

ASSIGNMENT : 5 (yash kanojia,2018372)

Ans 1: a ,b ,c)

As Number	As Name	CIDR Range	Monitor
17488	HATHWAY CABLE AND DATACOM LIMITED	27.5.0.0/16	Monitor this

b) Hathway cable and datacom limited.

d) facebook.com

Total amount of IPs for this ASN: 16,384

As Number	As Name	CIDR Range	Monitor
32934	Facebook, Inc.	157.240.192.0/18	Monitor this

google.com

asn:172.217.166.228

[asn](#)

Total amount of IPs for this ASN: 65,536

As Number	As Name	CIDR Range	Monitor
15169	Google LLC	172.217.0.0/16	Monitor this

[reverse lookup](#) [smtp diag](#) [blacklist](#) [subnet tool](#)
Reported by [mxtoolbox.com](#) on 12/2/2020 at 11:04:45 AM, [just for you.](#) [Transcript](#)

IIT bombay

Total amount of IPs for this ASN: 1,536

As Number	As Name	CIDR Range	Monitor
132423	Indian Institute of Technology Bombay	103.21.126.0/23	Monitor this
132423	Indian Institute of Technology Bombay	103.21.124.0/22	Monitor this

[reverse lookup](#) [smtp diag](#) [blacklist](#) [subnet tool](#)
Reported by [mxtoolbox.com](#) on 12/2/2020 at 11:02:52 AM, [just for you.](#) [Transcript](#)

IIIT delhi

As Number	As Name	CIDR Range	Monitor
55824	National Knowledge Network	103.25.231.0/24	Monitor this

Ans 2: a)

ARP packets :

3645	31.919747	IntelCor_8c:ad:b6	TendaTec_b3:11:00	ARP	42	Who has 192.168.0.1? Tell 192.168.0.104
3646	31.922398	TendaTec_b3:11:00	IntelCor_8c:ad:b6	ARP	42	192.168.0.1 is at c8:3a:35:b3:11:00
3649	31.973323	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3650	31.973445	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3651	31.973559	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3661	32.918037	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3662	32.918139	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3663	32.918171	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3677	33.918273	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3678	33.918423	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3679	33.918467	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3721	36.918840	IntelCor_8c:ad:b6	XiaomiCo_4b:6c:1d	ARP	42	Who has 192.168.0.100? Tell 192.168.0.104
3912	37.806795	XiaomiCo_4b:6c:1d	IntelCor_8c:ad:b6	ARP	42	192.168.0.100 is at a4:4b:d5:4b:6c:1d

b) operational code : 1 : Request Code

2: Reply Code

Type: ARP (0x0806)
▼ Address Resolution Protocol (reply)
Hardware type: Ethernet (1)
Protocol type: IPv4 (0x0800)
Hardware size: 6
Protocol size: 4
Opcode: reply (2)
Sender MAC address: TendaTec_b3:11:00 (c8:3a:35:b3:11:00)
Sender IP address: 192.168.0.1
Target MAC address: IntelCor_8c:ad:b6 (24:ee:9a:8c:ad:b6)
Target IP address: 192.168.0.104

Type: ARP (0x0806)
▼ Address Resolution Protocol (request)
Hardware type: Ethernet (1)
Protocol type: IPv4 (0x0800)
Hardware size: 6
Protocol size: 4
Opcode: request (1)
Sender MAC address: IntelCor_8c:ad:b6 (24:ee:9a:8c:ad:b6)
Sender IP address: 192.168.0.104
Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
Target IP address: 192.168.0.105

c)

Type: ARP (0x0806)
▼ Address Resolution Protocol (reply)
Hardware type: Ethernet (1)
Protocol type: IPv4 (0x0800)
Hardware size: 6
Protocol size: 4
Opcode: reply (2)
Sender MAC address: TendaTec_b3:11:00 (c8:3a:35:b3:11:00)
Sender IP address: 192.168.0.1
Target MAC address: IntelCor_8c:ad:b6 (24:ee:9a:8c:ad:b6)
Target IP address: 192.168.0.104

Find MAC Address Vendors. Now.

Enter a MAC Address

c8:3a:35:b3:11:00

Tenda Technology Co., Ltd.

Find MAC Address Vendors. Now.

