

# GNS-LAB6 IPv6 Submission

**Due** Nov 25 at 11:59pm  
**Allowed Attempts** 2

**Points** 13

**Questions** 13

**Time Limit** None

Take the Quiz Again

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	169 minutes	0 out of 13 *

\* Some questions not yet graded

Score for this attempt: **0** out of 13 \*

Submitted Nov 25 at 4:14pm

This attempt took 169 minutes.

### Question 1

Not yet graded / 1 pts

Please upload images of your topology

↓ [GNS-LAB-IPV6-\(012556895\).png](#)  
(<https://sjsu.instructure.com/files/52048483/download>)

### Question 2

Not yet graded / 1 pts

Please paste output fro R2 fro Step4 and explain what you see.

Your Answer:

#### Output of IPv6 route in R2

```
R2#show ipv6 route
IPv6 Routing Table - default - 7 entries
```

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, R - RIP, H - NHRP, I1 - ISIS L1

I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP

EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE - Destination

NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1

OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, I - LISP

O 2001:AA:CAFE::AA/128 [110/1]

via FE80::C801:47FF:FE0B:0, FastEthernet0/0

LC 2001:BB:7AC0::BB/128 [0/0]

via Loopback0, receive

C 3FFE:AABB:FA00:FA00::/64 [0/0]

via FastEthernet0/0, directly connected

L 3FFE:AABB:FA00:FA00::BB/128 [0/0]

via FastEthernet0/0, receive

C 3FFE:BBDD:FA20:FA20::/64 [0/0]

via FastEthernet2/0, directly connected

L 3FFE:BBDD:FA20:FA20::BB/128 [0/0]

via FastEthernet2/0, receive

L FF00::/8 [0/0]

via Null0, receive

### **Output of IPv6 OSPF neighbor in R2**

```
R2#show ipv6 ospf neighbor
```

```
OSPFv3 Router with ID (2.2.2.2) (Process ID 1)
```

Neighbor ID	Pri	State	Dead Time	Interface
1.1.1.1	1	FULL/DR	00:00:31	FastEthernet0/0

```
2
```

```
FastEthernet0/0
```

```
R2#
```

**Explanation.**

1. R2 sees the OSPF route from R1. In addition it also lists the local routes, directly connected routes and the loop-back routes.
2. The output from the second command indicates the OSPF neighbor relationship between R1 and R2.

**Question 3****Not yet graded / 1 pts**

Please paste output from R2 (Step 8) and explain what you see.

Your Answer:

Step-8 establishes EIGRP relation between R3 and R4. Hence pasting the output representing the EIGRP relationship between them.

```
R3#show ipv6 eigrp neighbor
EIGRP-IPv6 Neighbors for AS(6)
H   Address                               Interface           Hold Upt
ime  SRTT   RT0   Q   Seq                                     (se
c)      (ms)      Cnt Num
0   Link-local address:      Fa2/1              10 01:
37:56  676   4056  0   3
      FE80::C804:47FF:FE10:39

R4#show ipv6 eigrp neighbor
EIGRP-IPv6 Neighbors for AS(6)
H   Address                               Interface           Hold Upt
ime  SRTT   RT0   Q   Seq                                     (se
c)      (ms)      Cnt Num
0   Link-local address:      Fa2/1              9 01:
38:16   34    204  0   3
      FE80::C803:47FF:FE0F:39
```

The output shows:

1. R4's link local address (FE80::C804:47FF:FE10:39) is the EIGRP neighbor for R3.
2. R3's link local address (FE80::C803:47FF:FE0F:39) is the EIGRP neighbor for R4.

**Question 4****Not yet graded / 1 pts**

Please paste output from R4 (Step 11) and explain

- What routes do you now see on R3 that you did not see before?

