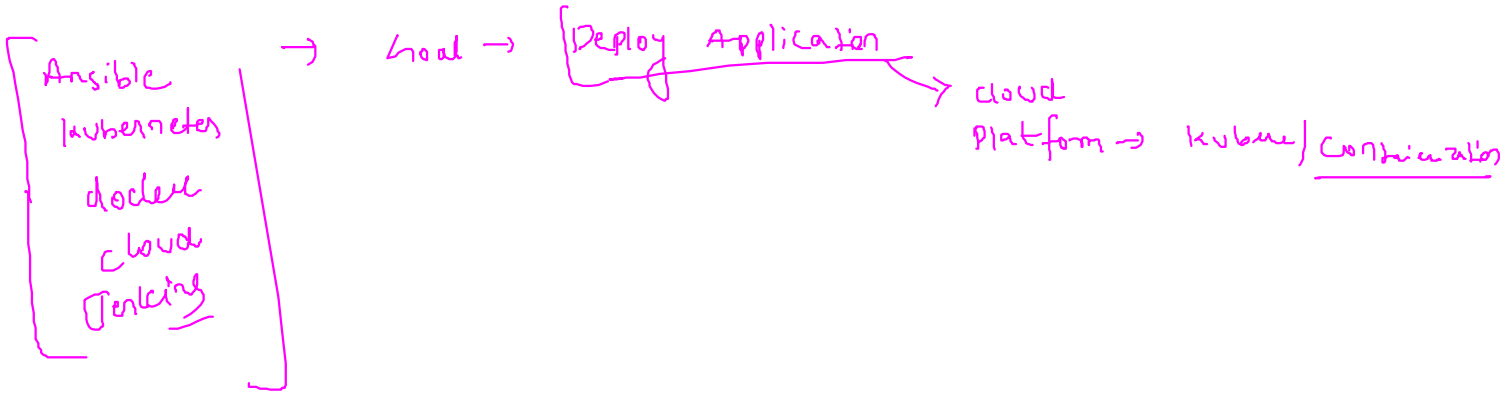
Training Name : DevSecOps
Training Duration : 4hours / Day --- 13 Days
17th June to 3rd July 2024

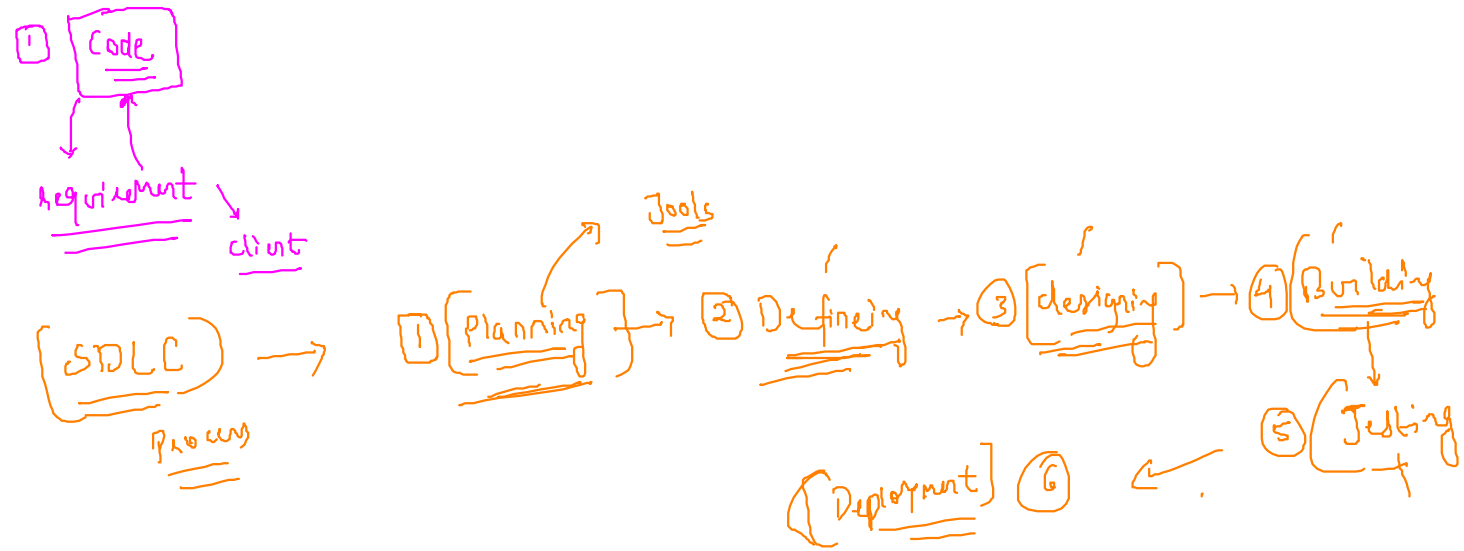
1. Theory 25% -- Practical 75%
2. Interactive
3. Labs --
   AWS Cloud -- Credentials --

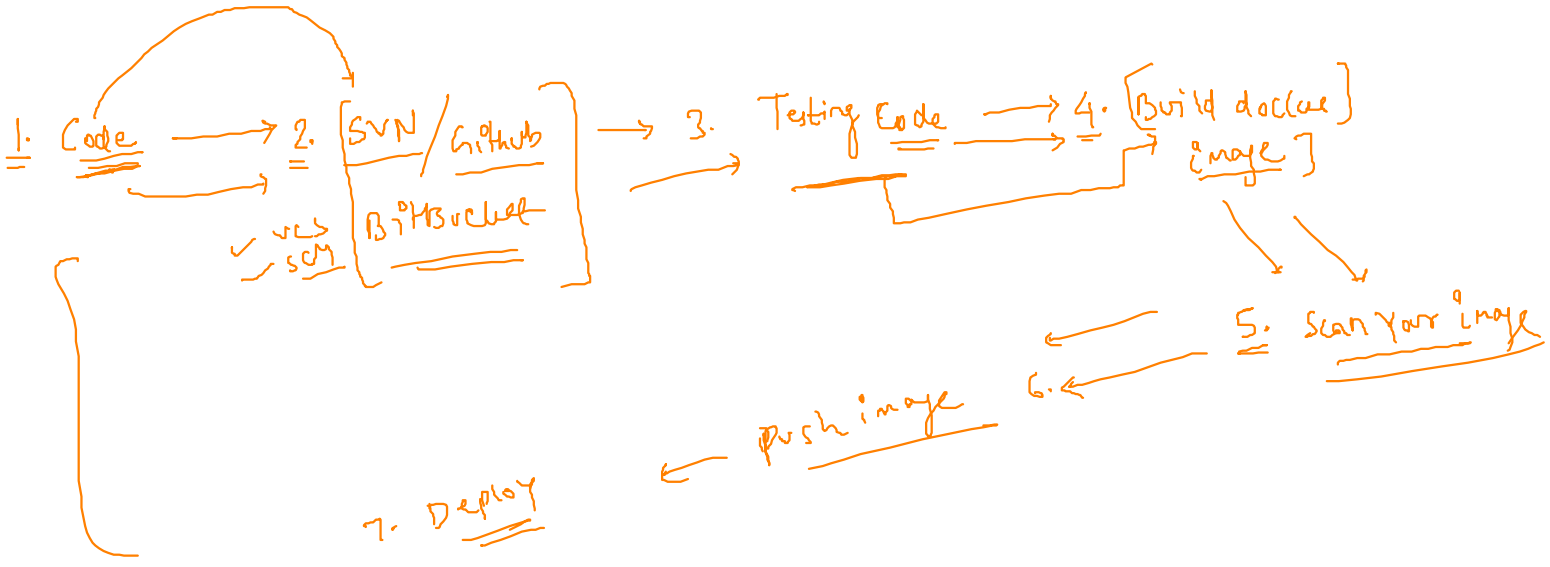
4. Notes :-

   a. Create your Own Notes
   b. Google Drive -- One the daily basis i wil upload files



1





Devops → practice → follow

thing

Automated fashion

1. Code -- Manual
2. Push Our Code -- SVN/Github/Bitbucket/GitLab/CodeCommmit
3. Testing The COde --- Selenium , sonarqube etc.
4. Building Container Image --- Docker , podman, buildash, crio ,containerd
5. Scan The Container Image -- Checkmarx , Docker scan , Triyy
6. Pushing Image -- Command
7.. Platform to Deploy app --- ALl CSP , Kubernets , openshift , Apache Mesos

→ application → Autom

security

CI/CD

1. Jenkins
2. BAMBOO
3. All CSP
4. circleci

Automated fashion → CI/CD

continous integration
Contineous delevery + deployment

CI/CD → Devops practice

Devsecops → X

Devsecops

OS

N/W

Devops → process / terminology

CAMS → General

Repo → insurance

fixed

environment

CAMS → Devops → Culture Automation Measurement Sharing

General

Organisation

multiple tools

set fixed

Login → Manual

Automate

Analyzing data
Key Metrics

Speed

Reliable

Availbility

Scalibility

Automation

cost effective

cloud

infra → Terraform

confi mgmt → Ansible | Chef | Puppet

Conf.

Chef

ceph

Storage

chef

datacenter → workit?

→ cloud → GC, Aws, Azure

secure sdlc

Security

Security

SDLC

ubuntu Red
fed.

DevSecOps

root

Windows

Linux

MacOS

OS

opensource

Secure

Infra

Test the code → 1

2) scan image → 2

3 Basic req.

1 Design

Privacy is a myth myth.

security

OS ← Networks Security → Port/Internet
Authentication → u/s | p/n
Authorization →

Threat Modeling

Testing Code → SAST → sonarqube

Static Application Security testing

Testing Image → Trivy. → DAST

Dynamic application Security Testing

Application Security → https → 443

http → 80

1) https

2)

Jenkins → 8080

Then

devsecops Maturity Model

4 stages

Beginner — intermediate → Advanced — Expert

SDLC

Observability — Alerts

Logging → Logs

ELK
EFK
full stack of Logs

Monitoring → Grafana
Datadog
dyn

SRE → SLO, SLA

AWS

CI / CD

→ Automat CI / CD

AWS → Practice

credential → admin? X

IAM → Identity Access Management

② ① Authentication
② Authorization

cloud computing

fullyend

desktop
laptop → RunApp = X

Organisation →

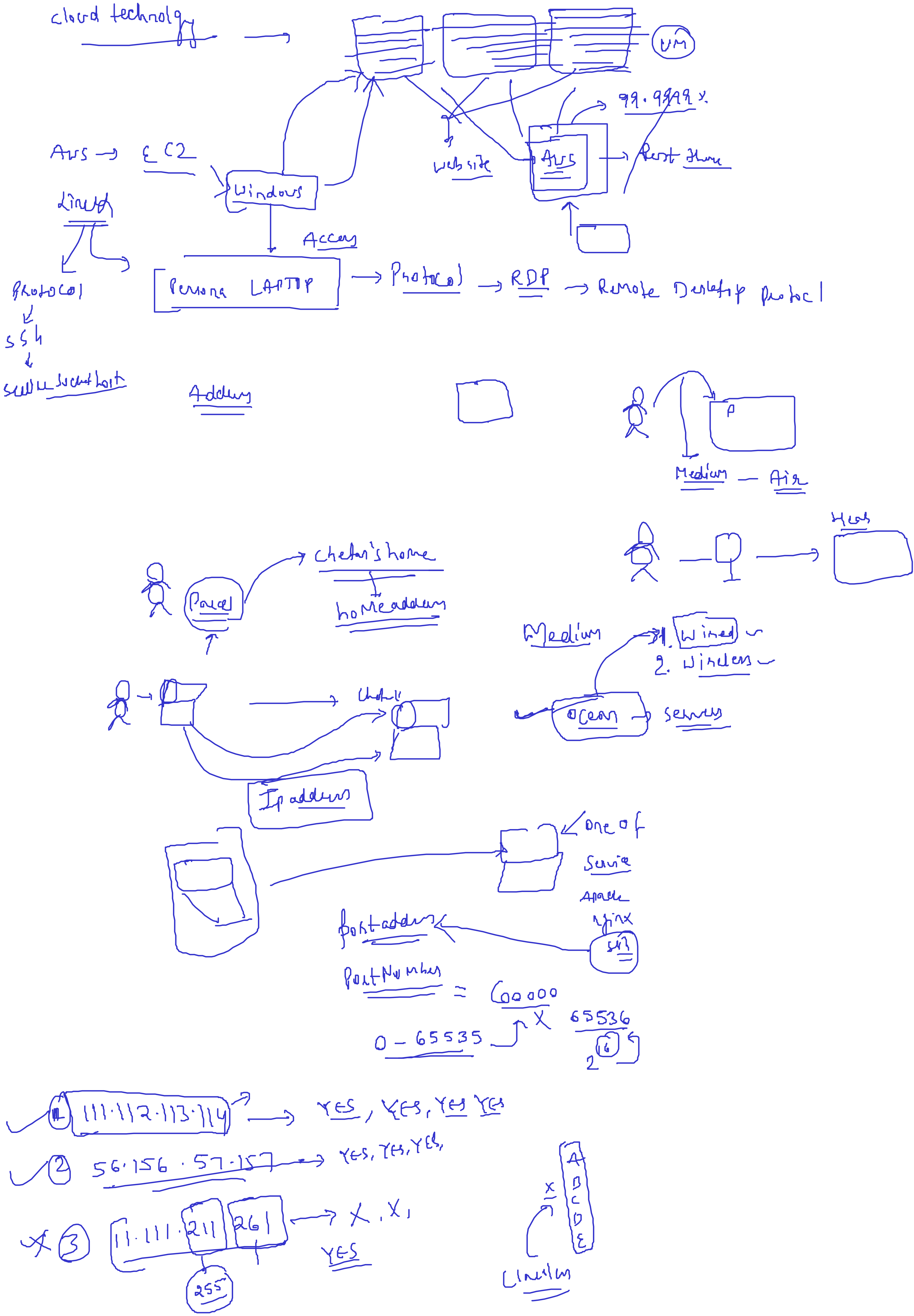
IT Network
Internet

ServerCost

← Cooling
→ Payment

10 lakhs + employee Cost
AC Bill
② Internet
Rent

Meme


cloud technology
VM
99.9999%
AWS → EC2
Windows
website
AWS
Rent them
Linux
Access
Personal LAPTOP → Protocol → RDP → Remote Desktop protocol
Protocol
ssh
secure shell host
Address
Medium — Air
Chetan's home
home address
Parcel
Medium
1. wired
2. wireless
Ocean → servers
IP address
one of service
Apache
nginx
port address
Port Number = 600000
0 – 65535
65536
2^16
111·112·113·114 → YES, YES, YES YES
56·156·57·157 → YES, YES, YES,
11·111·211·261 → X, X,
YES
255
A
B
C
D
E
X
Linux

0 – 0 – 255
256
255 → ✗

11.112.113.114 → Private/Public
Private

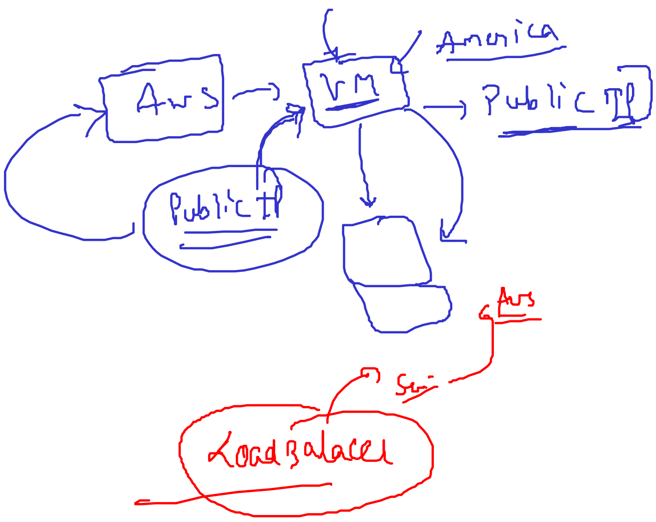
✓ 11.112.113.114

✓ 57.75.157.175 → Priv
Publi

Private IP's → 1. 10.x.x.x
2. 172.16.x.x To 172.31.x.x
3. 192.168.x.x

172.32.1.

172.7.1.1
172.27.5.5
172.31.1.1



Multiple Services

IAAS → Infrastructure as a Se (VM, Storage, Networking)

PAAS → platform as a service

SAAS → Software As a Serv

Infra → EC2 → Elastic compute cloud

AWS → login

→ Console → dashboard

→ CLI → AWS → login

EC2 → VM, storage, network, Hardware, sof → OS

[Resource → CPU, memory]

EC2 → creating instance ← Second Name of VM - Virtual Machine -- Node -- AWS instance

VPC

1. NAME
2. which OS → AMI → Amazon Machine Image
3. RAM, CPU ↑ instance type
4. N/W
5. storage → S3 → Simple Storage Service
   → EBS → Elastic Block Storage

Bastion host

Authentication → [user / password] → Not Secure → Brute force → file → mining

Authentication → user + key Authentication

SG → inbound, outbound

Public IP

Service → Public IP

VM

Windows, Linux → 1 → IP, 2 → OS, 3 → Password / Key

IPV4

2^{32} → 4 billion

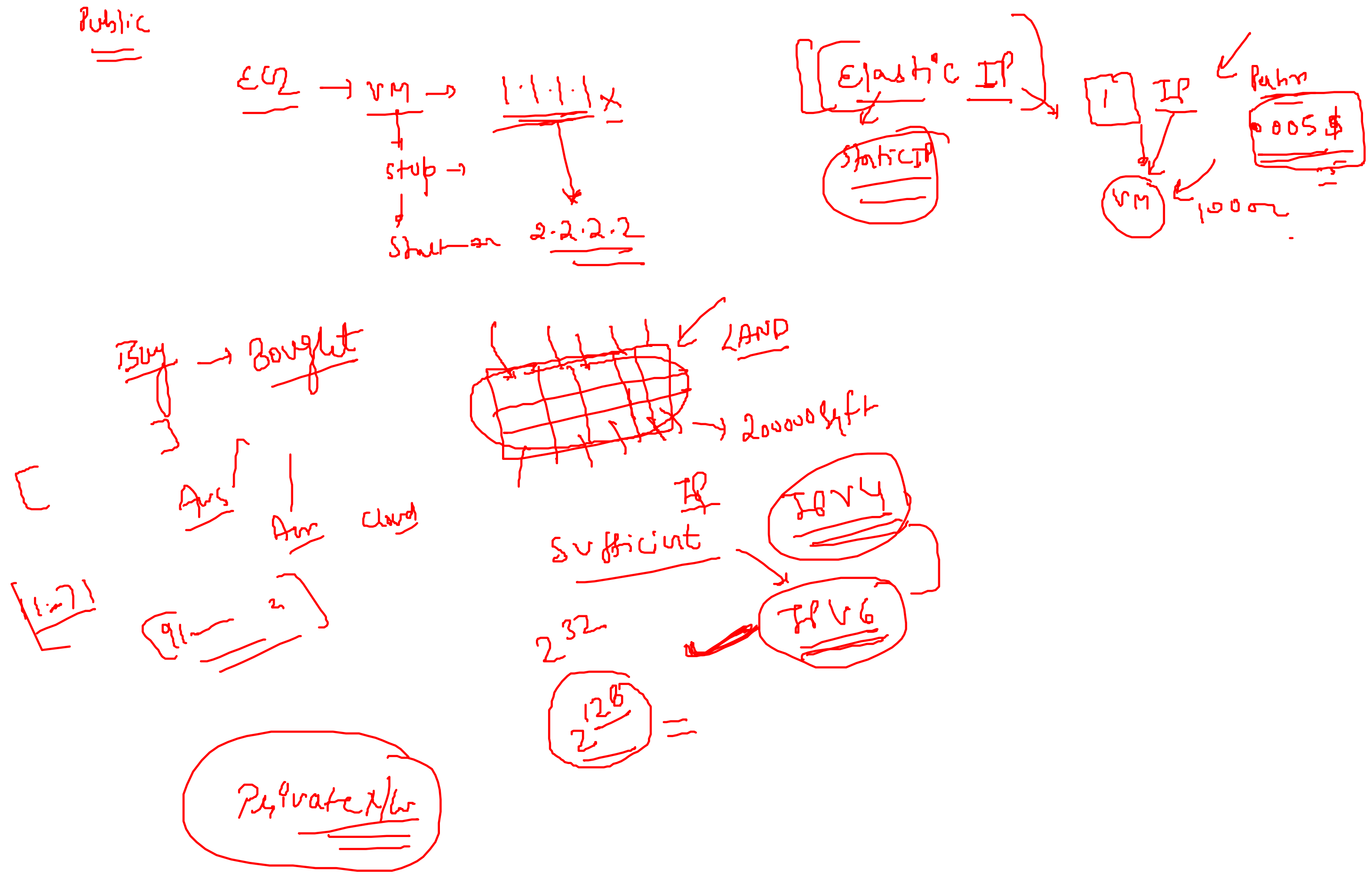
2

$2^8 = 256$

256×256

2^8 2^8 2^8 2^8

65536



Public
EC2
VM
1.1.1.1
X
stop
Start
2.2.2.2
Elastic IP
Static IP
1
IP
VM
0.005$
Buy
Bought
Aws
Aws
Cloud
LAND
200000 sqft
IP
sufficient
IPV4
IPV6
2^32
2^128
Private N/w