

Pandit Deendayal Energy University
School of Technology
Department of ICT
Academic Year: 2022-23
Computer Communication and Networking Lab
20IC306P

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Experiment 4:

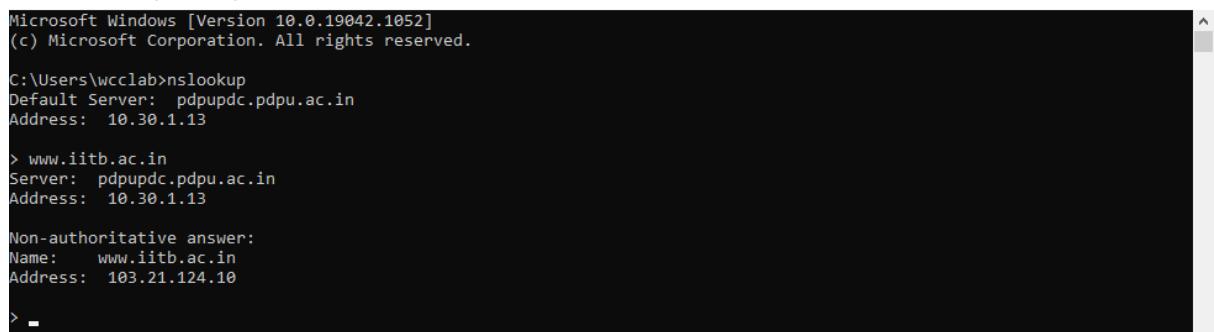
Aim: To understand the working of DNS by using wire shark and packet tracer.

Software Tools required: - Wire-shark and Cisco packet tracer

1. nslookup

1. Run `nslookup` to obtain the IP address of the web server for the Indian Institute of Technology in Bombay, India: `www.iitb.ac.in`. What is the IP address of `www.iitb.ac.in`

Ans:



```
Command Prompt - nslookup
Microsoft Windows [Version 10.0.19042.1052]
(c) Microsoft Corporation. All rights reserved.

C:\Users\wcclab>nslookup
Default Server: pdpupdc.pdpu.ac.in
Address: 10.30.1.13

> www.iitb.ac.in
Server: pdpupdc.pdpu.ac.in
Address: 10.30.1.13

Non-authoritative answer:
Name: www.iitb.ac.in
Address: 103.21.124.18
>
```

IP Address: 103.21.124.18

2. What is the IP address of the DNS server that provided the answer to your `nslookup` command in question 1 above?

Ans: IP Address: 103.21.124.18

3. Did the answer to your `nslookup` command in question 1 above come from an authoritative or non-authoritative server?

Ans: Non-authoritative server

4. Use the `nslookup` command to determine the name of the authoritative name server for the `iitb.ac.in` domain. What is that name? (If there are more than one authoritative servers, what is the name of the first authoritative server returned by `nslookup`)? If you had to find the IP address of that authoritative name server, how would you do so?

Ans:

```

C:\ Command Prompt
Microsoft Windows [Version 10.0.19042.1052]
(c) Microsoft Corporation. All rights reserved.

C:\Users\wcclab>nslookup -type=NS iitb.ac.in
Server: pdpupdc.pdpu.ac.in
Address: 10.30.1.13

Non-authoritative answer:
iitb.ac.in      nameserver = dns2.iitb.ac.in
iitb.ac.in      nameserver = dns1.iitb.ac.in
iitb.ac.in      nameserver = dns3.iitb.ac.in

dns2.iitb.ac.in internet address = 103.21.126.129
dns1.iitb.ac.in internet address = 103.21.125.129
dns3.iitb.ac.in internet address = 103.21.127.129

C:\Users\wcclab>

```

Three authoritative servers. The first server name is dns2.iitb.ac.in and internet address 103.21.126.129

2. The DNS cache on your computer

```

C:\Users\wcclab>ipconfig /flushdns

Windows IP Configuration

Successfully flushed the DNS Resolver Cache.

C:\Users\wcclab>

```

3. Tracing DNS with Wireshark

```

C:\Users\wcclab>ipconfig /flushdns

Windows IP Configuration

Successfully flushed the DNS Resolver Cache.

C:\Users\wcclab>

