

IPv4

ADDRESSING
SPACE



32

2 ~ 4 MIL AD,

1P

PUBLIC

PM VA 71

PC1



10.0.0.1



PC2



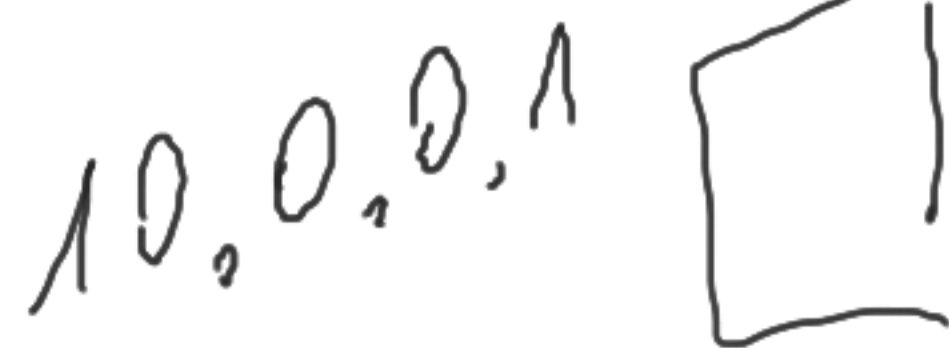
10.0.0.2

PC4



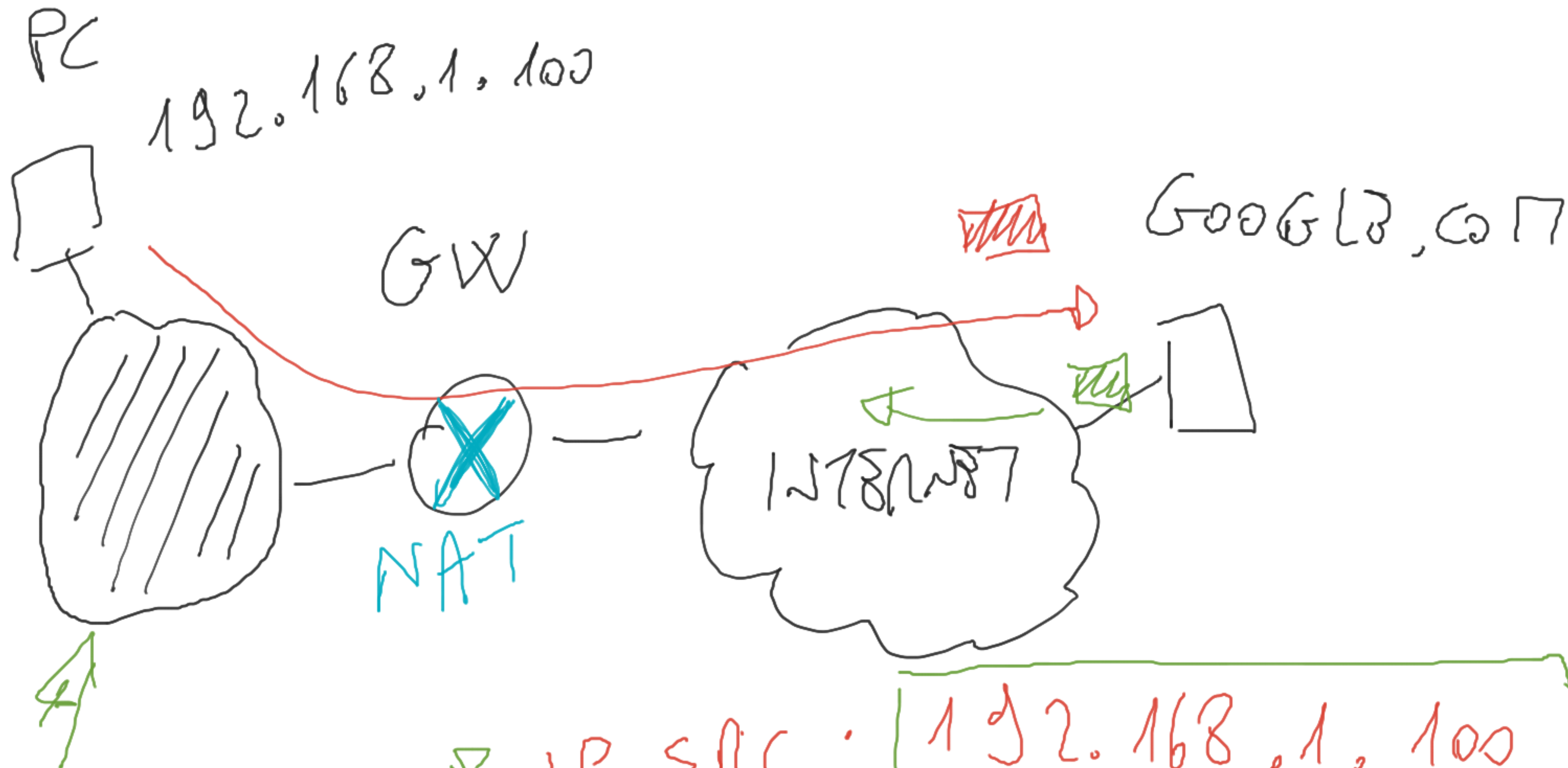
10.0.0.2

PC3



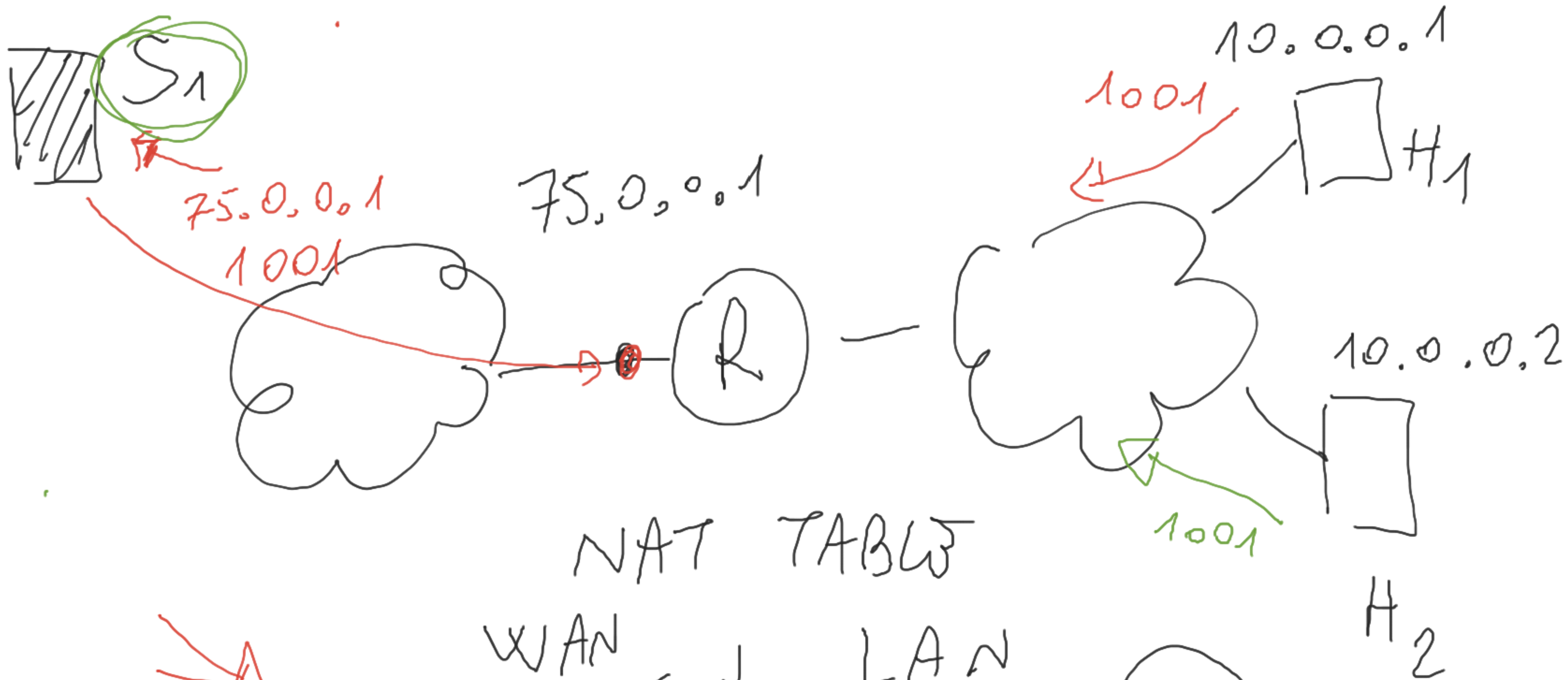
10.0.0.1





IP_SRC : 192.168.1.100

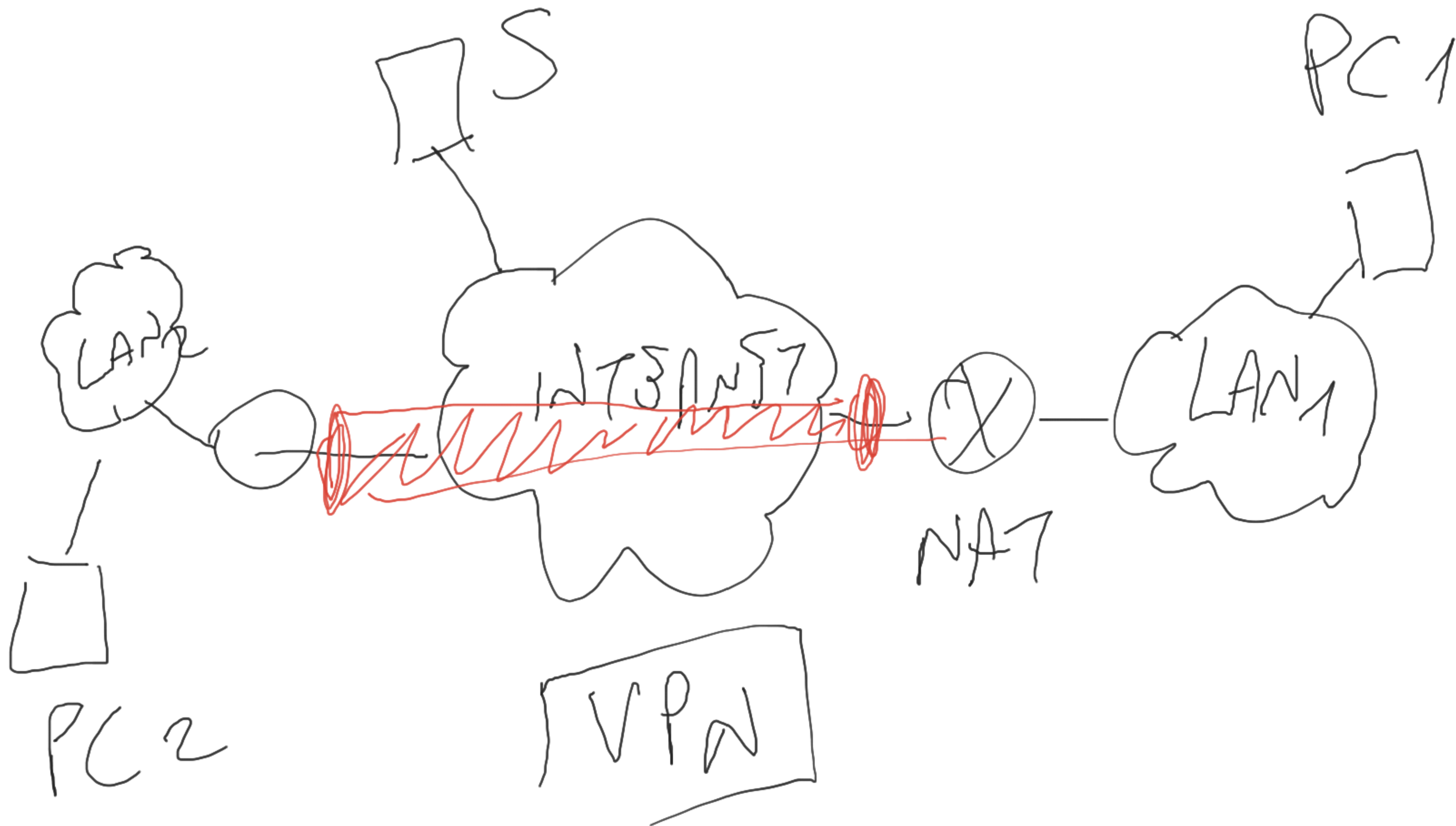
IP_DST : IP_Google



→

WAN	LAN
→ 75,0,0,1, 1001	10,0,0,1, 1001
→ 75,0,0,1, 1001	10,0,0,2, 1001

1250



⁷	⁶	⁵	⁴	³	²	¹	⁰
2	2	2	2	2	2	2	2
128	64	32	16	8	4	2	1
1	0	0	1	0	1	1	1

$$\begin{aligned}
 & 2^0 + 2^1 + 2^2 + 2^4 + 2^7 = \\
 & = 1 + 2 + 4 + 16 + 128 = 151
 \end{aligned}$$

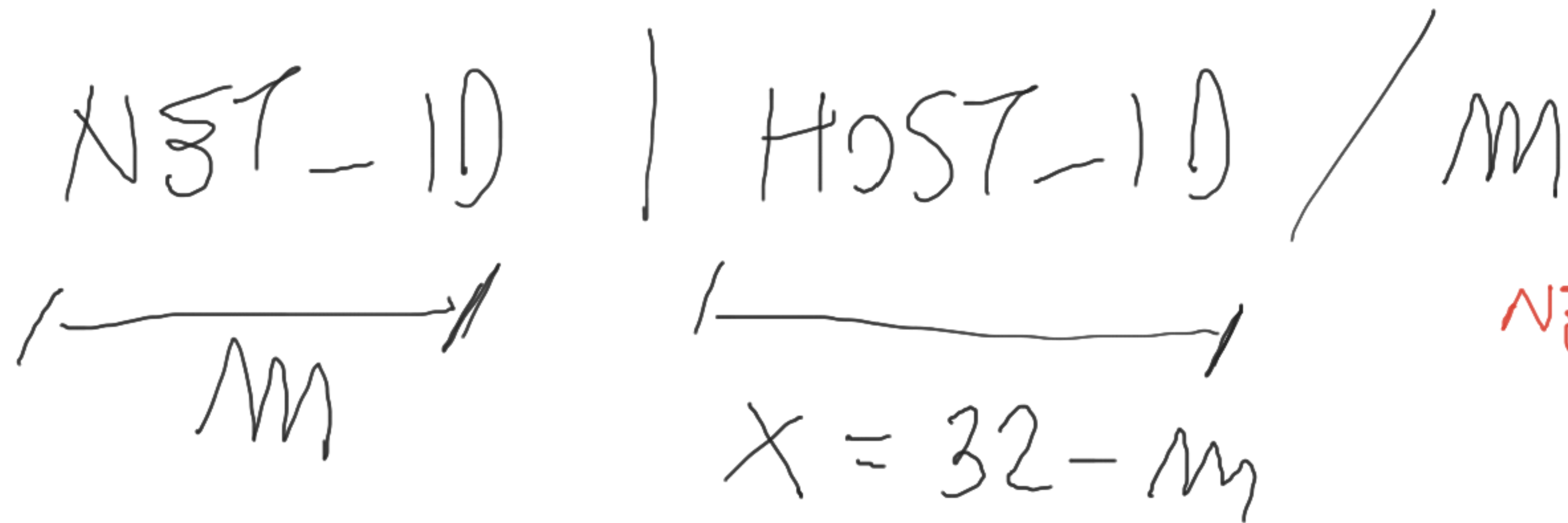
1 1 1 1 1 1 1 1 \Rightarrow 255

⋮

~~4~~
↓

0 0 0 0 0 0 0 0 $=$ 0

HOST_ID | HOST_ID / MASK
MASK 31
1



NST-ID | 00...0

PREFIX

DI 12578

$$\# \text{ HOST} = 2^x - 2$$

$$2 \leq 2^x - 2$$

BROADCAST

NST-ID | 11...1

192.168.1.0/29 \Leftarrow

Host-ID

Host-ID

192.168.1.0000000 XXX

$$2^3 - 2 = 6$$

192.168.1.0

→ PASSIVE

192.168.1.1

2

3

4

5

6

192.168.1.0/29

192.168.1.7

→ NO ADCAST