NAT (Network Address Translation)

private IP Range:

Class	Activity type
A	10.0.0.0 — 10.255.255.255
B	172.16.0.0 — 172.31.255.255
C	192.168.0.0 — 192.168.255.255

* private ip to real ip conversion ⟹ NAT

* Border router এই change করবে তাই এটাকে NAT router বলা।

* Best case : No translation

* Worst case : Src. & Dest. both translation
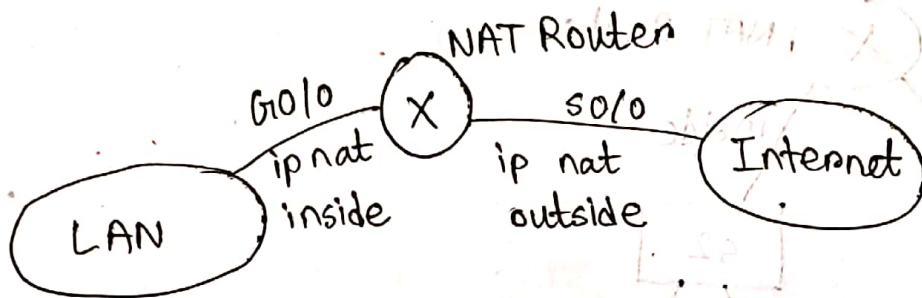
Types of NAT:

① Static NAT (fixed one to one mapping)

② Dynamic NAT

③ PAT (one to many mapping)

Configure Static NAT :

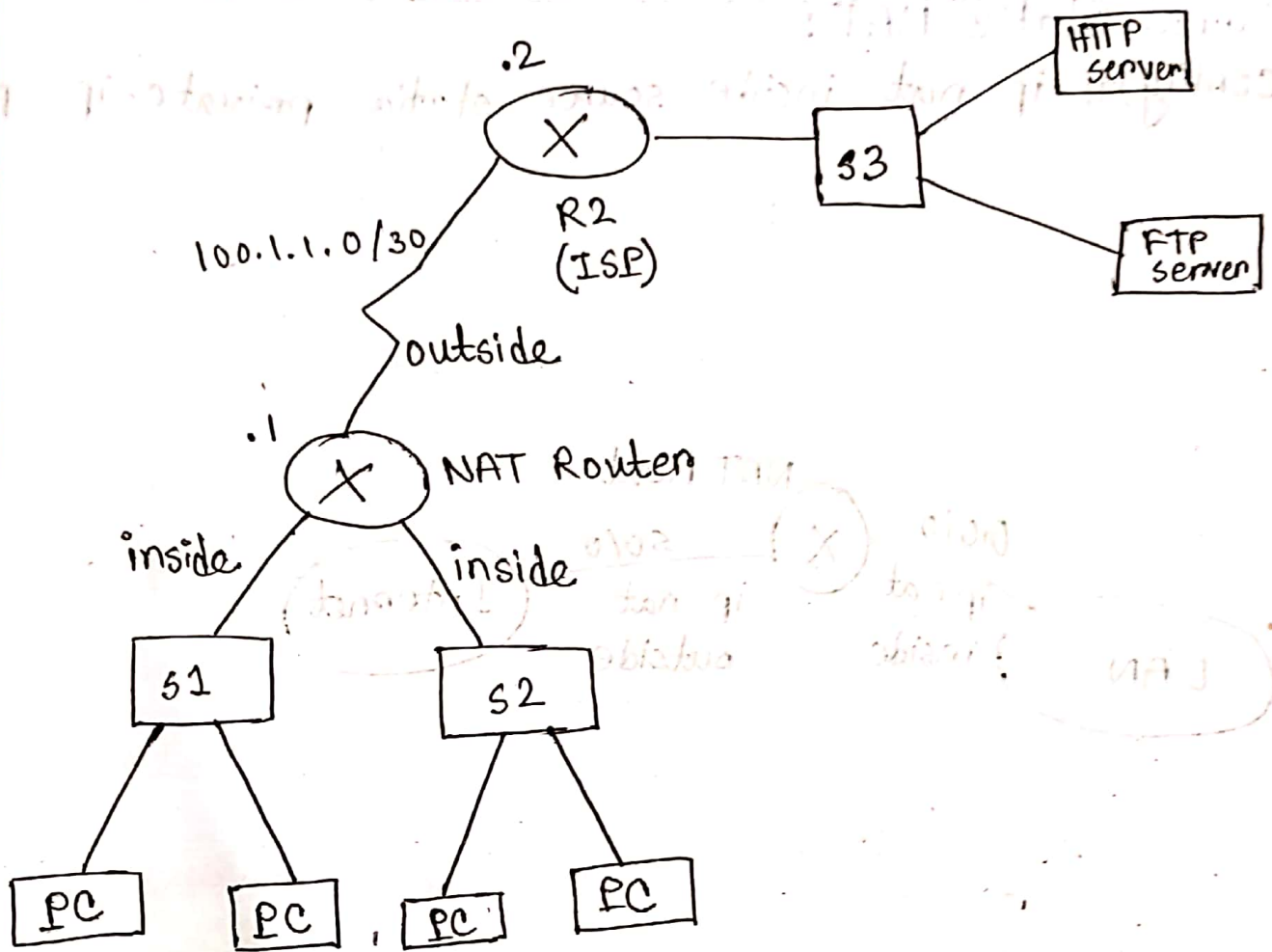R1 (config)# ip nat inside source static private-ip public-ip

100.1.1.0 /30
        └──→ 2 bit for host portion

subnet mask : 255. 255. 255. 252

*Serial link-এর কোন side clock থাকবে, অন্যদিক side-এ থাকবে না

  clock rate 64000

.2

X

R2
(ISP)

S3

HTTP
server

FTP
server

100.1.1.0/30

outside

.1

X

NAT Router

inside

inside

S1

S2

PC

PC

PC

PC

LAN (10)

192.168.10.0/24

LAN (20)

192.168.20.0/24

R1:

int g0/0
ip nat inside

int g0/1
ip nat inside

int s0/0/0
ip nat outside

Routing:

Distance Vector   Link Step

    RIP   OSPF

static ⇒ manually configuration

R1

ip route 0.0.0.0 0.0.0.0 s0/0/0 (এই packet অাসার উপর
s0/0/0 দিয়ে পাঠাবে)

R2

same command as R1 (নাহলে packet শুধু R1→R2 তে অাসবে
R2→R1 এ অাসবে না।)