sible

Problem: We need to manage many devices problem like installing linux, docker version problem? How many system can manage for that he need a tool. to mangal multiple system, configure multiple system and automate everything that is when ansible come in.

Ansible is a configuration managment tool, if you want to update docker (or) install nginx in 100 systems you don't do it on by one you do it all at once and manage its configuration that is where ansible come in

=> Ansible will give you the feature of managing multiple environments like dev, production, testing.

=> Ansible will give you the featur of managing multiple cloud environat as well

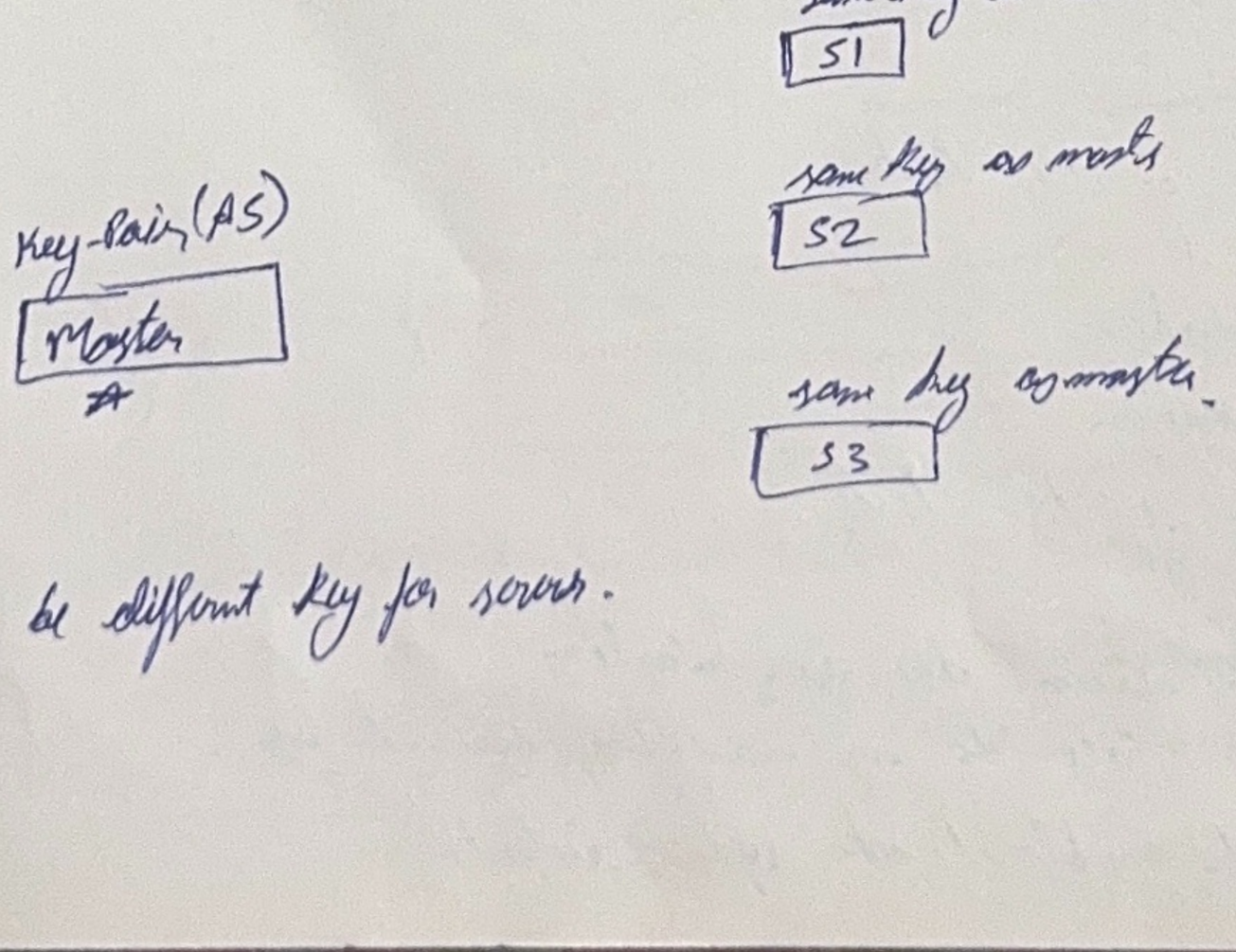
=> Ansible is an open source tool which allows you to do infrastruc as code & configuration managment.

=> If we want to make a resource in AWS ex terraform, if ya want to manag the resources in the AWS then use ansible

=> How can the system be updated?

- Using Pull based & Push based
- they uses Pull based mechanism to update the system that means it will request the information and then update the system
- Ansible use push based mechanism to update the system that means it will be installed in one device and then send updates to all the device

=> Ansible will be installed on one device and then push the upate to all the other servers it only needs to be installed on one device, that is called master. all the other device will be connected through SSH



=> It can be different key for servers.

① => Install ansible on the master.

② => Update the host file located at etc/ansible/hosts
this host file is used to update all the connected servers.

③ => Create 2 groups, How?, if you add it in [ ] in the host file
1st group
[dev servers]
server1
server2

2nd group
[prod_servers]
server3 ansible_host = 18.204.43.91
↳ servers name ↳ to hold the ip address of the server we are using the ansible variable called ansible_host

④ transfer the .pem file from local to the master server, How? :- using scp command same as SSH, but instead of SSH we SCP

⑤ In the host file you will have to mention where the .pem file is located, How?
↳ Using a variable, who's name is ansible_ssh_private_key_file
so, in host file add
[all:vars]
ansible_ssh_private_key_file = (location of the file where it is)
↳ using all will add it to all the groups in the hosts file
If you would like it for one group instead of all we need to add (devservers) -> group name.

⑥ to update all the servers in the group run this ad-hoc command.
-m => flag for module command
⑦ ansible dev_servers -a "sudo apt-get update"
↳ group name ↳ flag for ad-hoc command

Ansible Playbook (Ansible yml)

name: Install nginx & serve static website → name of the playbook
hosts: prod → which group do you want this to happen
become: yes → Root access yes

tasks:
- name: install-nginx → name of the task
  apt:
    name: nginx → install what
    state: latest → which version
- name: start-nginx → name of the task
  service:
    name: nginx → which service are you starting
    state: started → what state do you want the service to be
    enabled: yes → want to enable it when system restarts