running applications.

How create the EC2 instance steps given below:

Select an Amazon Machine Image (AMI)

- Choose an **AMI** (Amazon Machine Image) based on the operating system you want, such as Amazon Linux 2, Ubuntu, or Windows.

Choose an Instance Type

- Select an **instance type** based on the required CPU and memory. The **t2.micro** type is often eligible for the AWS Free Tier.

Select or Create a Key Pair

- key pair or create a new one to access your instance.
- Download the key pair (.pem file) and store it securely (you'll need it to connect to your instance via SSH or RDP).

Add Storage

- By default, an **8 GiB** EBS volume is provided. You can increase this if needed.

Add Tags (Optional)

- You can add **tags** to your instance (e.g., Name = MyEC2Instance) for easy identification.

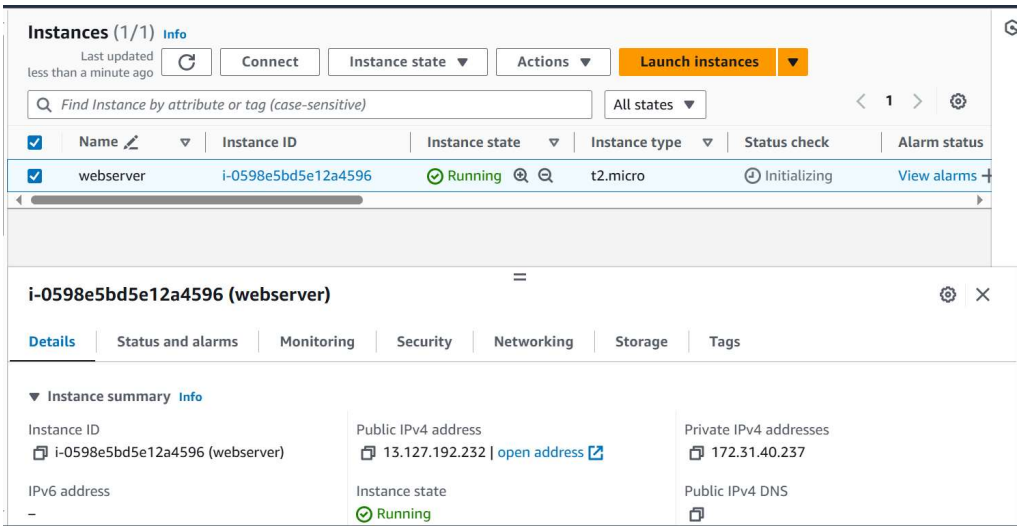
Configure Security Group

- Allow **SSH** (port 22) for Linux instances

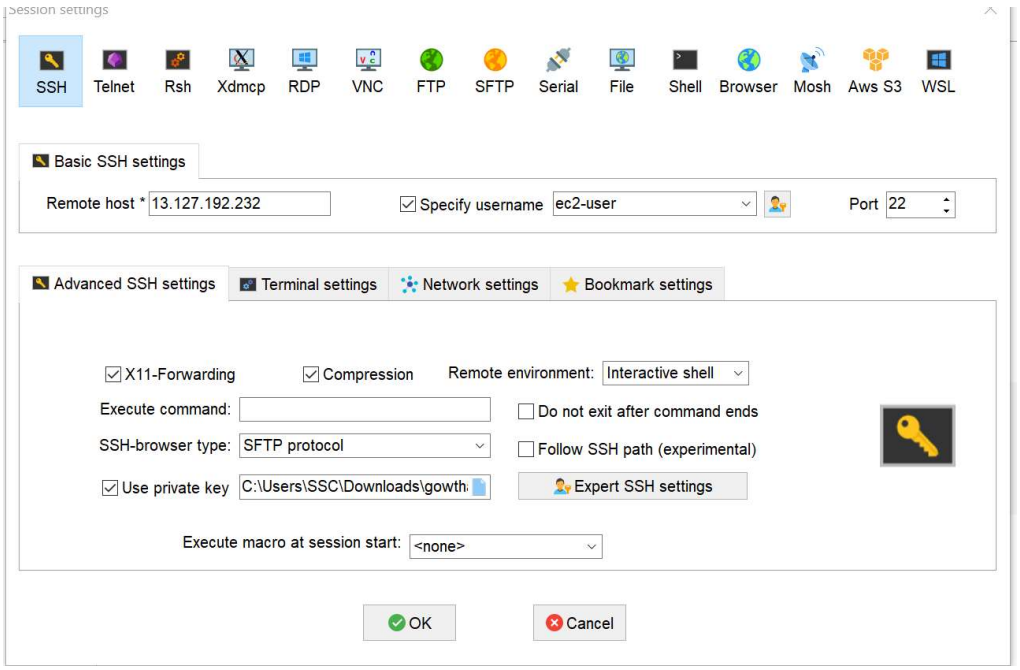
Review and Launch

- Review your configuration and click **Launch**.

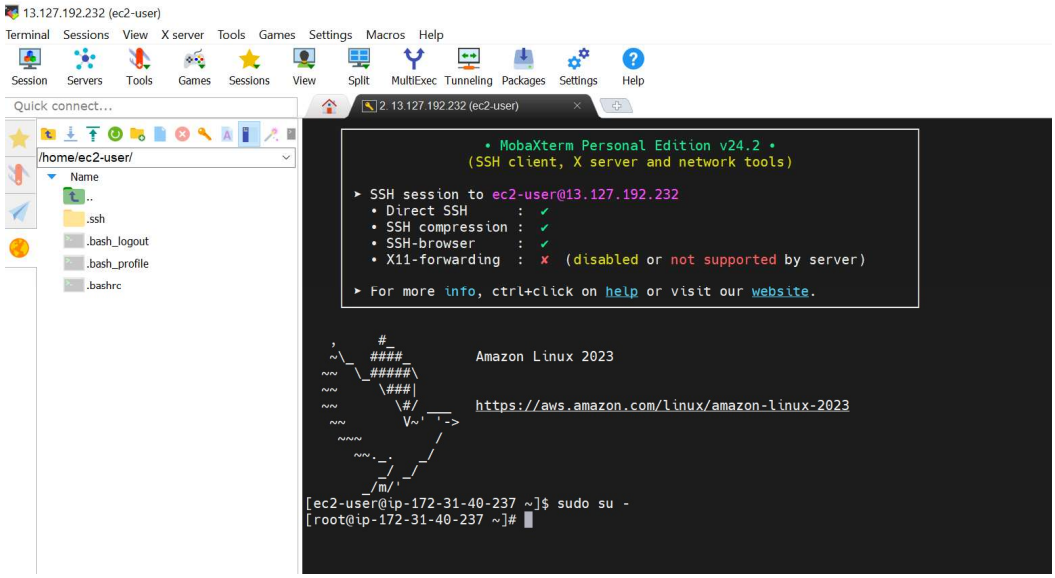
1. Create the instance and check the status:



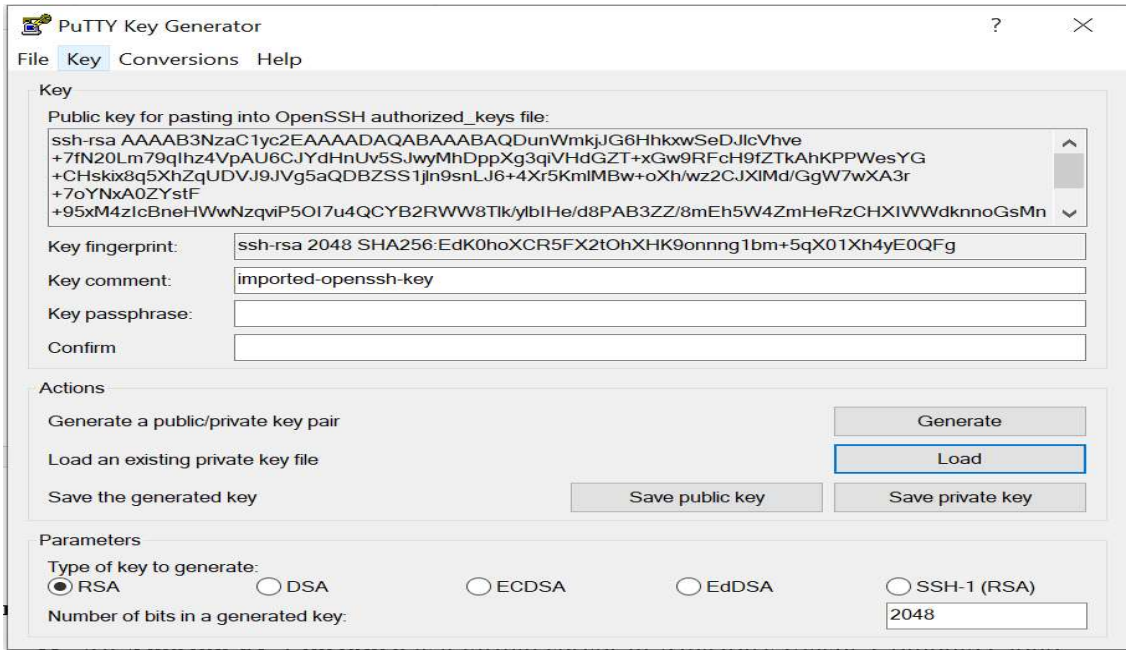
2. To access the Mobaxterm and using ssh:



