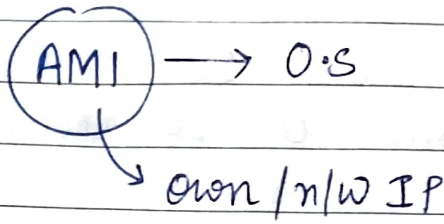
Day-6

AWS Global Accelerator



Poppy - Openstack for CDNaas.

▷ **Cloudfront - Revision**

→ When you create a cache it stays by default for one day. (default TTL - 1 day)

→ As soon as you make changes to your code, all the caches gets deleted presented in every edge location

o Create Invalidations → whichever file cache you want to be removed.
→ give filename, images, videos.
* (for delete all)
↓
Click Invalidate.

→ If my client now finds or requests for the invalidated file, he/she wont get it on the nearest edge location.

→ Then all the Proxy process needs to be repeated.

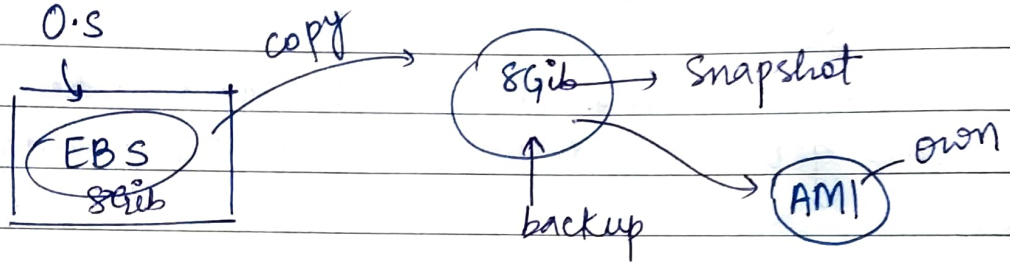
→ Therefore,
If we want to delete edge location caches we can use 'Invalidations'.

▷ Amazon Machine Images (AMI)

→ We need AMI's to launch OS.
→ Images give you Linux OS, Windows OS, etc.

Why own AMI?
→ To launch multiple Web Server's.
→ You require all your Web Server's to have same environment.

▷ Cloning EBS Volume - Snapshot Creation



→ from Snapshot you can create your own AMI.

After Snapshot Creation
↓
Create Image from EBS Snapshot

▷ Reasons to create Snapshot :-
↓
→ For backup Copy and Creation of AMI (own)

▷ Benefits of the created AMI :-

→ When you go up to launch new EC2 instance

AMI → My AMI (The AMI you created from snapshot)

ssh will make it insecure.

further configurations (Change to http or https)

→ We can have a option of Proceed without Keypair. (If you dont want to make changes in AMI further)

→ OS contains Webserver. - Client can only have the IP and cant make any changes (as we can't go in)
- secure.

* [We require keypair to go in and reconfigure something]

:- Challenge → OS is running in Mumbai and lauched from AMI we have created.
→ AMI is region based.
→ Suppose your team in any other region wants to use your AMI image, they can't.

⇝ Solution :-
→ We can ask the person to repeat the steps in for his region
↓ If we dont want this.

We can copy our image from one region to another

↓

How?

↓

Images → AMI → select the AMI

↓

Actions

↓

Copy AMI.

↓

and change the region to suppose California (us-west-1)

▷ If I want to share my created AMI to everybody in world:- → Image → AMI

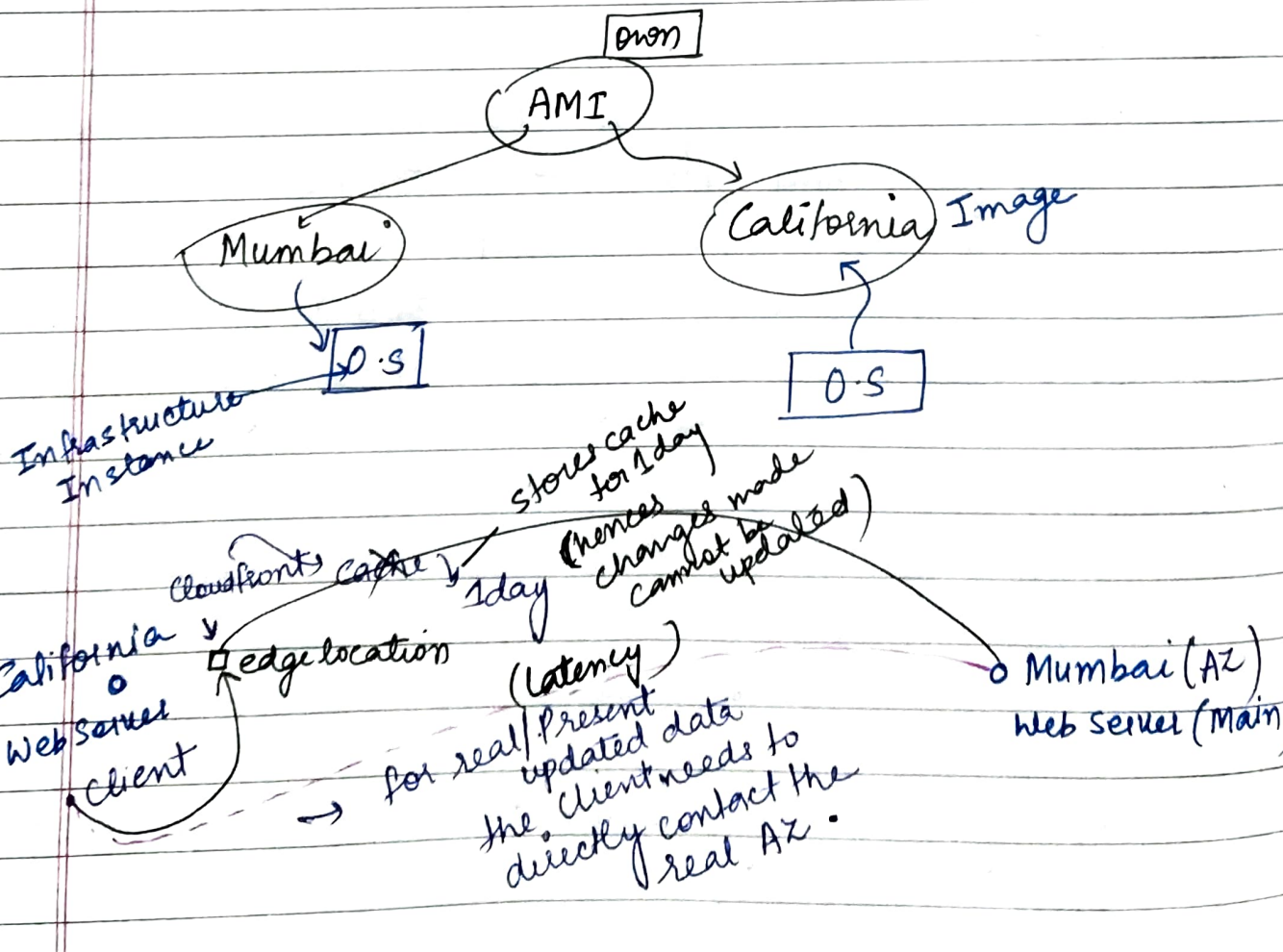
↓

Modify Image Permission

↓

Private to Public

Or you can give account number of the person whom you want to share your Image



AWS CSA - Global Accelerator (added)

- Hence, to Improve Latency they have used their Edge locations
  - ↳ Hence, due to so many edge location across globe they have set their own private network which is very highly reliable.

▷ Global Accelerator

→ To accelerate the traffic (use of AWS edge locations)
→ We use global accelerator to increase availability and performance of our application
→ Global Accelerator → highly reliable.

AWS Global Accelerator - Speed Comparison.
↳ to compare your local internet speed with AWS Global Accelerator.

→ Provides Fault Tolerance.
→ Secure (They have internal security measures)
↓
You will provide the url provided by AWS Global Accelerator not your own url

→ URL provided by Global Accelerator have got inbuilt security to protect your product from attacks - DDOS attack, etc.

→ Management is only in [Oregaon Region]

AWS Global Accelerator Create

↓

Provide Name - Select Name.

↓

Add Listeners → Port 80 / TCP.

↓

Add Endpoint Groups.
(We can add multiple)
↓ (depending upon where our client - exists)

aws global-accelerator list-accelerators
-- region us-west-1

Not running on Mumbai region.

⇒ Removing Global Accelerator

↓

disable Accelerator

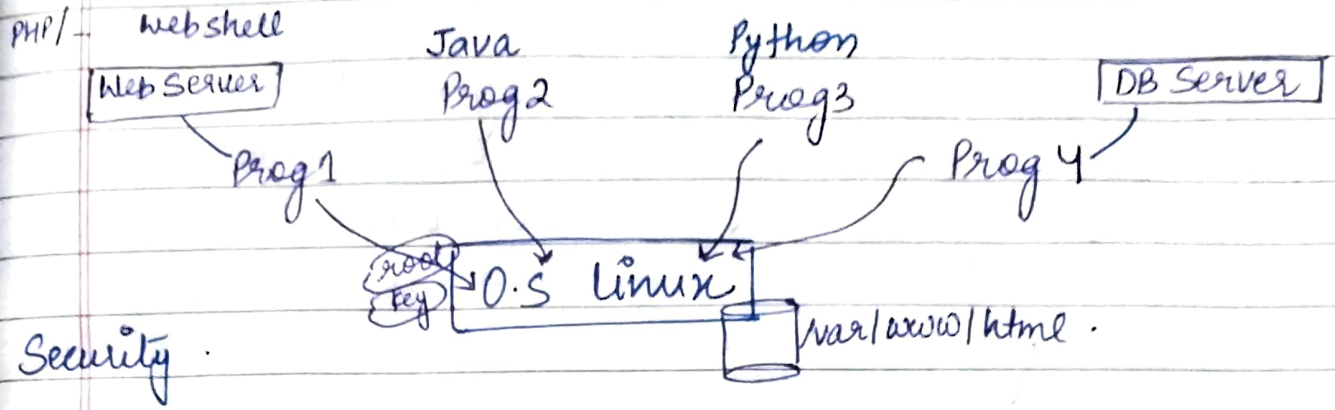
↓

Type delete

↓

Global Accelerator deleted

DAY-7

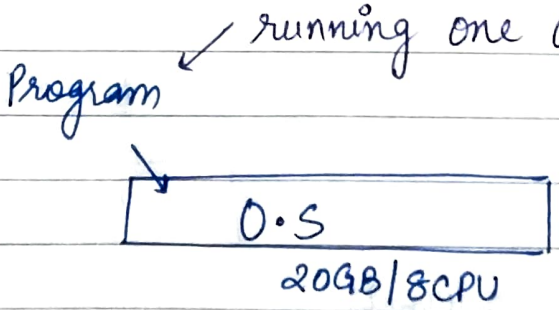


Security.

Why we need Key ?
To get into the Operating System.

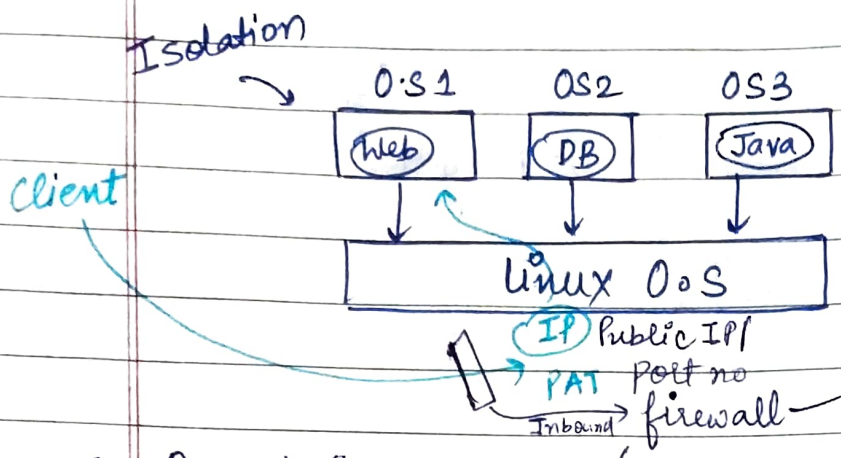
↳ Webserver Shell exploit or PHP shell exploit crackers without knowing keypair through root get into the O.S, sometimes happen.

Therefore, we should have the practice of running only one program on one Operating System.



But running one program on top of O.S may lead to inefficient utilization of O.S (The program may not be able to utilize full resources offered by O.S)
(RAM / GPU/CPU)

⇒

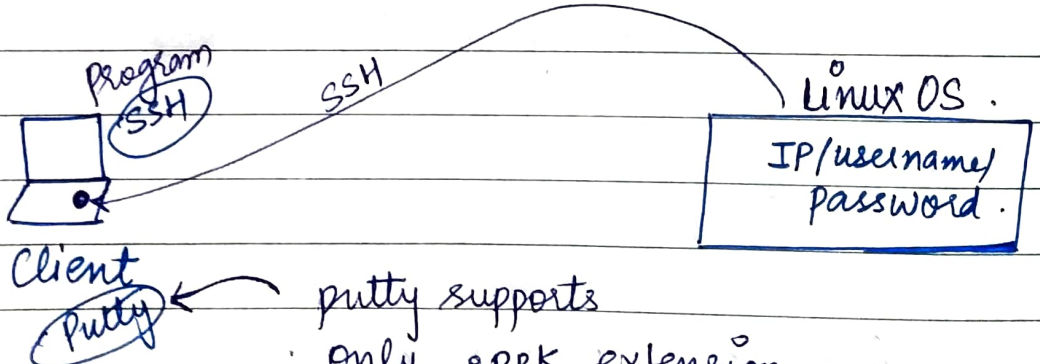


OS carrying different program running over an OS, unaware of each others existance. and isolated.

- Operating systems (That are isolated from each other) is running over an Operating system.
- Technology → Containers → Docker.

AWS ECS, EKS etc.

We can lauch OS in just 1 second.



→ pem - for openSSH

→ ppk - for putty

- pem Key
  ↓ (convert)
- ppk Key
  ↓

we need a software puttygen.

- Sudo su --root (for root power)
- systemctl or service docker start
- chkconfig docker on. (to make service permanent)

▷ Connect to your OS and install Docker on it.

- Port Address Translation (PAT)
  -p

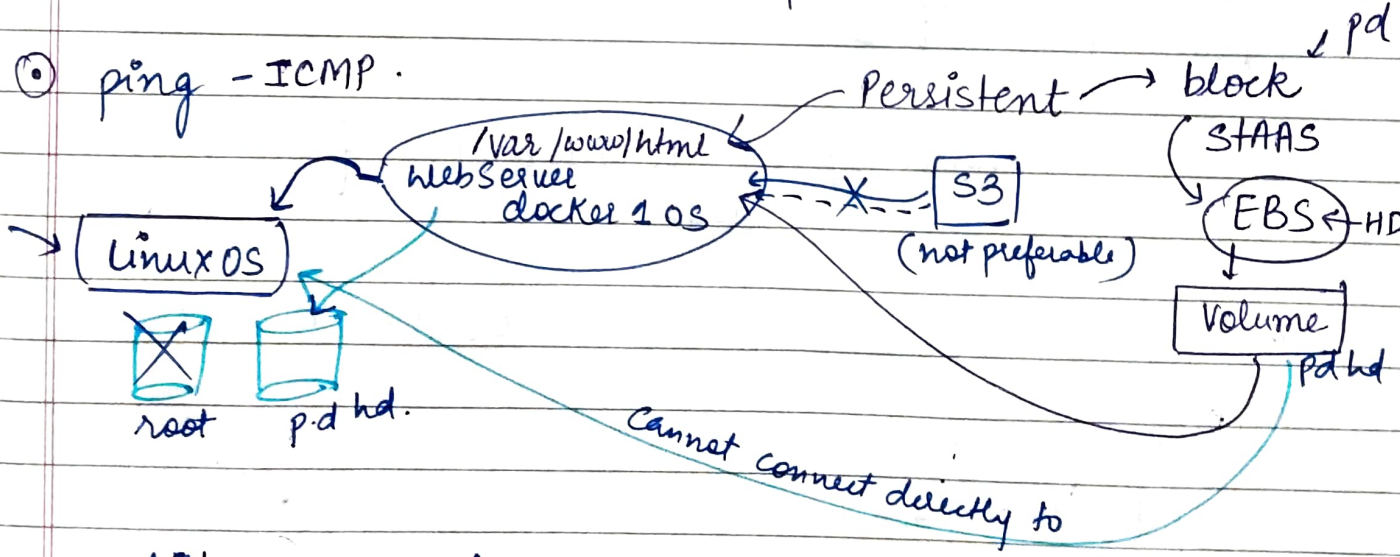
Outside world can connect to the Docker OS.

(port 81)

Can expose the container but you cannot connect to the container.
Unless you make changes in Inbound (of base OS) and allow the TCP and port 81.
(Custom TCP)

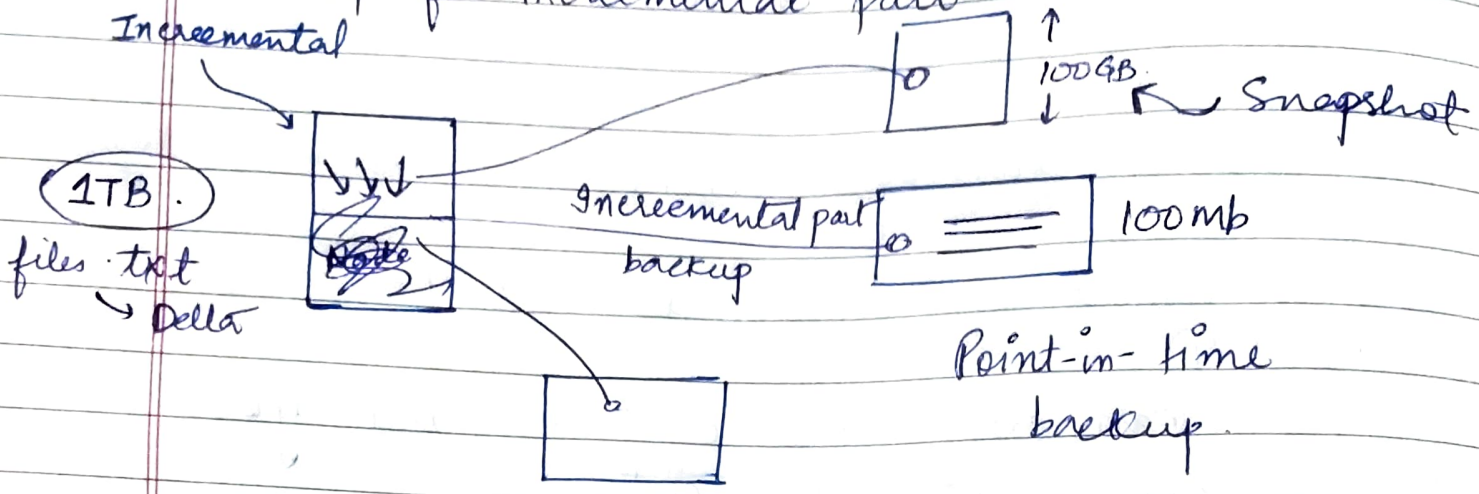
We can decide if we want our docker OS to be exposed to world or not therefore '-p' is provided to include exposure

⊙ ping - ICMP.

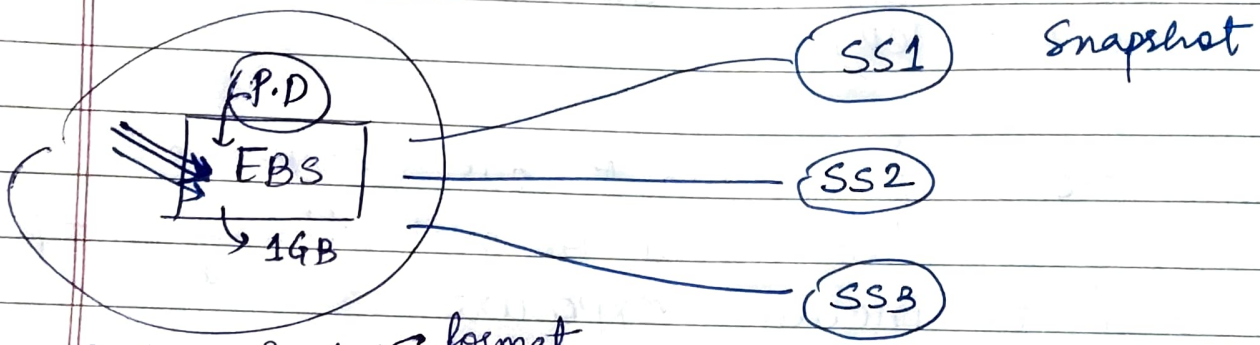


- partition comes from EBS.

→ Backup for increemental part



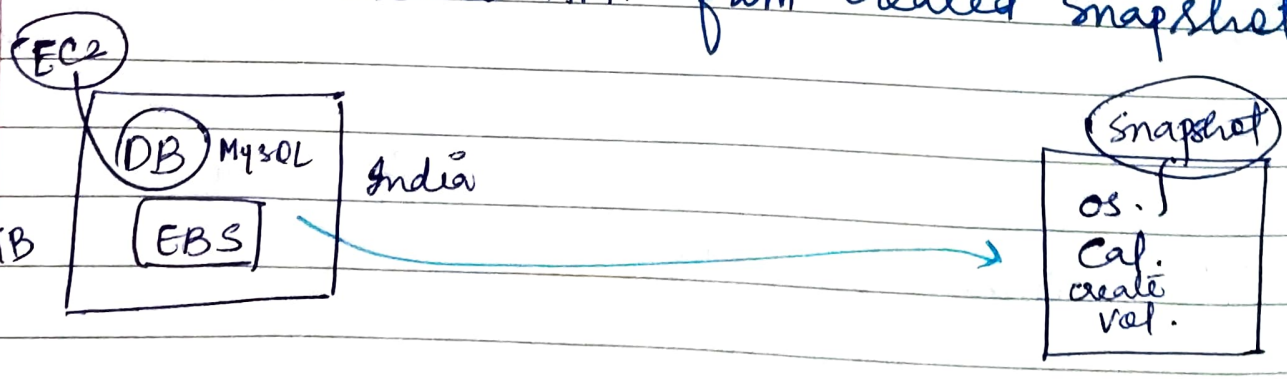
Whatever part you add / remove / modify is called Delta.



Data → Port ← format

You have option to get backup from any data

- You can create AMI from Created Snapshot.



Migration of EBS Volume by use of Snapshot: