

Lab - Identifying IPv6 Addresses

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Part 1

Step 2: Match the IPv6 address to its type

IPv6 Address	Answer
2001:0db8:1:ACAD::FE55:6789:B210	Global unicast address (b)
::1	Loopback address (a)
FC00:22:A:2::CD4:23E4:76FA	Unique-local (d)
2033:DB8:1:1:22:A33D:259A:21FE	Global unicast address (b)
FE80:3201:CC01:65B1	Link-local (c)
FF00::	Multicast address (e)
FF00::DB7:4322:A231:67C	Multicast address (e)
FF02::2	Multicast address (e)

Part 2

Step 1: Check your PC IPv6 network address settings

1. You can see from the output that the client PC has an IPv6 link-local address with a randomly generated interface ID. What does it indicate about the network regarding IPv6 global unicast address, IPv6 unique-local address, or IPv6 gateway address?

There is no IPv6 enabled gateway router.

2. What kind of IPv6 addresses did you find when using **ipconfig /all**?

- i. IPv6 Address. : 2806:103e:27:5452:fc2e:2ca:75f1:c3ab(Preferred)
(Global unicast address)
- ii. IPv6 Address. :
fd80:6933:8cf1:d100:fc2e:2ca:75f1:c3ab(Preferred)
- iii. Temporary IPv6 Address. :
2806:103e:27:5452:24f5:93c7:7b8b:c75d(Preferred) **(Global unicast address)**
- iv. Temporary IPv6 Address. :
2806:103e:27:5452:ec58:2fbc:a71f:166e(Deprecated)**(Global unicast address)**
- v. Temporary IPv6 Address. :
fd80:6933:8cf1:d100:15a9:a1b5:d4ab:c9ce(Preferred)
- vi. Link-local IPv6 Address : fe80::fc2e:2ca:75f1:c3ab%13(Preferred) **(Link-local)**

Part 3

Step 2: Practice compressing and decompressing IPv6 addresses

- 1. 2002:0EC0:0200:0001:0000:04EB:44CE:08A2 **2002:EC0:200:1::4EB:44CE:8A2**
- 2. FE80:0000:0000:0001:0000:60BB:008E:7402 **FE80:::1::60BB:8E:7402**
- 3. FE80::7042:B3D7:3DEC:84B8 **FE80:0000:7042:B3D7:3DEC:84B8**
- 4. FF00:: **FF00:0000:0000:0000:0000:0000:0000**
- 5. 2001:0030:0001:ACAD:0000:330E:10C2:32BF
2001:30:1:ACAD::330E:10C2:32BF

Reflection

- 1. How do you think you must support IPv6 in the future? **By start using it in all the possible devices.**

2. Do you think IPv4 networks continue on, or will everyone eventually switch over to IPv6? How long do you think it will take? **Eventually everyone will switch to IPv6, but its going to take like 60 years to do so because of all the tecnology that uses IPv4.**