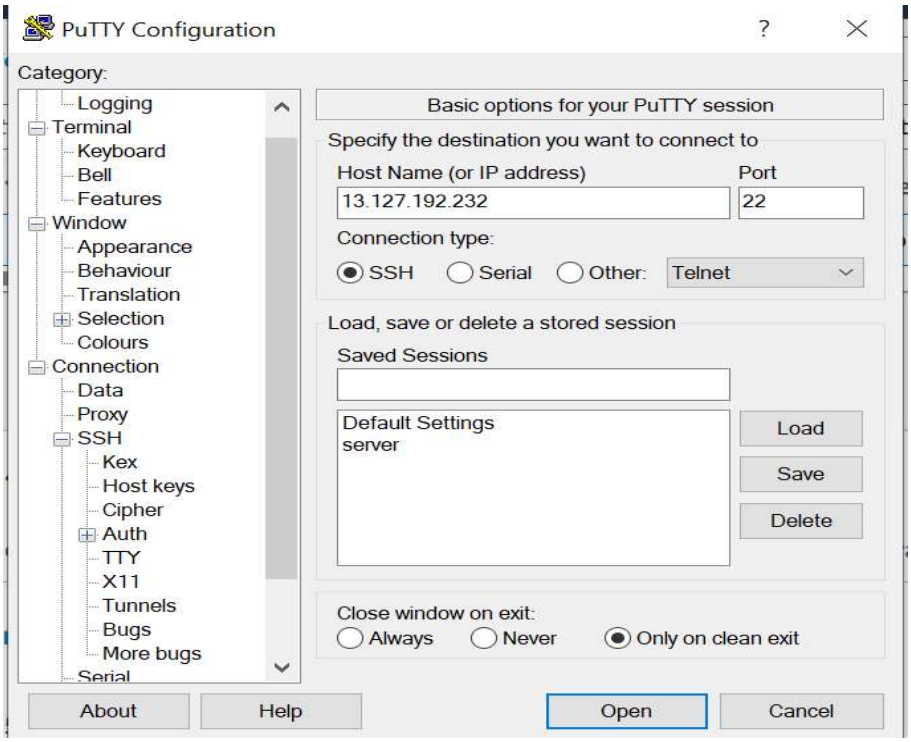
3. To check the mobaxterm output status:



