EC2 BASICS

Amazon EC2

- EC2 is one of the most popular of AWS' offering
- EC2 = Elastic Compute Cloud = Infrastructure as a Service
- It mainly consists in the capability of :
  - Renting virtual machines (EC2)
  - Storing data on virtual drives (EBS)
  - Distributing load across machines (ELB)
  - Scaling the services using an auto-scaling group (ASG)

- Knowing EC2 is fundamental to understand how the Cloud works

EC2 sizing & configuration options

- Operating System (OS): Linux, Windows or Mac OS
- How much compute power & cores (CPU)
- How much random-access memory (RAM)
- How much storage space:
  - Network-attached (EBS & EFS)
  - hardware (EC2 Instance Store)
- Network card: speed of the card, Public IP address
- Firewall rules: security group
- Bootstrap script (configure at first launch): EC2 User Data

EC2 User Data

- It is possible to bootstrap our instances using an EC2 User data script.
- bootstrapping means launching commands when a machine starts
- That script is only run once at the instance first start
- EC2 user data is used to automate boot tasks such as:
    - Installing updates
    - Installing software
    - Downloading common files from the internet
    - Anything you can think of
- The EC2 User Data Script runs with the root user

EC2 instance types: example

Instance	vCPU	Mem (GiB)	Storage	Network Performance	EBS Bandwidth (Mbps)
t2.micro	1	1	EBS-Only	Low to Moderate	
t2.xlarge	4	16	EBS-Only	Moderate	
c5d.4xlarge	16	32	1 x 400 NVMe SSD	Up to 10 Gbps	4,750
r5.16xlarge	64	512	EBS Only	20 Gbps	13,600
m5.8xlarge	32	128	EBS Only	10 Gbps	6,800

t2.micro is part of the AWS free tier (up to 750 hours per month)

LET'S MOVE TO HAND'S ON........OF EC2.