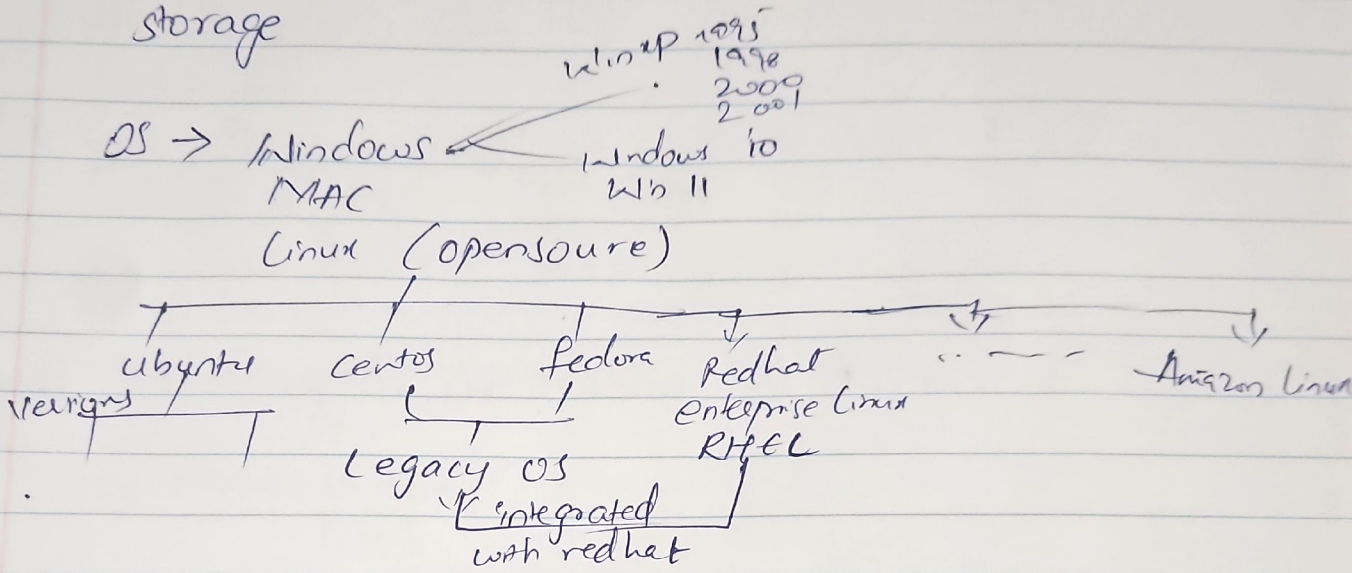
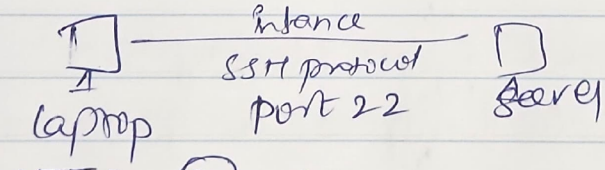
for cost estimate ask

Core
RAM
storage



in production => 1st preference → REDHAT Enterprise Linux
RHEL
bcoz it has more support mechanisms

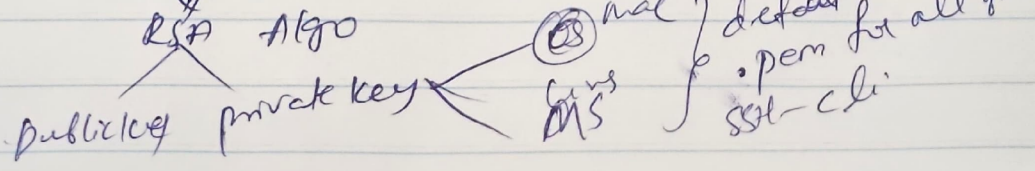


HTTP - 80 port
HTTPS - 443 port

using SSH portal we can connect to other system/service

so secure the connection

RSA Algo



SSH ⇒ Known hosts
↓
Stores info of all the IP I visited
(it stores public IP of EC2 also)

SSH connection

Instance → (Private key) → local (for auth req)

public key → Server (to verify private key)

↓

to connect it stores server finger print in known devices (local)

↓

ID card of server (local)

to prevent false servers

authorized keys: Server file that lists public SSH

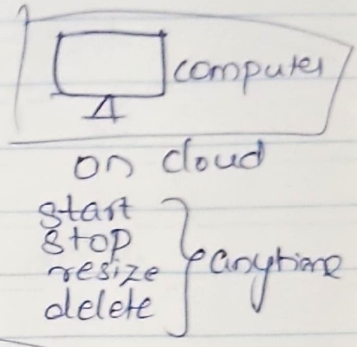
⇒ client —check→ known hosts
↓
server proves identity
↓
client requests using private key
↓
Server verify private key using public key
↓
Access granted

(public key → stored in server under authorized keys)