Enter a MAC Address

24:ee:9a:8c:ad:b6

Intel Corporate

d)

```

Interface: 192.168.0.104 --- 0xd
  Internet Address      Physical Address      Type
  192.168.0.1          c8-3a-35-b3-11-00    dynamic
  224.0.0.22           01-00-5e-00-00-16    static

Interface: 192.168.56.1 --- 0x12
  Internet Address      Physical Address      Type
  224.0.0.22           01-00-5e-00-00-16    static

```

```

Interface: 192.168.0.104 --- 0xd
  Internet Address      Physical Address      Type
  192.168.0.1          c8-3a-35-b3-11-00    dynamic
  192.168.0.100        a4-4b-d5-4b-6c-1d    dynamic
  192.168.0.101        c4-3a-35-5d-28-50    dynamic
  192.168.0.102        20-a6-0c-30-f0-67    dynamic
  192.168.0.255        ff-ff-ff-ff-ff-ff    static
  192.168.1.1          ff-ff-ff-ff-ff-ff    static
  192.168.1.2          ff-ff-ff-ff-ff-ff    static
  192.168.1.3          ff-ff-ff-ff-ff-ff    static
  224.0.0.22           01-00-5e-00-00-16    static
  239.192.152.143      01-00-5e-40-98-8f    static
  239.255.255.250      01-00-5e-7f-ff-fa    static

Interface: 192.168.56.1 --- 0x12
  Internet Address      Physical Address      Type
  192.168.56.255       ff-ff-ff-ff-ff-ff    static
  224.0.0.22           01-00-5e-00-00-16    static
  239.192.152.143      01-00-5e-40-98-8f    static
  239.255.255.250      01-00-5e-7f-ff-fa    static

```

Type static :

These are address which are manually added to the table and these are the permanent addresses.

Type dynamic :

These type addresses are there for the short period of time. These are the addresses added by the internal softwares of the system and they are added when there previous ARP request got succesfull.

Ans 3:

a)

3645	31.919747	IntelCor_8c:ad:b6	TendaTec_b3:11:00	ARP	42	Who has 192.168.0.1? Tell 192.168.0.104
3646	31.922398	TendaTec_b3:11:00	IntelCor_8c:ad:b6	ARP	42	192.168.0.1 is at c8:3a:35:b3:11:00
3649	31.973323	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3650	31.973445	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3651	31.973559	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3661	32.918037	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3662	32.918139	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3663	32.918171	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3677	33.918273	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3678	33.918423	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3679	33.918467	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3721	36.918840	IntelCor_8c:ad:b6	XiaomiCo_4b:6c:1d	ARP	42	Who has 192.168.0.100? Tell 192.168.0.104
3912	37.806795	XiaomiCo_4b:6c:1d	IntelCor_8c:ad:b6	ARP	42	192.168.0.100 is at a4:4b:d5:4b:6c:1d

No, ARP request packet is the broadcast packet. So, it will be received by all the hosts in the network.

b)

3645	31.919747	IntelCor_8c:ad:b6	TendaTec_b3:11:00	ARP	42	Who has 192.168.0.1? Tell 192.168.0.104
3646	31.922398	TendaTec_b3:11:00	IntelCor_8c:ad:b6	ARP	42	192.168.0.1 is at c8:3a:35:b3:11:00
3649	31.973323	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3650	31.973445	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3651	31.973559	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3661	32.918037	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3662	32.918139	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3663	32.918171	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3677	33.918273	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.101? Tell 192.168.0.104
3678	33.918423	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.102? Tell 192.168.0.104
3679	33.918467	IntelCor_8c:ad:b6	Broadcast	ARP	42	Who has 192.168.0.105? Tell 192.168.0.104
3721	36.918840	IntelCor_8c:ad:b6	XiaomiCo_4b:6c:1d	ARP	42	Who has 192.168.0.100? Tell 192.168.0.104
3912	37.806795	XiaomiCo_4b:6c:1d	IntelCor_8c:ad:b6	ARP	42	192.168.0.100 is at a4:4b:d5:4b:6c:1d

yes it is real host, ARP reply packet is received only by the host which has sended the ARP request packet.

c) timeout time for ARP cache is 22500 milli seconds.

```
C:\WINDOWS\system32>netsh interface ipv4 show interfaces
```

Idx	Met	MTU	State	Name
1	75	4294967295	connected	Loopback Pseudo-Interface 1
13	40	1500	connected	Wi-Fi
10	25	1500	disconnected	Local Area Connection* 3
8	25	1500	disconnected	Local Area Connection* 4
2	35	1500	disconnected	Ethernet 2
21	1	1392	disconnected	Ethernet 3
18	25	1500	connected	VirtualBox Host-Only Network

```
C:\WINDOWS\system32>netsh interface ipv4 show interface 13
```

Interface Wi-Fi Parameters

IfLuid	: wireless_32768
IfIndex	: 13
State	: connected
Metric	: 45
Link MTU	: 1500 bytes
Reachable Time	: 22500 ms
Base Reachable Time	: 30000 ms
Retransmission Interval	: 1000 ms
DAD Transmits	: 3
Site Prefix Length	: 64
Site Id	: 1
Forwarding	: disabled