Day 1 of my AWS - I learned about basic concepts of AWS and how to create an EC2 instance.

What is AWS ?

- AWS (Amazon Web Services) is a cloud computing platform provided by amazon.
- They provide you with servers and services that you can use on demand and scale easily.
- AWS powers some of the biggest websites in the world (amazon.com, Netflix etc).

Collection of data centres is called the availability zone.
Collection of availability zones is called region.

AWS Regions

- AWS has regions all around the world.
- Names can be: us-east-I, eu-west-3 etc.
- A region is a cluster of data centres.
- Most Aws services are region-scoped.

AWS Availability Zones

- Each region has many availability zones (usually 3, min is 2, max is 6). Example:
    - ap-southeast-2a
    - ap-southeast-2b
    - ap-southeast-2c

- Each availability zone is one or more discrete data centres with redundant power, networking and connectivity.
- They are separate from each other, so that they are isolated from disasters.
- They're connected with high bandwidth, ultra-low latency networking.

EC2

- EC2 stands for Elastic Compute Cloud. It's a web service that provides secure, resizable computing capacity in the cloud. EC2 is a service on the Amazon Web Services (AWS) platform. It allows businesses to run application programs in the AWS public cloud.
- EC2 is designed to make web-scale cloud computing easier for developers. It reduces the time required to obtain and boot new user instances to minutes.
- EC2 is a virtual server that helps users run applications on the AWS cloud infrastructure. Users can create and run virtual machines in the cloud, which

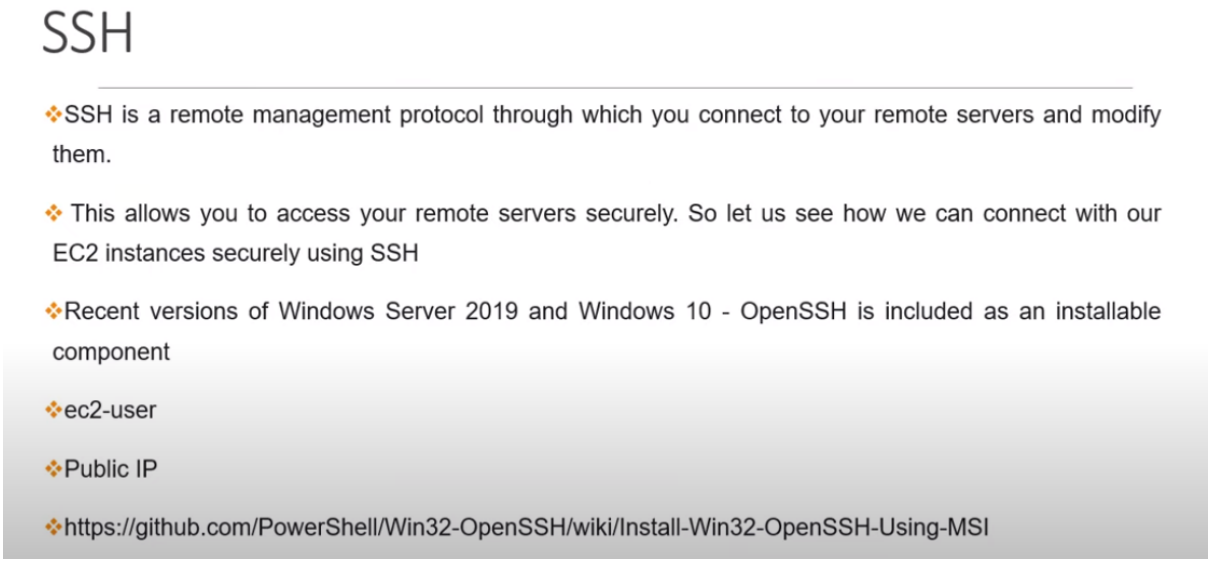
are called "instances". EC2 instances have different resource configurations of CPU, memory, storage, and networking.

- EC2 is one of Amazon Web Services' most well-known services.
- It mainly consists in the capability of :
    - Renting a virtual machine (EC2).
    - Storing data on virtual drives (EBS).
    - Distributing load across machines (ELB).
    - Scaling the services using the auto scaling groups (ASG).

A hypervisor is used to virtualize a physical machine. Hypervisors have been used for various purposes since their early days.

What is SSH in AWS?

SSH is a remote management protocol through which you connect to your remote servers and modify them. This allows you to access your remote servers securely.
The most common tool to connect to Linux servers is Secure Shell (SSH). It was created in 1995 and is now installed by default on almost every Linux distribution.



To launch the EC2 instance and mount an EFS file system

1. Open the Amazon EC2 console at https://console.aws.amazon.com/ec2/.
2. Choose **Launch Instance**.
3. In **Step 1: Choose an Amazon Machine Image (AMI)**, find an Amazon Linux 2 AMI at the top of the list and choose **Select**.
4. In **Step 2: Choose an Instance Type**, choose **Next: Configure Instance Details**.
5. In **Step 3: Configure Instance Details**, provide the following information:

   - Leave **Number of instances** at one.
   - Leave **Purchasing option** at the default setting.
   - For **Network**, choose the entry for the same VPC that you noted when you created your EFS file system in Step 1: Create your Amazon EFS file system (p. 15).
   - For **Subnet**, choose a default subnet in any Availability Zone.
   - For **File systems**, make sure that the EFS file system that you created in Step 1: Create your Amazon EFS file system (p. 15) is selected. The path shown next to the file system ID is the mount point that the EC2 instance will use, which you can change.
   - The **User data** automatically includes the commands for mounting your Amazon EFS file system.
6. Choose **Next: Add Storage**.
7. Choose **Next: Add Tags**.
8. Name your instance and choose **Next: Configure Security Group**.
9. In **Step 6: Configure Security Group**, set **Assign a security group** to **Select an existing security group**. Choose the default security group to make sure that it can access your EFS file system.
10. Choose **Review and Launch**.
11. Choose **Launch**.
12. Select the check box for the key pair that you created, and then choose **Launch Instances**.

    Once the EC2 instance is created and becomes available, it will be mounted to your EFS file system. At this point, you will be able to transfer files to your EFS file system.