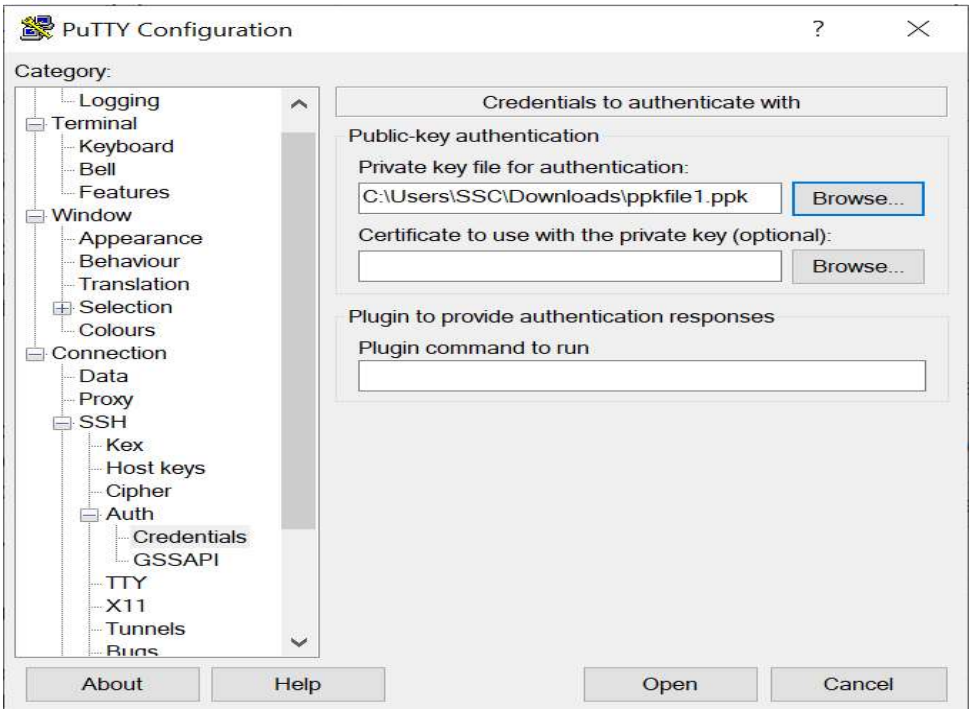
1. To access the putty and using puttygen:



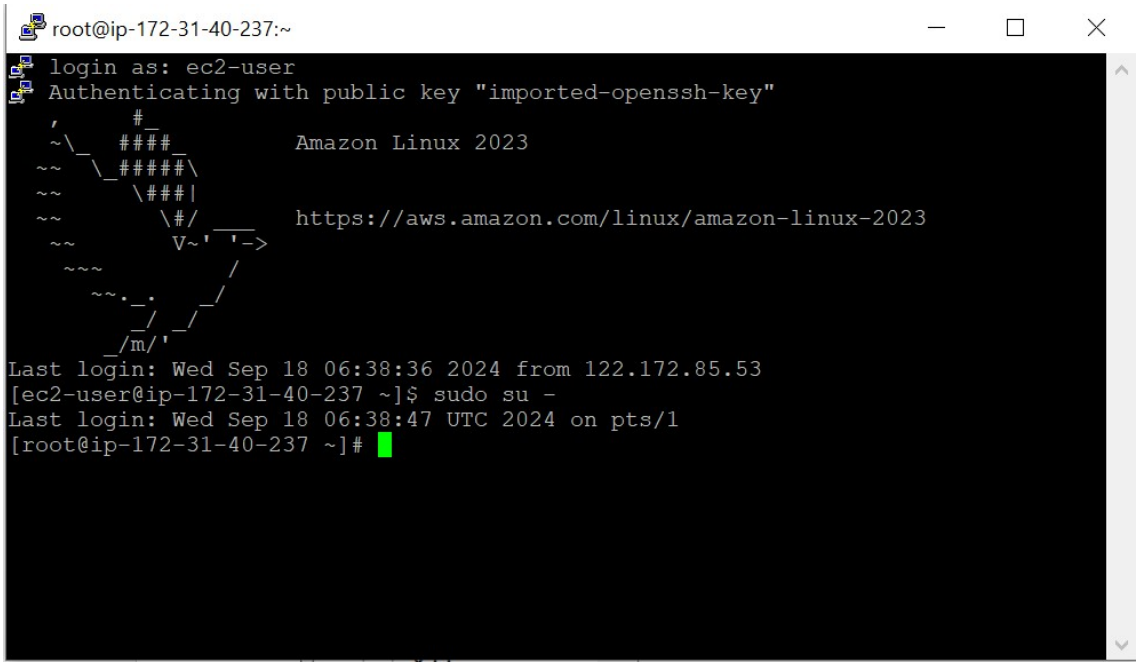
2. To enter the public ip and to using putty:



3. To click the ssh and Auth and credentials also click it and to click the ppkfile1:



4. To seeing the ssh putty output:



Flow chart:

How to working in Public IP and Private IP: