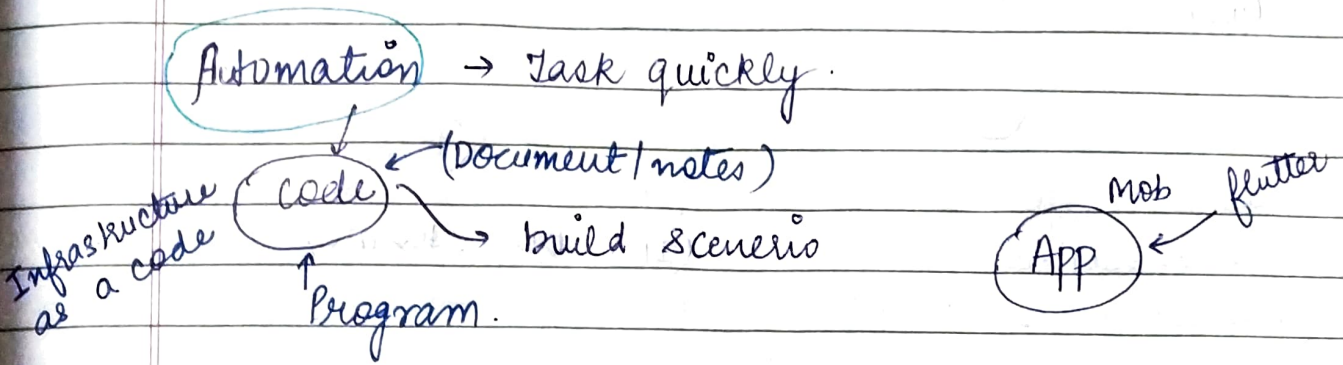


DAY - 9

◦ AWS Cloud Formation → Create service<sup>to</sup> builds Infrastructure through code

◦ Standardized tool - Terraform  
Terraform works on declarative language (HCL)  
Tool that works for all cloud.

◦ Openstack : write Infrastructure as a code  
Heat

→ Hybrid Multi<sup>o</sup> Cloud  
↳ IBM → Redhat  
↳ acquired → (Cloudforms)

Terraform.

Hybrid → (HCL code)  
Intelligent code  
↓

→ Desire  
↳ EC2 → OS

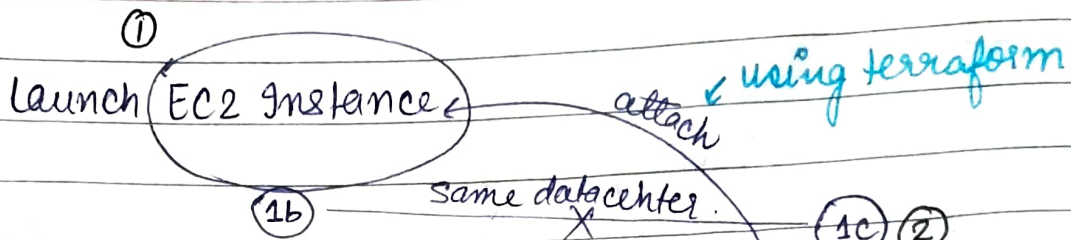
→ If the OS present don't run  
and if not present create  
OS

When to run/  
not run the code  
↓

Idempotent concept

Checks for  
the existence

P



Whenever you launch an EC2 instance

- mention your availability zone.

challenge

→ How I can create EBS in 1b?

same as Instance AZ

(without - hardcore)

Therefore, first we need AZ of Instance.

↓ how

→ after the command Terraform apply.

instance id is outputted

▷ [output function in terraform] - used to print.

"myout1" (give unique name)

Eg:- output {

value = aws-instance.myin2

}

unique name

⇒ prints all information about the Instance

▷ If only want to print AZ of an Instance

output "out2" {

value = aws-instance.myin2.availability-zone

}

▷ output "myoutip" {  
    value = aws\_instance.myin2.public\_ip.  
}

→ resource "aws\_ebs\_volume" "esb2" {  
    availability\_zone = aws\_instance.myin2.availability\_zone

Example :- [variable creation]

→ variable "x" {  
    type = string  
    default = "linuxworld"      by default datatype → "string"

}

output {

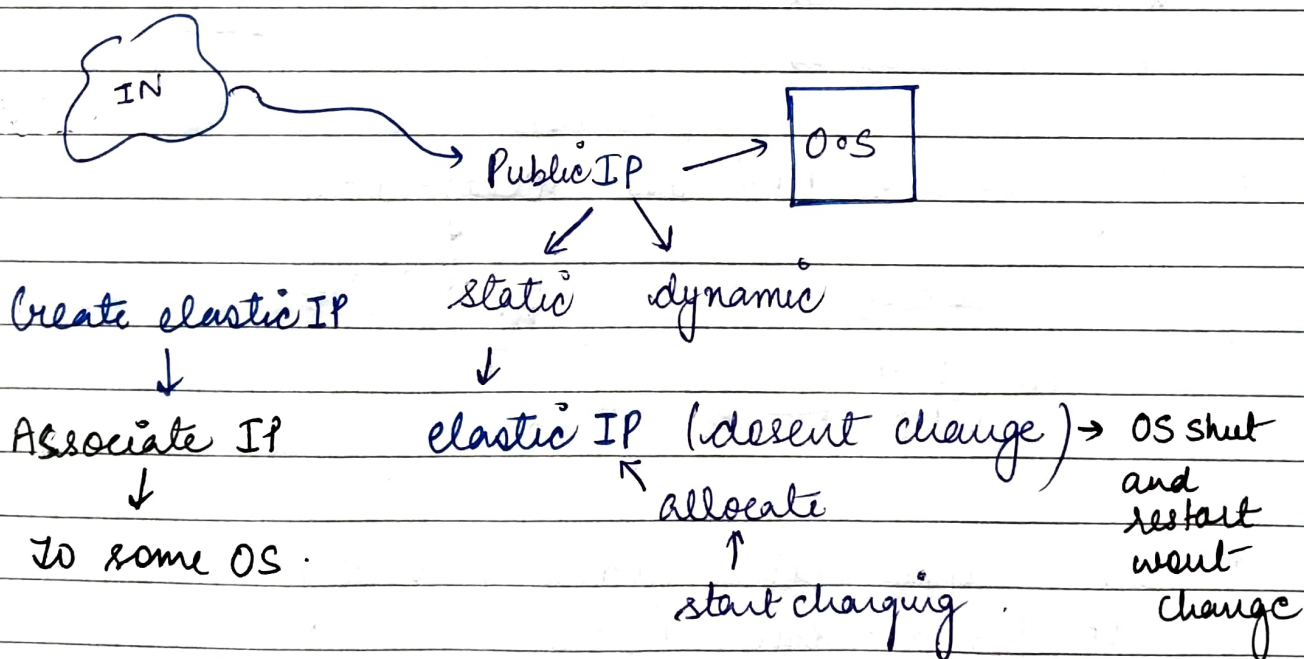
    value = "\${var.x}"      or      var.x

    }

    Adv.

both syntax support

→ terraform apply (command)  
    ↑  
    space



• elastic IP → detach from one OS → attach to another OS (possible)



## ▷ AWS billing dashboard

### Creating a budget in AWS

select budget type - enter name  
- amount

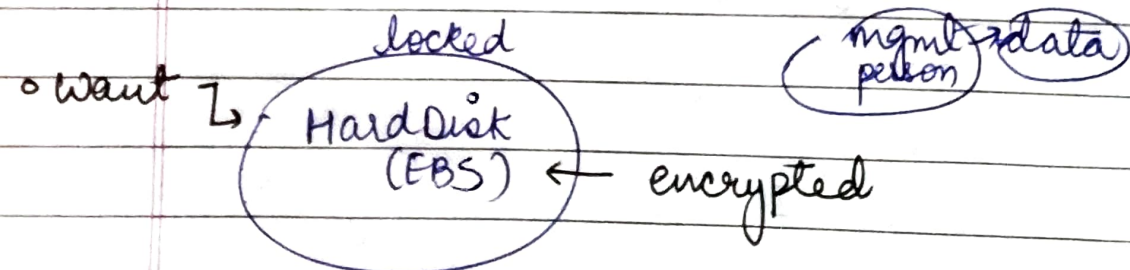
completed budget upto suppose 80%.

sends notification (SNS) /  
email

⇒ as soon as threshold limit reaches  
(80% of budget)

## Q If you store any data in HDD (EBS)?

- where is data → AWS EBS. ↓  
storage
- management → do they have  
(person) Capability to access HDD?
- Any data in HDD it's clear-data



- Before you store data, encrypt the hard-disk (EBS)
- People should not know even about the encryption

## • Data in - rest encryption :-

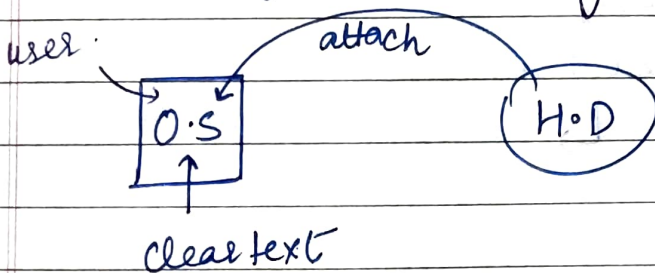
- tool → looks [encryption-tool]
- hard-disk encryption tool
- before storing data, locked encrypts) the EBS / hard-disk.
- Key encryption
- ask AWS for the encryption

• (KMS) service - for Key management

Q How to encrypt your Hard-disk [EBS] ?

• While creation of EBS → ☒ Encryption

- default Key created by AWS but you can create your own Key



- encrypted disk (hard-disk) <sup>data</sup> when you attach to OS will be Clear-text

- but if you attach the H.D. to any other laptop it would remain encrypted.

