2017-2-60-096

1.

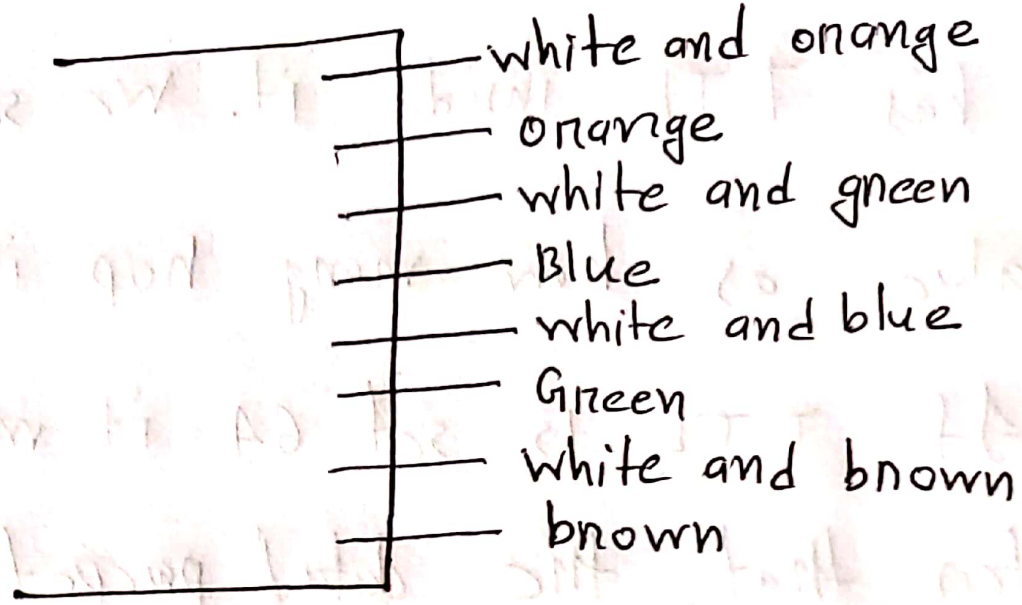


Figure: Orientation of a straight-through cable.

2017-2-60-096

2|

ARP finds the hardware address ~~MAC~~ MAC address. ARP also maintains a cache table in which MAC address and mapped to IP address.

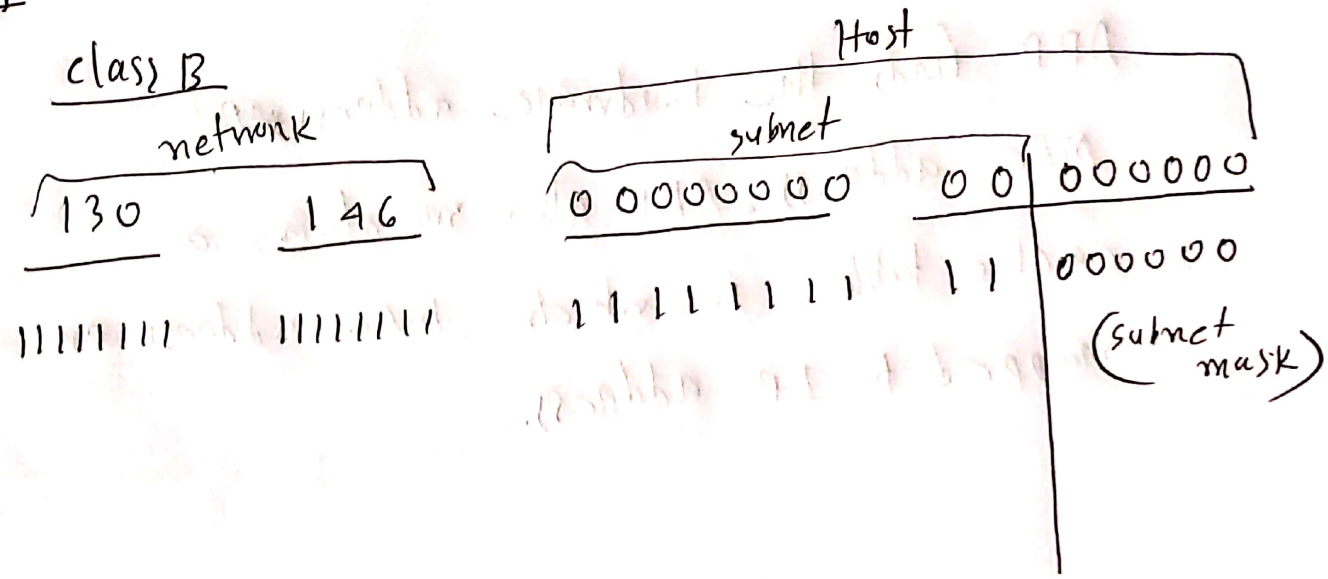
3|

Data packets usually have TTL that tells how long the packet will last(means how many hop the packet can survive). It is not possible to implement a clock in the packet's header to demote its age. Because if we want to invent a clock inside the packet there will ~~be~~ need a huge space. Because clock has its own executable file. It need to decrement its value. so, lots of function will be

there. As packets are only a collections of bits. And this collection of bits moves from one network to another. It is not possible to implement a code there and maintain the clock in the packet.

That is why it is not possible to implement the clock in the packets header to denote its age.

4]



here network IP : 130.146.0.0

subnet mask : 255.255.255.192

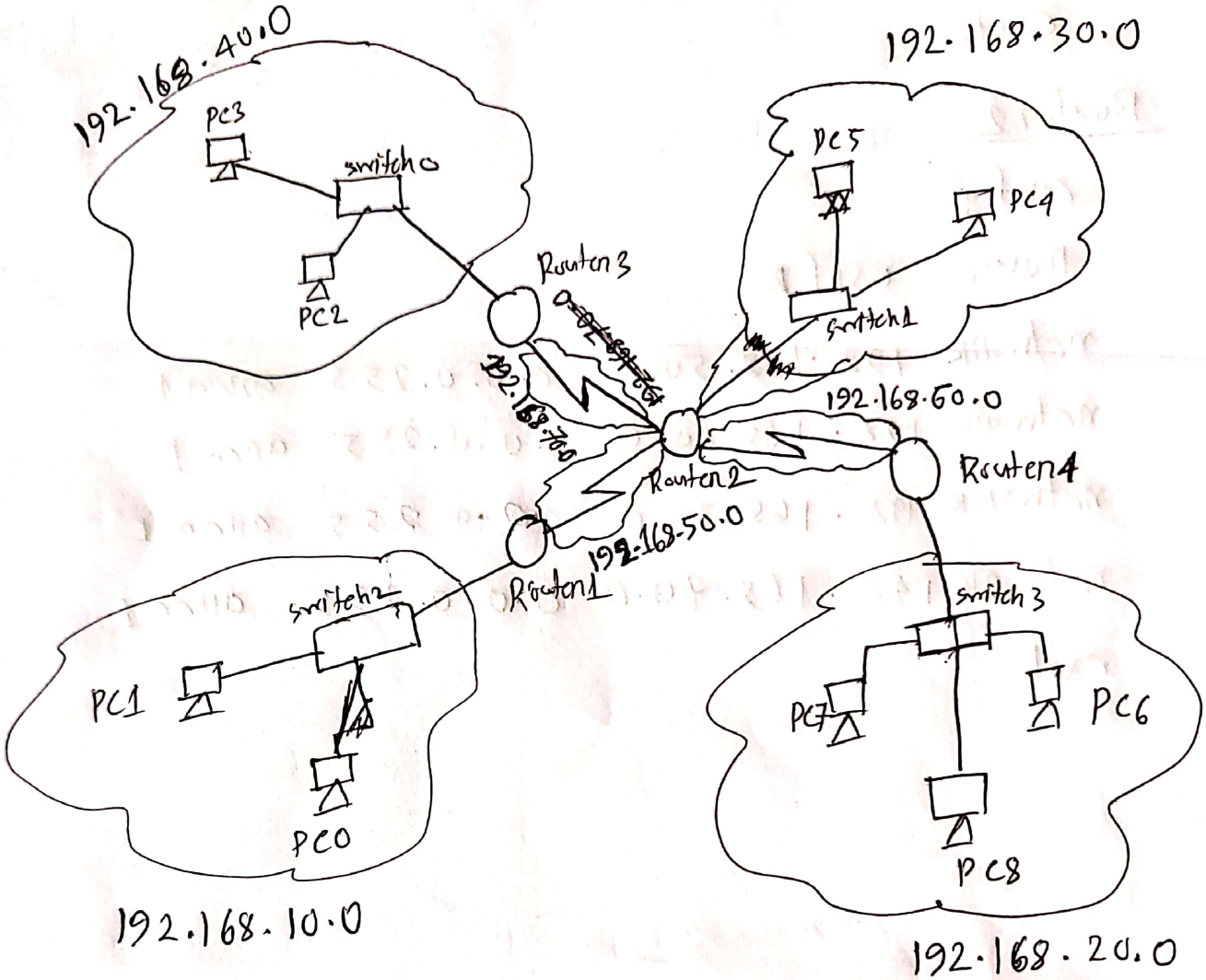
5]

mask value	255	255	255	255
given subnet mask	255	255	240	0
	0	0	10	255

so wild card mask = 0.0.10.255

Punto c

1)


192.168.40.0
PC3
switch0
PC2
Router3
192.168.70.0
192.168.30.0
PC5
PC4
switch1
192.168.60.0
Router4
Router2
192.168.50.0
Router1
switch2
PC1
PC0
192.168.10.0
switch3
PC7
PC6
PC8
192.168.20.0

router 3

IP route 192.168.10.0 255.255.255.0 192.168.50.2

IP route 192.168.20.0 255.255.255.0 192.168.50.2

IP route 192.168.40.0 255.255.255.0 192.168.50.2

2017-2-60-096

part B

a)

IP: 192.168.20.120

MAC: 46:FC:2D:10:36:C0

b)

IP: 120.136.36.127

MAC: ~~26~~.FC:26:12:10:D0:F0