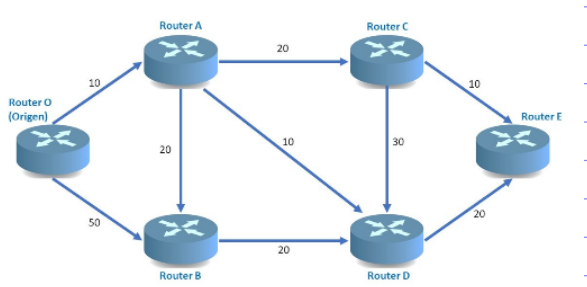
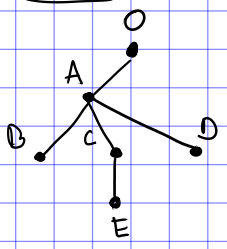
Dikjstra



	O	A	B	C	D	E
O	0	$10_{(OA)}$	$50_{(OB)}$	∞	∞	∞
A	□	0	$30_{(OAB)}$	$30_{(OAC)}$	$20_{(OAD)}$	∞
B	□	□	0	□	$20_{(OAD)}$	∞
C	□	□	□	0	$20_{(OAD)}$	$40_{(OACE)}$
D	□	□	□	□	0	$40_{(OACE)}$
E	□	□	□	□	□	0

Árbol



tabla

Ruta	Camino	Costo
O – A	O A	10
O – B	O A B	30
O – C	O A C	30
O – D	O A D	20
O – E	O A C E	40

WireShark

1

Dirección de origen

19	3.814364	2601:193:8302:4620:215c:f5ae:8b40:a27a	2001:558:feed::1	DNS	91 Standard query 0x4667 A youtube.com
20	3.814489	2601:193:8302:4620:215c:f5ae:8b40:a27a	2001:558:feed::1	DNS	91 Standard query 0x926d AAAA youtube.com
21	3.819378	2601:193:8302:4620:215c:f5ae:8b40:a27a	2001:558:feed::1	DNS	95 Standard query 0x7884 A www.youtube.com

2

19	3.814364	2601:193:8302:4620:215c:f5ae:8b40:a27a	2001:558:feed::1	DNS	91 Standard query 0x4667 A youtube.com
20	3.814489	2601:193:8302:4620:215c:f5ae:8b40:a27a	2001:558:feed::1	DNS	91 Standard query 0x926d AAAA youtube.com
21	3.819378	2601:193:8302:4620:215c:f5ae:8b40:a27a	2001:558:feed::1	DNS	95 Standard query 0x7884 A www.youtube.com

Dirección de destino

3 Valor etiqueta de flujo

```
Internet Protocol Version 6, Src: 2601:193:8302:4620:215c:f5ae:8b40:a27a, Dst: 2001:558:feed::1
    0110 .... = Version: 6
  .... 0000 0000 .... .... .... .... .... = Traffic Class: 0x00 (DSCP: CS0, ECN: Not-ECT)
      .... 0000 00.. .... .... .... .... .... = Differentiated Services Codepoint: Default (0)
      .... .... ..00 .... .... .... .... .... = Explicit Congestion Notification: Not ECN-Capable Transport (0)
  .... .... .... 0110 0011 1110 1101 0000 = Flow Label: 0x63ed0
  Payload Length: 37
  Next Header: UDP (17)
  Hop Limit: 255
  Source: 2601:193:8302:4620:215c:f5ae:8b40:a27a
  Destination: 2001:558:feed::1
```

4 el Payload del IPV6

```
Internet Protocol Version 6, Src: 2601:193:8302:4620:215c:f5ae:8b40:a27a, Dst: 2001:558:feed::1
    0110 .... = Version: 6
  .... 0000 0000 .... .... .... .... .... = Traffic Class: 0x00 (DSCP: CS0, ECN: Not-ECT)
  .... .... .... 0110 0011 1110 1101 0000 = Flow Label: 0x63ed0
  Payload Length: 37
  Next Header: UDP (17)
  Hop Limit: 255
  Source: 2601:193:8302:4620:215c:f5ae:8b40:a27a
  Destination: 2001:558:feed::1
User Datagram Protocol, Src Port: 64430, Dst Port: 53
  Source Port: 64430
  Destination Port: 53
  Length: 37
  Checksum: 0x3953 [unverified]
  [Checksum Status: Unverified]
  [Stream index: 3]
  [Timestamps]
Domain Name System (query)
```

Largo del mensaje UDP que se lleva dentro del IPV6

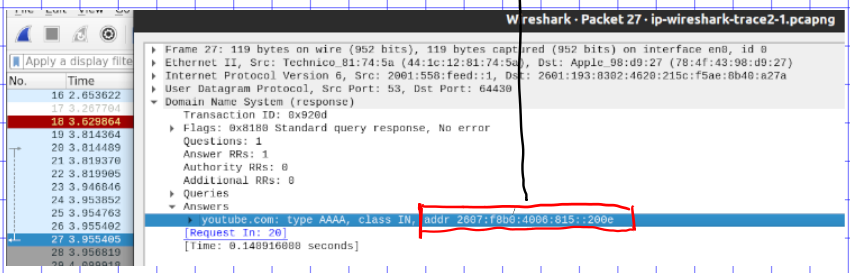
observe como ambos coinciden:

el Payload del IPV6 = Largo del mensaje UDP que se lleva dentro del IPV6

5 Protocolo de capa superior (UDP)

```
Internet Protocol Version 6, Src: 2601:193:8302:4620:215c:f5ae:8b40:a27a, Dst: 2001:558:feed::1
    0110 .... = Version: 6
  .... 0000 0000 .... .... .... .... .... = Traffic Class: 0x00 (DSCP: CS0, ECN: Not-ECT)
  .... .... .... 0110 0011 1110 1101 0000 = Flow Label: 0x63ed0
  Payload Length: 37
  Next Header: UDP (17)
  Hop Limit: 255
  Source: 2601:193:8302:4620:215c:f5ae:8b40:a27a
  Destination: 2001:558:feed::1
User Datagram Protocol, Src Port: 64430, Dst Port: 53
  Source Port: 64430
  Destination Port: 53
  Length: 37
  Checksum: 0x3953 [unverified]
  [Checksum Status: Unverified]
  [Stream index: 3]
  [Timestamps]
Domain Name System (query)
```

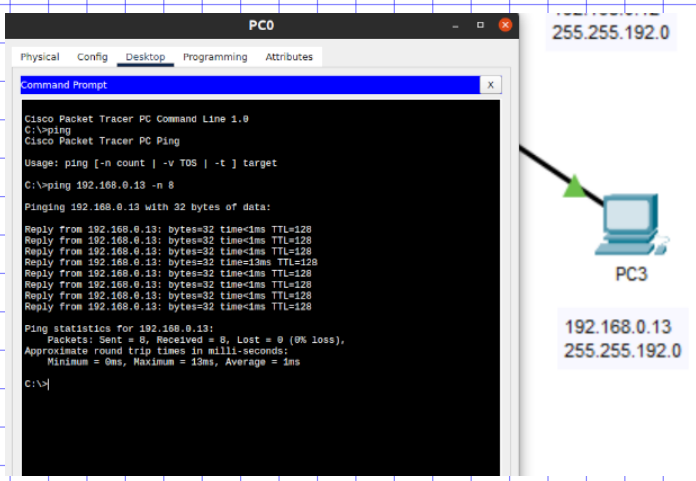
6 # de direcciones IPV6 devueltas como respuesta (solo 1)



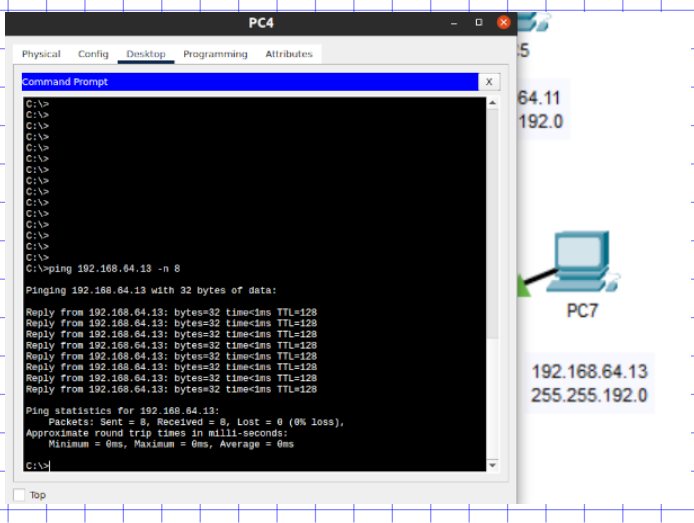
7 Sólo hay una IP devuelta:

```
▸ User Datagram Protocol, Src Port: 53, Dst Port: 64430
▾ Domain Name System (response)
    Transaction ID: 0x920d
  ▸ Flags: 0x8180 Standard query response, No error
    Questions: 1
    Answer RRs: 1
    Authority RRs: 0
    Additional RRs: 0
  ▾ Queries
    ▸ youtube.com: type AAAA, class IN
  ▾ Answers
    ▾ youtube.com: type AAAA, class IN, addr 2607:f8b0:4006:815::200e
        Name: youtube.com
        Type: AAAA (IPv6 Address) (28)
        Class: IN (0x0001)
        Time to live: 201 (3 minutes, 21 seconds)
        Data length: 16
        AAAA Address: 2607:f8b0:4006:815::200e
    [Request In: 20]
    [Time: 0.140916000 seconds]
```

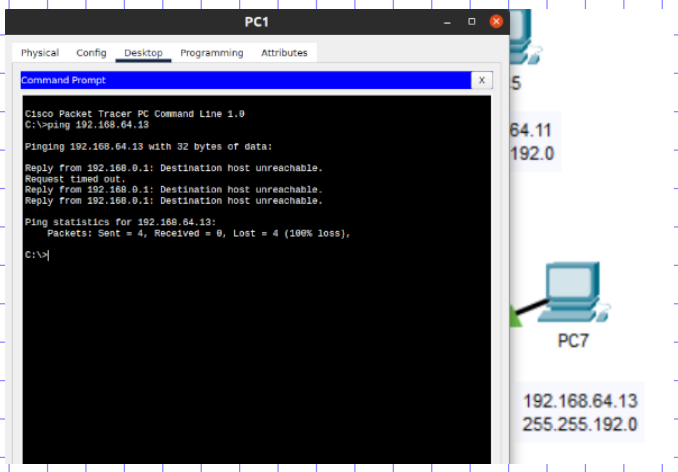
9



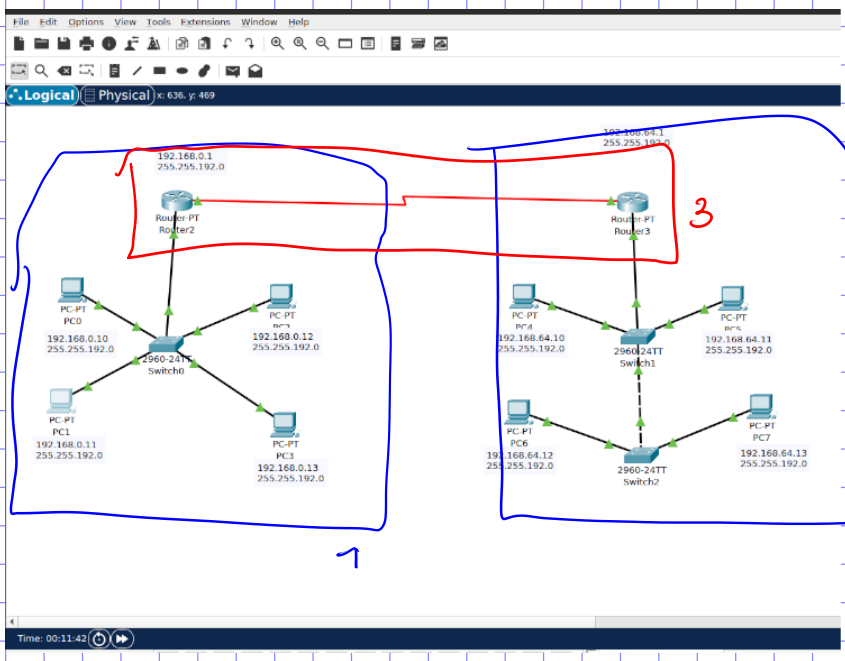
2



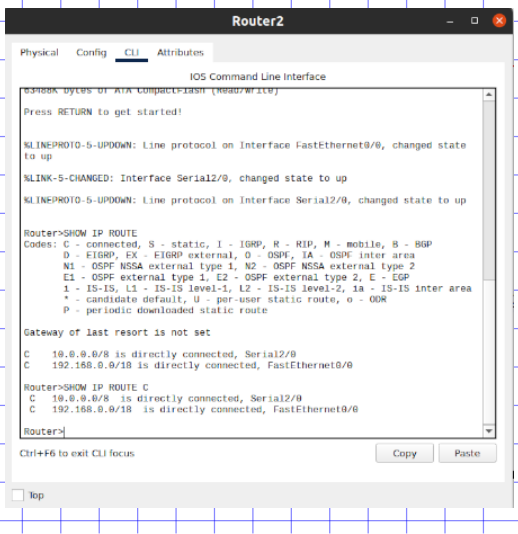
3 Como puede notar no funcionan porque no están en la misma red local y estamos haciendo pings con la ip local.

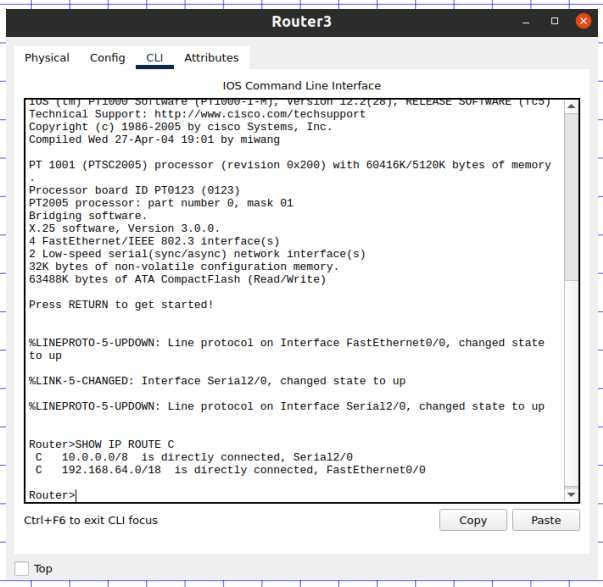


4 hay 3 subredes configuradas



5





Si es consistente acá se entiende el link entre router y router (Router 2 y Router 3) que son 192.168.0.0 y 192.168.64.0 respectivamente. en ambos también se puede ver su link con el switch que tiene cada router.