Your Answer:

```
R3#show ipv6 route
IPv6 Routing Table - default - 11 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user S
tatic route
        B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
        I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summar
y, D - EIGRP
        EX - EIGRP external, ND - ND Default, NDp - ND Prefi
x, DCE - Destination
        NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1
- OSPF ext 1
        OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF
NSSA ext 2, I - LISP

EX  2001:AA:CAFE::AA/128 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1

EX  2001:BB:7AC0::BB/128 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1

LC  2001:CC:FACE::CC/128 [0/0]
    via Loopback0, receive

D   2001:DD:BABE::DD/128 [90/156160]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
```

```
EX 3FFE:AABB:FA00:FA00::/64 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1

D 3FFE:BBCC:FA21:FA21::/64 [90/30720]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1

EX 3FFE:BBDD:FA20:FA20::/64 [170/30720]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1

C 3FFE:CCDD:FA21:FA21::/64 [0/0]
    via FastEthernet2/1, directly connected

L 3FFE:CCDD:FA21:FA21::BB/128 [0/0]
    via FastEthernet2/1, receive

EX 3FFE:DDEE:FA00:FA00::/64 [170/30720]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1

L FF00::/8 [0/0]
    via Null0, receive
```

The R3 now has the OSPF external routes(of R1 and R2) being redistributed via R4.

### Question 5

Not yet graded / 1 pts

From Step 12: Please research and explain each of the parameters in this commands “redistribute ospf 1 metric 1500 1 100 1 1500”

Your Answer:

The command redistributes the OSPF routes. The arguments are as follows:

1. 'OSPF 1' configures to redistribute routes belonging to OSPF process 1
2. Metrics to be injected for the redistribution:
  - Argument-1(1500) - Bandwidth of the link in Kbps, 1500Kbps in this case
  - Argument-2(1)-Delay of the link in microseconds. 1us in this case
  - Argument-3(100)- Reliability number for the link (min-0, max-255)
  - Argument-4(1)-Load on the channel (0-no load, 255-100% load)

- Argument-5(1500)-MTU

**Question 6****Not yet graded / 1 pts**

Step 15 - Go to R1 and run "show ipv6 route" do you see any of the routes from R3 on R1? Which routes now appear on R1 that didn't before?

Your Answer:

**Show IPv6 route in R1**

```
R1#show ipv6 route
```

```
IPv6 Routing Table - default - 11 entries
```

```
Codes: C - Connected, L - Local, S - Static, U - Per-user S  
tatic route
```

```
      B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
```

```
      I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summar  
y, D - EIGRP
```

```
      EX - EIGRP external, ND - ND Default, NDp - ND Prefi  
x, DCE - Destination
```

```
      NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1  
- OSPF ext 1
```

```
      OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF  
NSSA ext 2, I - LISP
```

```
LC  2001:AA:CAFE::AA/128 [0/0]  
    via Loopback0, receive
```

```
O   2001:BB:7AC0::BB/128 [110/1]  
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
```

```
OE2 2001:CC:FACE::CC/128 [110/20]  
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
```

```
O   2001:DD:BABE::DD/128 [110/2]  
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
```

```
C   3FFE:AABB:FA00:FA00::/64 [0/0]  
    via FastEthernet0/0, directly connected
```

```

L    3FFE:AABB:FA00:FA00::AA/128 [0/0]
      via FastEthernet0/0, receive

OE2  3FFE:BBCC:FA21:FA21::/64 [110/20]
      via FE80::C802:47FF:FE0E:0, FastEthernet0/0

O    3FFE:BBDD:FA20:FA20::/64 [110/2]
      via FE80::C802:47FF:FE0E:0, FastEthernet0/0

OE2  3FFE:CCDD:FA21:FA21::/64 [110/20]
      via FE80::C802:47FF:FE0E:0, FastEthernet0/0

OE2  3FFE:DDEE:FA00:FA00::/64 [110/20]
      via FE80::C802:47FF:FE0E:0, FastEthernet0/0

L    FF00::/8 [0/0]

```

Yes, the loop-back network configured in R3 (2001:CC:FACE::CC/128) and the network link between R3 and R4 (3FFE:CCDD:FA21:FA21::/64) are now seen in R1 after EIGRP redistribution.