In powershell

ssh --version
ssh -i path\mykey.pem ec2-user@ public key. , yes
exit

EC2 :- Infrastructure as a Service / IaaS



EC2 is an service that provides virtual servers (Instances) on demand

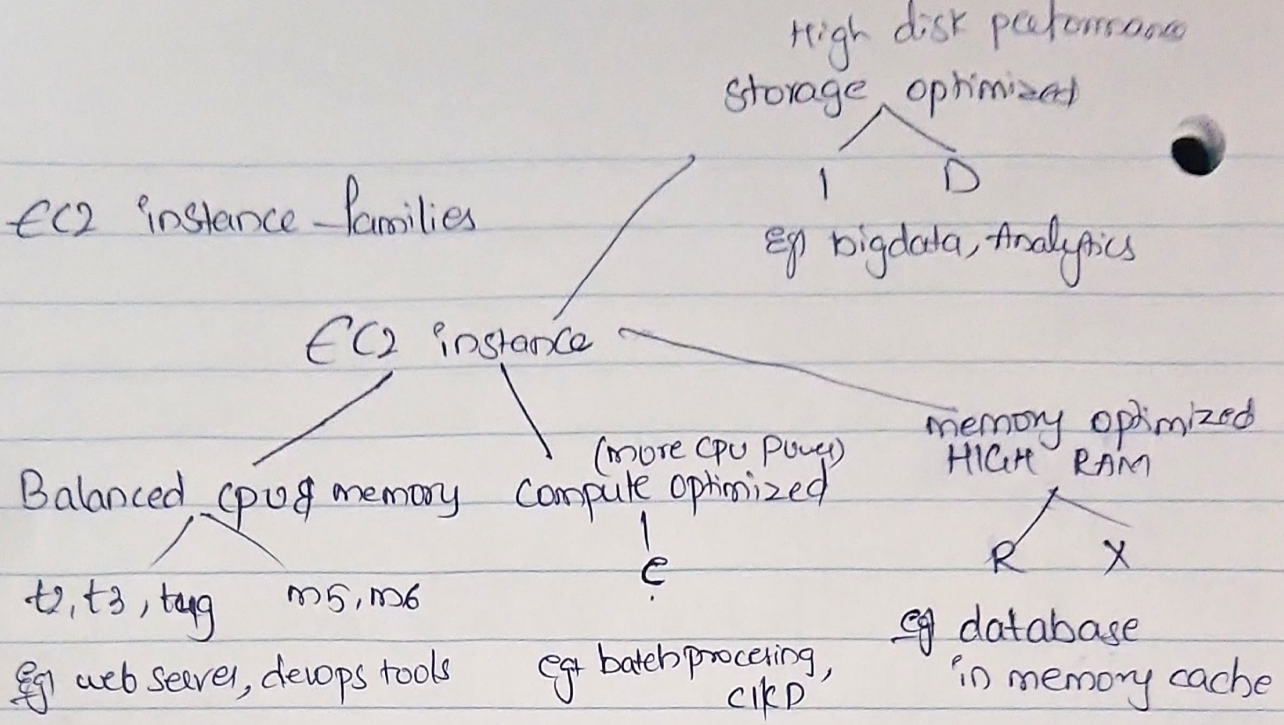
Why EC2 needed ? ⇒ no need of physical servers
costly, slow setup, fixed capacity
EC2 ⇒ pay as use launch in minutes scale up/do

Instance ⇒ virtual machine running in AWS

AMI :- Amazon Machine Image
template to create EC2 has OS preinstalled s/w

AMI = OS + base configuration

Instance Type :- CPU, RAM, N/w, Storage
Eg t3.micro → 1 cpu, 1GB ram



* CPU & memory balanced — t, m
* More CPU power — C
* Memory optimized → high RAM — R X
* Storage optimized — I D

t2, t3 - FREE TIER

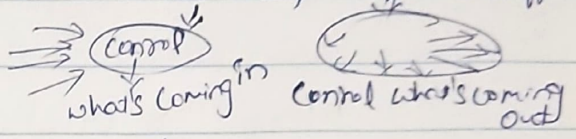
LAUNCH

Name	Reason
Name	identification, cost tracking
AMI	Amazon Linux (preferred), Ubuntu, Windows
Instance	learning → t3.micro, production → m5.large } based on App load & budget
Key Pair	to login securely
	public → stored on server (instance)
	private → stored locally
N/w Settings	vpc → has subnet, Route table, internet gateway
	Subnet → division of vpc
	Public → internet
	private → no internet

If you deploy app → allow HTTPS
HTTP
to allow All IP → 0.0.0.0

autoassign public IP : enable
gives public IP → internet access

Firewall : Security group
control inbound & outbound traffic



SSH 22 → My IP | HTTP 80 → Anywhere

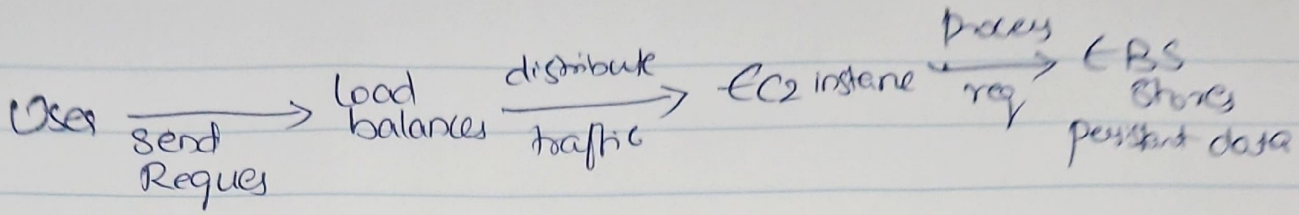
Storage

EBS : Elastic block storage
types : gp2 / gp3
io1 (high IOPS)
IOPS per second)

instance store → data lost, when instance stops
min 8/10 GiB

LAUNCH

STAGES : Pending
Running
Stopped → data retained
Terminated → data deleted



N/w Architecture

VPC → public subnet (Public IP)
→ private subnet (No public IP)

Network ACL

EC2 → IP
→ subnet
default → Security rules

Aws sets the needed n/w to access EC2 by default