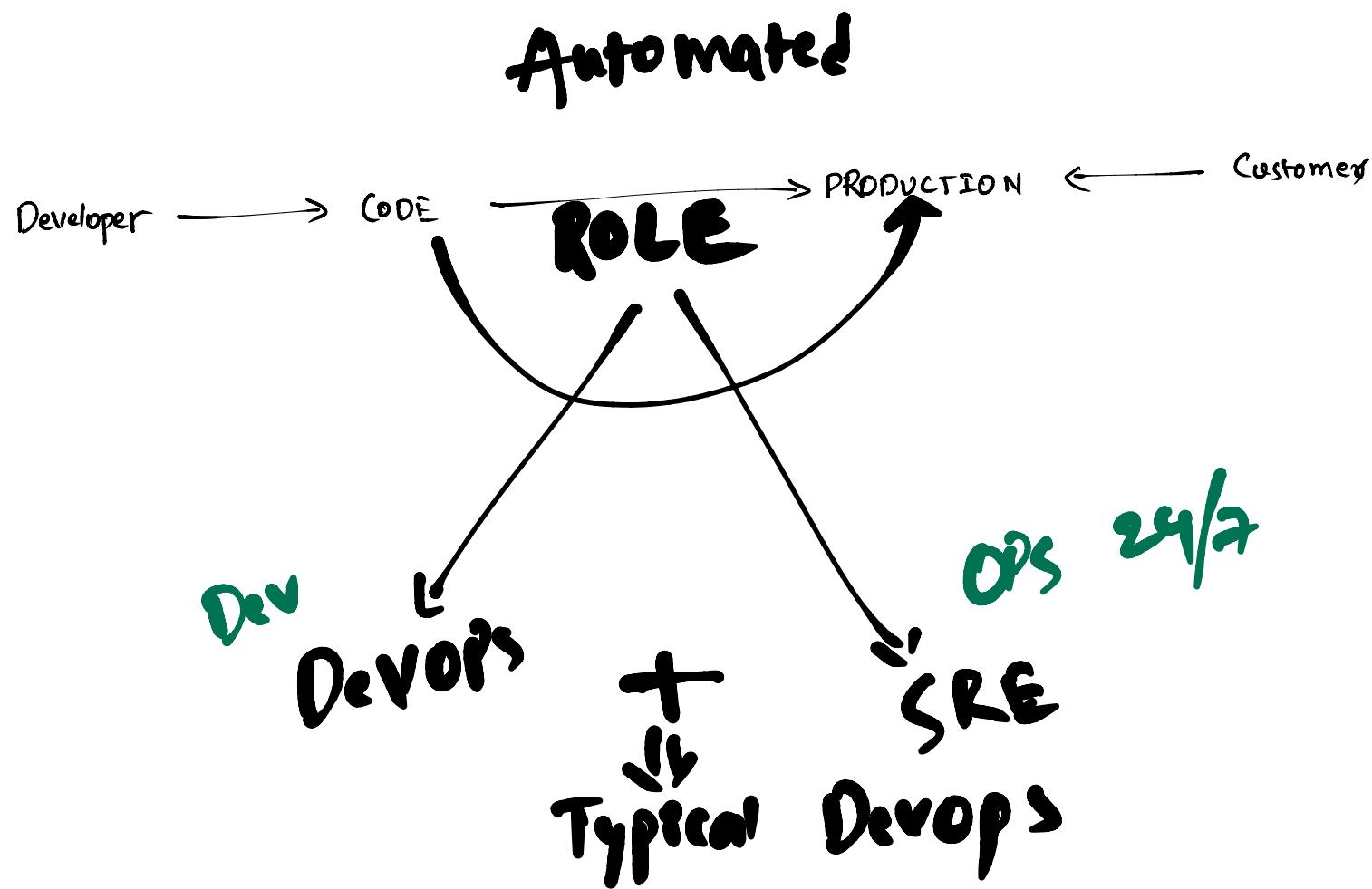
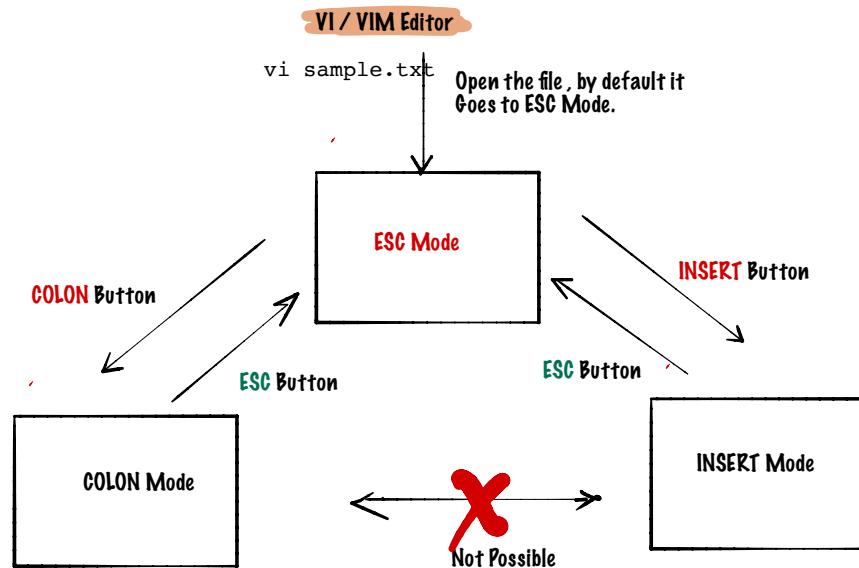
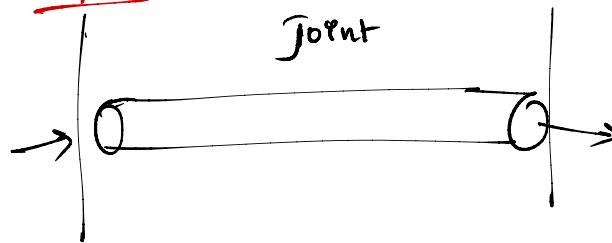


ROLE OF A DEVOPS ENGINEER





Pipes



rwx	-7
rw-	6
r-x	5
r--	4
-wx	3
-w-	2
--x	1
---	0

u g o
r - 4
w - 2
x - 1
Chmod 750 Sample.txt
rwx r-x---

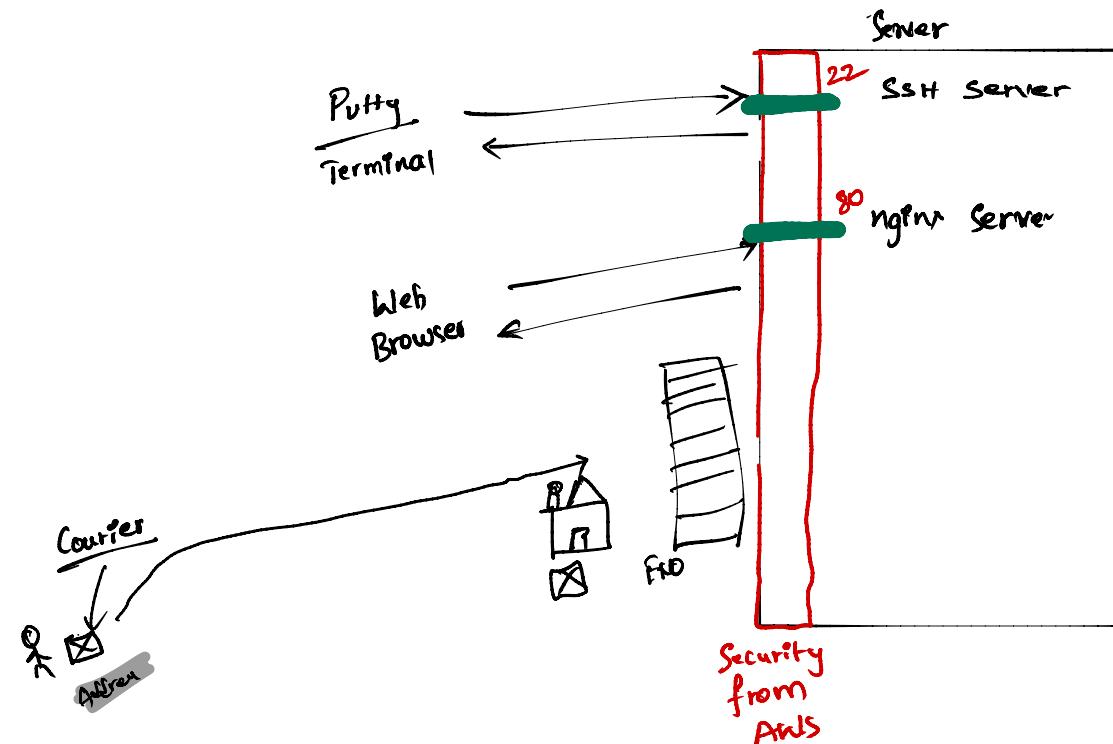
Command 1 → → Input → Command 2
Output

Com1 → Com2

cat /etc/passwd | grep root | awk '{print \$1}'

Check All ports listening on server : netstat -lntp

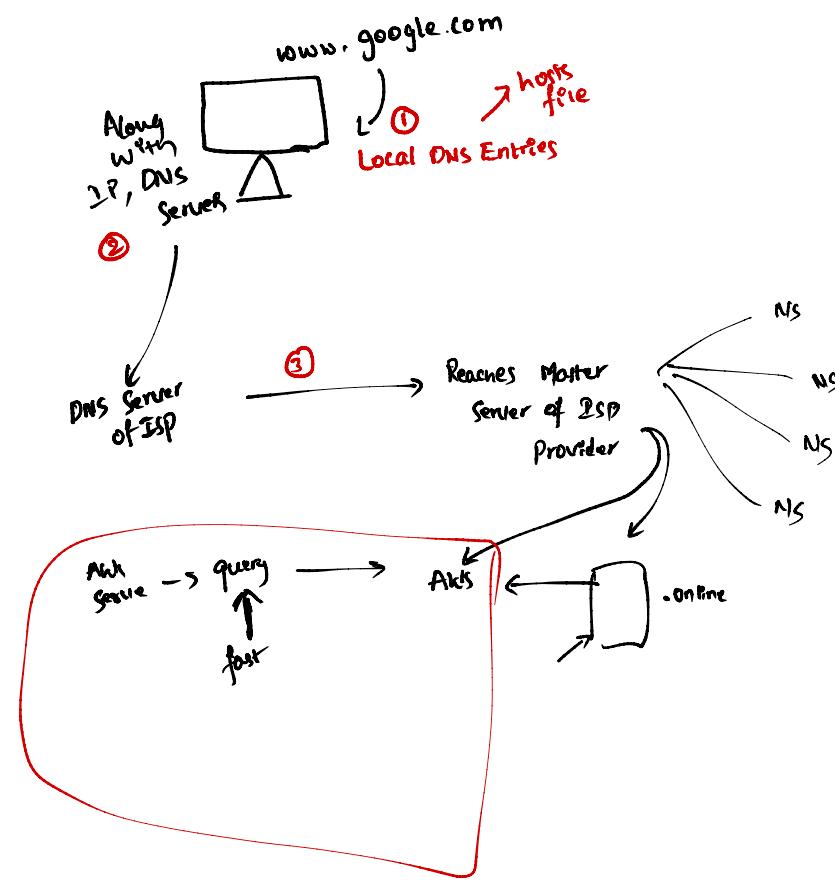
0-65535



Nginx

Front End Content

- HTML 5
- Angular JS
- React JS
- PHP



DNAME RECORDS

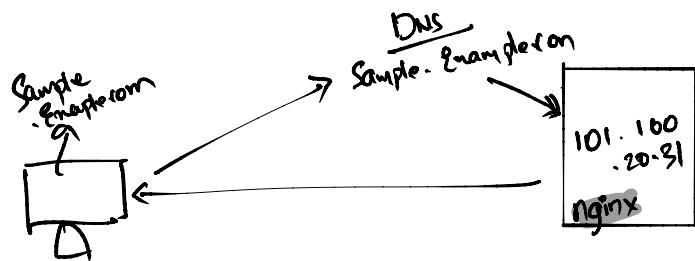
A - Address

CNAME - Canonical Name.

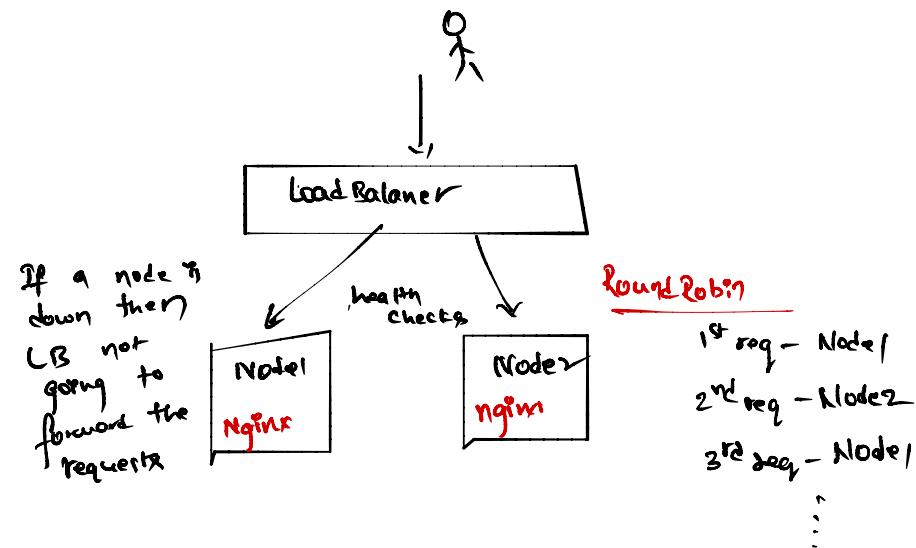
A → Converts Name to IP

CNAME → Converts Name to Name

Virtual Hosting in Webserver



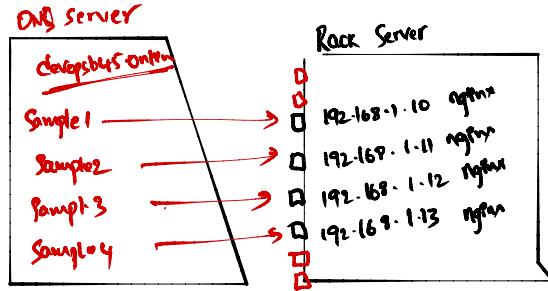
Load Balancer



RoundRobin

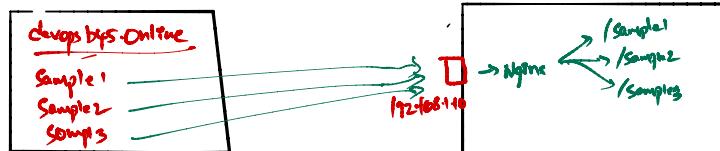
1st req - Node1
2nd req - Node2
3rd req - Node1
⋮

IP Based Virtual Hosting



Name Based Virtual Hosting

Explore **OSI Layers**

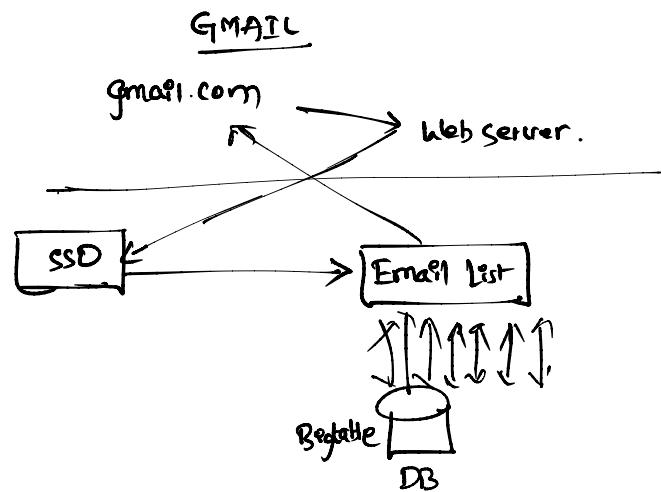


3-Tier Apps

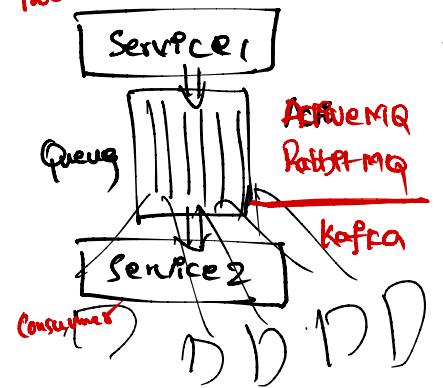
→ Frontend - Static

→ Backend - Dynamic - Middleware

→ Databases

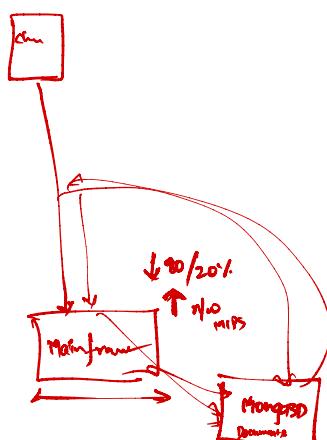
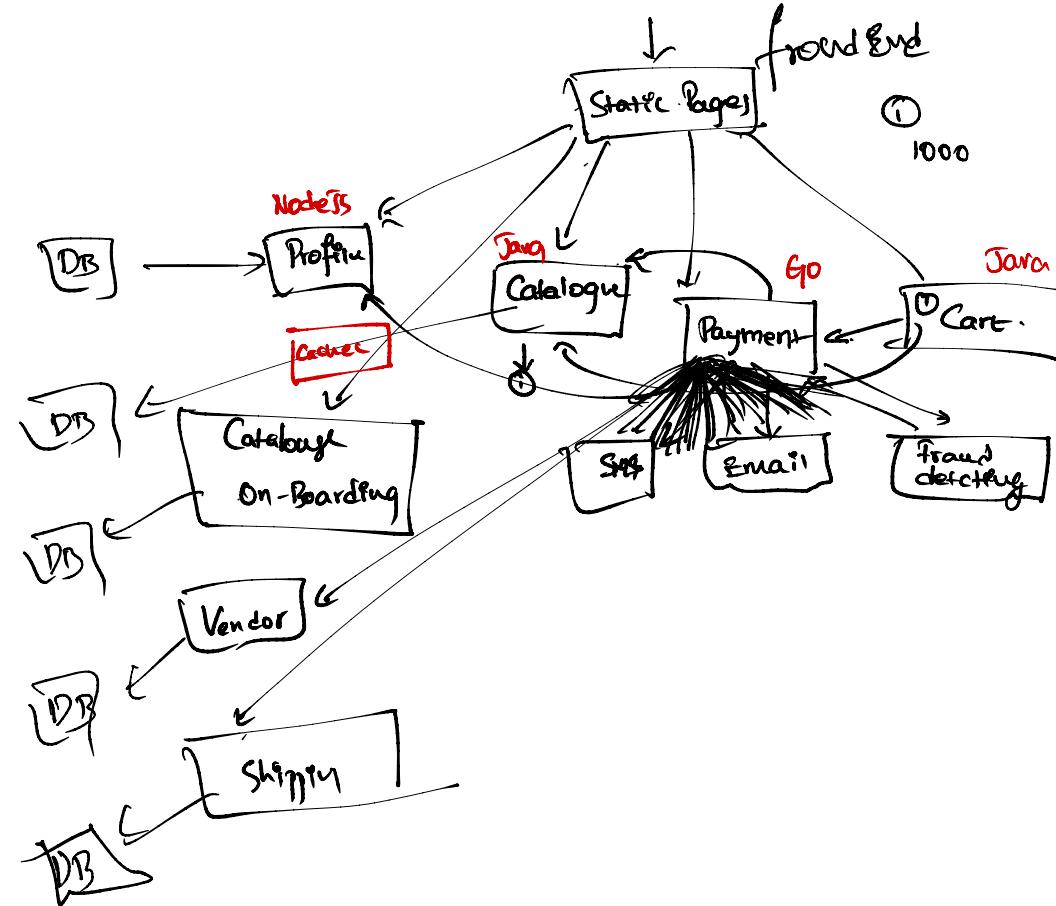


Producer



S1 → S2
AMQP
10,000 / s
1000 / s

E-COMMERCE



↓ 20/20%

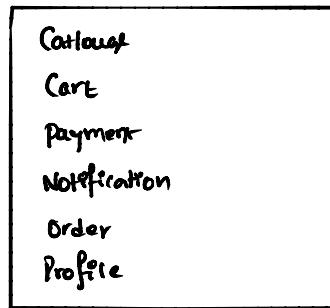
↑ 1/10 MB/s

Backend Applications

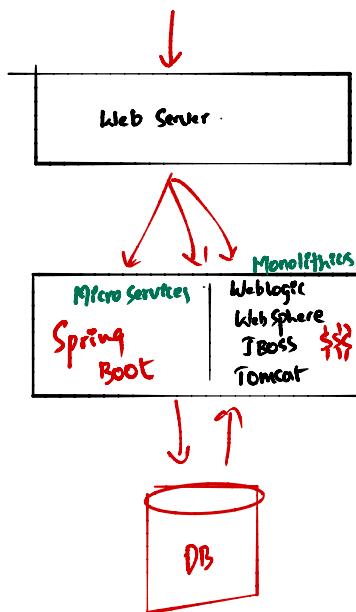
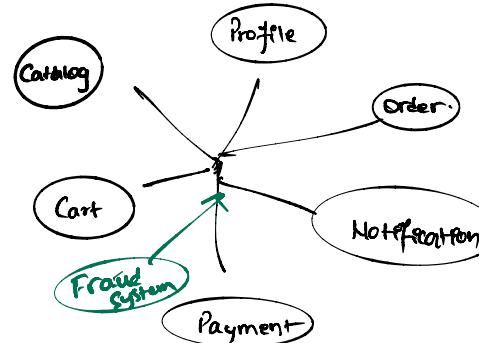
JAVA, NodeJS, GO, .NET
PYTHON, RUBY, RUST

One type of Programming Language is used

✓ → Monolithic Application
✗ → Microservice Applications



1. Availability of application is high.
2. Allows you to use polyglot programming.

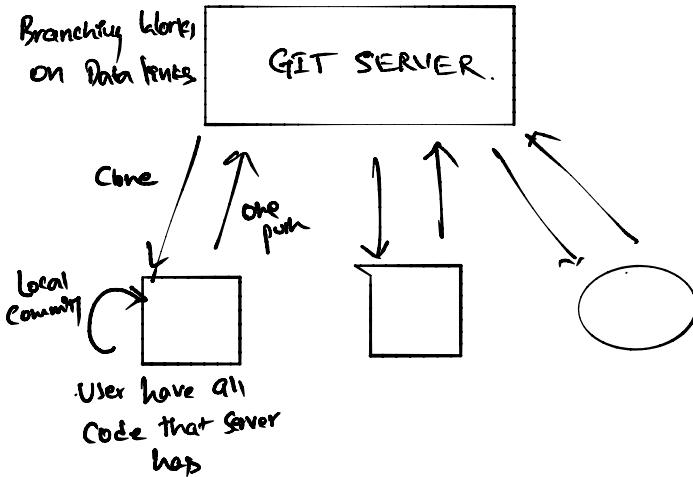
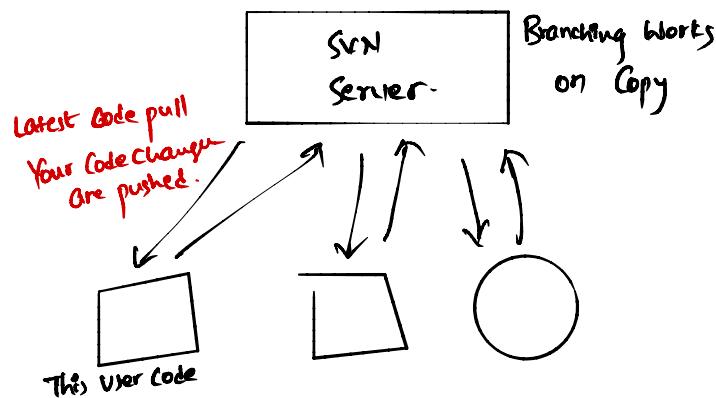


SCM

Source Code Management.

SVN

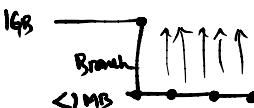
Subscription



Branching



Admin can create branches, means who ever have server access to SVN they do create a branch

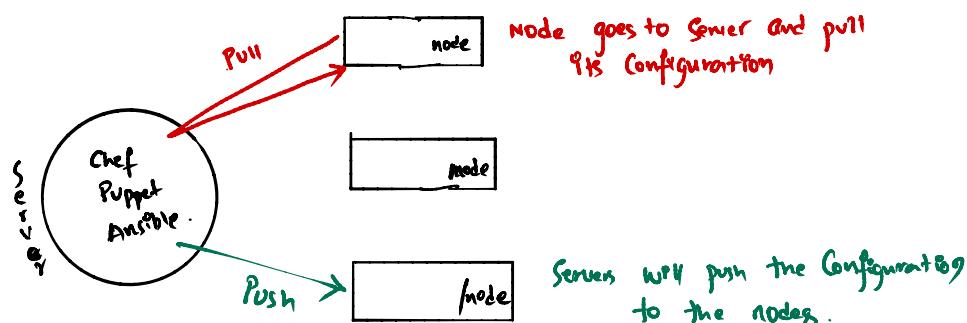


A user also can create his own branches.

1. Git repos should be created. Which is Centralized.
2. You clone the repository
3. Edit the code locally.
4. You need to stage the file (Only available in GIT)
5. Commit the changes locally
6. Push the changes to GIT server, Central one

PUSH

PULL



PULL

Node comes to center then it is better in terms of maintaining the configuration of node.

DESIRED CONFIGURATION is maintained well.

Chef & puppet also have PUSH

PUSH

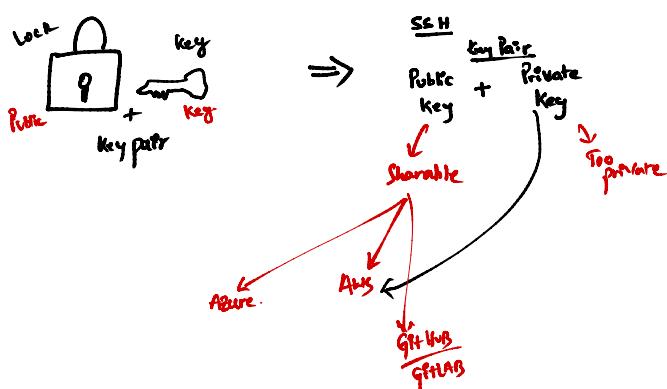
- From one place you push the desired configuration to the node.
- Also no need of separate agent software.

Ansible also have PULL Mechanism
Even in a better way by not maintaining any extra agent service.

- System default service : CRON
- No server machine is needed, All the Configuration can be kept under GIT Repos.

GITOPS

Keys



SSH over Linux

Desktop → Private Key
 Server → Public Key

User-Home /ssh/authorized-keys
 /root
 /home/centos
 /home/raju

SSH on AWS

Desktop → Private Key
 AWS → Public Key

(white Server Creates)
 AWS keep this file
 under authorized-keys

```
→ /tmp ssh-keygen -F devops
Generating public/private rsa key pair.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in devops.
Your public key has been saved in devops.pub.
The key fingerprint is:
SHA256:4V0YEr01zjaWxFeANJxxok7K3XRwDli7pC/NI8GH3pc sriharshak@INSrihashaksMBP.Dlink
The key's randomart image is:
+---[RSA 2048]---+
+X@=+
+B%+
+ . .
. X @ =
o S *
+ O .
+ * E
o o
+---[SHA256]---+
→ /tmp mv devops devops.pem
→ /tmp
```