## Question 7

Not yet graded / 1 pts

Step 16 - If you look at R1 ipv6 routes ("show ipv6 route") – routes from which router are missing and why?

Your Answer:

### Show IPv6 route in R1

```

R1#show ipv6 route

IPv6 Routing Table - default - 11 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
        B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
        I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP
        EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE - Destination

```

```

        NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1
- OSPF ext 1
        OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF
NSSA ext 2, I - LISP

LC  2001:AA:CAFE::AA/128 [0/0]
    via Loopback0, receive
O   2001:BB:7AC0::BB/128 [110/1]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
OE2 2001:CC:FACE::CC/128 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
O   2001:DD:BABE::DD/128 [110/2]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
C   3FFE:AABB:FA00:FA00::/64 [0/0]
    via FastEthernet0/0, directly connected
L   3FFE:AABB:FA00:FA00::AA/128 [0/0]
    via FastEthernet0/0, receive
OE2 3FFE:BBCC:FA21:FA21::/64 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
O   3FFE:BBDD:FA20:FA20::/64 [110/2]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
OE2 3FFE:CCDD:FA21:FA21::/64 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
OE2 3FFE:DDEE:FA00:FA00::/64 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
L   FF00::/8 [0/0]
    via Null0, receive

```

The loop-back network of R5( 2001:EE:FEED::EE/128) is not seen in R1. The reason being the BGP routes are not redistributed into the OSPF links yet.

## Question 8

Not yet graded / 1 pts

Step 22 - Recheck "show ipv6 route" on R1, R3 and R4 – which routers now have a default route "::/0" showing?

- Paste output from "show ipv6 route"
- Why do you think R1 is not receiving the default route for "::/0"?



Your Answer:

**Show IPv6 route in R1**

```
R1#show ipv6 route
IPv6 Routing Table - default - 12 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user S
tatic route
        B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
        I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summar
y, D - EIGRP
        EX - EIGRP external, ND - ND Default, NDp - ND Prefi
x, DCE - Destination
        NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1
- OSPF ext 1
        OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF
NSSA ext 2, I - LISP

LC  2001:AA:CAFE::AA/128 [0/0]
    via Loopback0, receive
O   2001:BB:7AC0::BB/128 [110/1]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
OE2 2001:CC:FACE::CC/128 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
O   2001:DD:BABE::DD/128 [110/2]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
OE2 2001:EE:FEED::EE/128 [110/1]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
C   3FFE:AABB:FA00:FA00::/64 [0/0]
    via FastEthernet0/0, directly connected
L   3FFE:AABB:FA00:FA00::AA/128 [0/0]
    via FastEthernet0/0, receive
OE2 3FFE:BBCC:FA21:FA21::/64 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
O   3FFE:BBDD:FA20:FA20::/64 [110/2]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
OE2 3FFE:CCDD:FA21:FA21::/64 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
OE2 3FFE:DDEE:FA00:FA00::/64 [110/20]
    via FE80::C802:47FF:FE0E:0, FastEthernet0/0
L   FF00::/8 [0/0]
    via Null0, receive
```

**Show IPv6 route in R3**

```
R3#show ipv6 route
IPv6 Routing Table - default - 13 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user S
tatic route
        B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
        I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summar
y, D - EIGRP
        EX - EIGRP external, ND - ND Default, NDp - ND Prefi
x, DCE - Destination
        NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1
- OSPF ext 1
        OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF
NSSA ext 2, I - LISP

EX  ::/0 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
EX  2001:AA:CAFE::AA/128 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
EX  2001:BB:7AC0::BB/128 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
LC  2001:CC:FACE::CC/128 [0/0]
    via Loopback0, receive
D   2001:DD:BABE::DD/128 [90/156160]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
EX  2001:EE:FEED::EE/128 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
EX  3FFE:AABB:FA00:FA00::/64 [170/1709312]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
D   3FFE:BBCC:FA21:FA21::/64 [90/30720]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
EX  3FFE:BBDD:FA20:FA20::/64 [170/30720]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
C   3FFE:CCDD:FA21:FA21::/64 [0/0]
    via FastEthernet2/1, directly connected
L   3FFE:CCDD:FA21:FA21::BB/128 [0/0]
    via FastEthernet2/1, receive
EX  3FFE:DDEE:FA00:FA00::/64 [170/30720]
    via FE80::C804:47FF:FE10:39, FastEthernet2/1
L   FF00::/8 [0/0]
    via Null0, receive
```

**Show IPv6 route in R4**

```

R4#show ipv6 route
IPv6 Routing Table - default - 15 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user S
tatic route
        B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
        I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summar
y, D - EIGRP
        EX - EIGRP external, ND - ND Default, NDp - ND Prefi
x, DCE - Destination
        NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1
- OSPF ext 1
        OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF
NSSA ext 2, I - LISP

B   ::/0 [20/0]
    via FE80::C805:47FF:FE19:0, FastEthernet0/0
O   2001:AA:CAFE::AA/128 [110/2]
    via FE80::C802:47FF:FE0E:38, FastEthernet2/0
O   2001:BB:7AC0::BB/128 [110/1]
    via FE80::C802:47FF:FE0E:38, FastEthernet2/0
D   2001:CC:FACE::CC/128 [90/156160]
    via FE80::C803:47FF:FE0F:39, FastEthernet2/1
LC  2001:DD:BABE::DD/128 [0/0]
    via Loopback0, receive
B   2001:EE:FEED::EE/128 [20/0]
    via FE80::C805:47FF:FE19:0, FastEthernet0/0
O   3FFE:AABB:FA00:FA00::/64 [110/2]
    via FE80::C802:47FF:FE0E:38, FastEthernet2/0
C   3FFE:BBCC:FA21:FA21::/64 [0/0]
    via FastEthernet2/1, directly connected
L   3FFE:BBCC:FA21:FA21::DD/128 [0/0]
    via FastEthernet2/1, receive
C   3FFE:BBDD:FA20:FA20::/64 [0/0]
    via FastEthernet2/0, directly connected
L   3FFE:BBDD:FA20:FA20::DD/128 [0/0]
    via FastEthernet2/0, receive
D   3FFE:CCDD:FA21:FA21::/64 [90/30720]
    via FE80::C803:47FF:FE0F:39, FastEthernet2/1
C   3FFE:DDEE:FA00:FA00::/64 [0/0]

```

```

    via FastEthernet0/0, directly connected
L   3FFE:DDEE:FA00:FA00::DD/128 [0/0]
    via FastEthernet0/0, receive
L   FF00::/8 [0/0]
    via Null0, receive

```

- R3 and R4 are the routers that show the default route.
- R1 is not receiving the default route because, BGP routes are not redistributed into the OSPF links.

## Question 9

Not yet graded / 1 pts

Step 24 - Test the default route path.. on R1 type the following command  
tracert ipv6 2002::1

- What path did it take? Paste below:

Your Answer:

### Traceroute output

```

R1#tracert ipv6 2002::1
Type escape sequence to abort.
Tracing the route to 2002::1
 0 3FFE:AABB:FA00:FA00::BB 168 msec 24 msec 20 msec
 1 3FFE:BBDD:FA20:FA20::DD 40 msec 40 msec 20 msec
 2 3FFE:DDEE:FA00:FA00::EE 44 msec 52 msec 60 msec
 3 3FFE:DDEE:FA00:FA00::EE !X !X !X

```

### The path taken by R1:

Since R1 does not have route to 2002::1, it forwards the packet to the default router which is R5. Hence the path taken by R1 is R1->R2->R4->R5

## Question 10

Not yet graded / 1 pts

## Step 45 -

- Paste the following into canvas Q10
  - Show run from R6
  - Show ipv6 route | i 2001 from R6
  - Show ipv6 route | i 2001 from R1

Your Answer:

**Running configuration**

```
R6#show run
```

```
Building configuration...
```

```
Current configuration : 1724 bytes
```

```
!  
! Last configuration change at 21:40:07 UTC Sat Nov 24 2018  
!  
version 15.2  
service timestamps debug datetime msec  
service timestamps log datetime msec  
  
!  
hostname R6  
!  
boot-start-marker  
boot-end-marker  
  
!  
!  
!  
no aaa new-model  
no ip icmp rate-limit unreachable  
ip cef  
!  
!  
!  
!  
!  
!  
no ip domain lookup  
ipv6 unicast-routing
```

```
ipv6 cef
!
!
multilink bundle-name authenticated
!
!
!
!
!
!
!
!
!
ip tcp synwait-time 5
!
!
!
!
!
!
!
!
!
!
!
!
!
interface Loopback0
  description LOCAL NETOWRK
  no ip address
  ipv6 address 2001:FF:DADA::FF/128
!
interface FastEthernet0/0
  no ip address
  shutdown
  duplex full
!
interface FastEthernet1/0
  description Transport Link TO R4 FA1/0 BGP 101
  no ip address
  speed auto
  duplex auto
  ipv6 address 3FFE:DDFF:FA21:FA21::FF/64
```

```
ipv6 enable
!
interface FastEthernet1/1
  no ip address
  shutdown
  speed auto
  duplex auto
!
interface FastEthernet2/0
  no ip address
  shutdown
  speed auto
  duplex auto
!

interface FastEthernet2/1
  no ip address
  shutdown
  speed auto
  duplex auto
!

router bgp 101
  bgp router-id 6.6.6.6
  bgp log-neighbor-changes
  no bgp default ipv4-unicast
  neighbor 3FFE:DDFF:FA21:FA21::DD remote-as 101
  neighbor 3FFE:DDFF:FA21:FA21::DD update-source FastEthernet1/0
!

  address-family ipv4
    neighbor 3FFE:DDFF:FA21:FA21::DD activate
  exit-address-family
!

  address-family ipv6
    redistribute connected
    redistribute static
    neighbor 3FFE:DDFF:FA21:FA21::DD activate
  exit-address-family
!
ip forward-protocol nd
```

```
!  
!  
no ip http server  
no ip http secure-server  
!  
!  
!  
!  
control-plane  
!  
!  
line con 0  
  exec-timeout 0 0  
  privilege level 15  
  logging synchronous  
  stopbits 1  
line aux 0  
  exec-timeout 0 0  
  privilege level 15  
  logging synchronous  
  stopbits 1  
line vty 0 4  
  login  
!  
!  
end
```

### **IPv6 route in R6**

```
R6(config)#do show ipv6 route | i 2001  
B 2001:AA:1212:10::F1A1:6500/128 [200/2]  
B 2001:AA:CAFE::AA/128 [200/2]  
B 2001:BB:7AC0::BB/128 [200/1]  
B 2001:CC:FACE::CC/128 [200/0]  
B 2001:DD:BABE::DD/128 [200/0]  
B 2001:EE:FEED::EE/128 [200/1709312]  
LC 2001:FF:DADA::FF/128 [0/0]
```

### **IPv6 route in R1**



```
show ipv6 route | i 2001 from R1
R1(config-if)#do show ipv6 route | i 2001
C 2001:AA:1212:10::/64 [0/0]
L 2001:AA:1212:10::F1A1:6500/128 [0/0]
LC 2001:AA:CAFE::AA/128 [0/0]
O 2001:BB:7AC0::BB/128 [110/1]
OE2 2001:CC:FACE::CC/128 [110/20]
O 2001:DD:BABE::DD/128 [110/2]
OE2 2001:EE:FEED::EE/128 [110/1]
```

## Question 11

Not yet graded / 1 pts

Step 51 -

- Go to R6 and run “show ipv6 route”
  - Explain What do you think happened?

Your Answer:

### IPv6 route in R6

```
R6(config-if)#do show ipv6 route
IPv6 Routing Table - default - 6 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user S
tatic route
B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - E
IGRP
EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE
- Destination
NDR - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF
ext 1
OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ex
t 2, l - LISP

B 2001:CC:FACE::CC/128 [200/0]
via 3FFE:BBFF:FA21:FA21::BB
```

```
LC 2001:FF:DADA::FF/128 [0/0]
via Loopback0, receive

C 3FFE:BBFF:FA21:FA21::/64 [0/0]
via FastEthernet1/1, directly connected

L 3FFE:BBFF:FA21:FA21::FF/128 [0/0]
via FastEthernet1/1, receive

B 3FFE:DDFF:FA21:FA21::/64 [200/0]
via 3FFE:DDFF:FA21:FA21::DD

L FF00::/8 [0/0]
via Null0, receive
```

**Explanation:**

R6 only has its local routes and routes to its directly connected neighbors which is R3. It does not see the rest of the network (R1,R2,R4 and R5). This is because R3, which is the only neighbor to R6, does not advertise its iBGP learned routes (about R1,R2,R4 and R5) to R3.

**Question 12****Not yet graded / 1 pts**

Step 53: Please paste output from R6 and run "show ipv6 route"

Your Answer:

**IPv6 route in R6**

```
R6(config-router)#do show ipv6 route
IPv6 Routing Table - default - 16 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user S
tatic route
B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - E
IGRP
EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE
- Destination
```

```
NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF
  ext 1
OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ex
  t 2, l - LISP

B ::/0 [200/0]
via 3FFE:DDEE:FA00:FA00::EE
B 2001:AA:1212:10::F1A1:6500/128 [200/2]
via 3FFE:CCDD:FA21:FA21::DD
B 2001:AA:CAFE::AA/128 [200/2]
via 3FFE:CCDD:FA21:FA21::DD
B 2001:BB:7AC0::BB/128 [200/1]
via 3FFE:CCDD:FA21:FA21::DD
B 2001:CC:FACE::CC/128 [200/0]
via 3FFE:BBFF:FA21:FA21::BB
B 2001:DD:BABE::DD/128 [200/0]
via 3FFE:CCDD:FA21:FA21::DD
B 2001:EE:FEED::EE/128 [200/0]
via 3FFE:DDEE:FA00:FA00::EE
LC 2001:FF:DADA::FF/128 [0/0]
via Loopback0, receive
B 3FFE:AABB:FA00:FA00::/64 [200/2]
via 3FFE:CCDD:FA21:FA21::DD
B 3FFE:BBDD:FA20:FA20::/64 [200/0]
via 3FFE:CCDD:FA21:FA21::DD
C 3FFE:BBFF:FA21:FA21::/64 [0/0]
via FastEthernet1/1, directly connected
L 3FFE:BBFF:FA21:FA21::FF/128 [0/0]
via FastEthernet1/1, receive
B 3FFE:CCDD:FA21:FA21::/64 [200/0]
via 3FFE:BBFF:FA21:FA21::BB
B 3FFE:DDEE:FA00:FA00::/64 [200/0]
via 3FFE:CCDD:FA21:FA21::DD
B 3FFE:DDFF:FA21:FA21::/64 [200/0]
via 3FFE:CCDD:FA21:FA21::DD
L FF00::/8 [0/0]
via Null0, receive
```

**Question 13****Not yet graded / 1 pts**

Step 56 - Upload packet capture



[Wireshark Capture From R4 To R2 On Fa2\\_0\(012556895\).pcap](https://sjsu.instructure.com/files/52049424/download)  
(<https://sjsu.instructure.com/files/52049424/download>)

Quiz Score: **0** out of 13