```

No.	Time	Source	Destination	Protocol	Length	Info
793	23.770632	10.30.7.191	128.119.245.12	HTTP	388	GET /kurose_ross/ HTTP/1.1
800	24.041713	128.119.245.12	10.30.7.191	HTTP	650	HTTP/1.1 301 Moved Permanently (text/html)
801	24.050278	10.30.7.191	128.119.245.12	HTTP	397	GET /kurose_ross/index.php HTTP/1.1
817	24.359374	128.119.245.12	10.30.7.191	HTTP	778	HTTP/1.1 200 OK (text/html)
822	24.381995	10.30.7.191	128.119.245.12	HTTP	388	GET /kurose_ross/custom.css HTTP/1.1
827	24.384103	10.30.7.191	128.119.245.12	HTTP	364	GET /kurose_ross/script.js HTTP/1.1
858	24.593377	10.30.7.191	117.18.237.29	OCSP	490	Request
871	24.686691	128.119.245.12	10.30.7.191	HTTP	389	HTTP/1.1 200 OK (text/css)
874	24.690844	128.119.245.12	10.30.7.191	HTTP	1349	HTTP/1.1 200 OK (application/javascript)
876	24.694297	117.18.237.29	10.30.7.191	OCSP	601	Response
968	24.871886	10.30.7.191	128.119.245.12	HTTP	383	GET /kurose_ross/header_graphic_book_BE_3.jpg HTTP/1.1
1031	25.129177	10.30.7.191	142.250.192.67	OCSP	492	Request
1071	25.248448	142.250.192.67	10.30.7.191	OCSP	755	Response
1341	28.364946	128.119.245.12	10.30.7.191	HTTP	704	HTTP/1.1 200 OK (JPEG/JFIF image)
1346	28.383667	10.30.7.191	128.119.245.12	HTTP	357	GET /favicon.ico HTTP/1.1
1364	28.674957	128.119.245.12	10.30.7.191	HTTP	538	HTTP/1.1 404 Not Found (text/html)
1365	28.676880	10.30.7.191	128.119.245.12	HTTP	357	GET /favicon.ico HTTP/1.1
1378	28.978440	128.119.245.12	10.30.7.191	HTTP	538	HTTP/1.1 404 Not Found (text/html)

> Frame 793: 388 bytes on wire (3104 bits), 388 bytes captured (3104 bits) on interface \Device\NPF_{289F6D83-7883-4080-842C-44FF5CACF0AA}, id 0
> Ethernet II, Src: Hewlett_P_87:79:93 (04:a9:3e:07:79:93), Dst: Cisco_58:32:00 (c8:f9:f9:58:32:00)
> Internet Protocol Version 4, Src: 10.30.7.191, Dst: 128.119.245.12
> Transmission Control Protocol, Src Port: 56884, Dst Port: 80, Seq: 1, Ack: 1, Len: 334
> Hypertext Transfer Protocol

0000 c8 f9 f9 58 32 00 84 a9 3e 87 79 93 08 00 45 00 ...X2...>y...E
0001 01 76 fd 01 40 00 88 06 00 00 0a 1e 07 bf 88 77 ..v@...
0020 f5 0c de 34 00 50 39 cd 1e 90 cd 04 3f 06 50 18 ..4-p@...:2-p@...
0030 02 04 88 c9 00 47 45 54 20 2f 6b 75 72 6f 73 ..GET /kurose_ross/
0040 65 5f 72 6f 73 74 3a 20 67 61 69 61 2e 63 73 26 ..Host: gaia.cs.
0050 6d 0a 48 f6 73 74 3a 20 67 61 69 61 2e 63 73 26

5. Locate the first DNS query message resolving the name gaia.cs.umass.edu. What is the packet number¹ in the trace for the DNS query message? Is this query message sent over UDP or TCP?

The Wireshark interface displays two windows. The top window is a detailed view of a single DNS query (packet 781) for the domain 'gaia.cs.umass.edu'. The bottom window is a list of all DNS packets captured, with packet 781 selected.

Detailed View (Top Window):

- Packet 781:** Standard query 0x9cd2 A gaia.cs.umass.edu
- Protocol:** DNS
- Length:** 77 bytes
- Info:** Response: Message is a query
- Flags:** 0x0100 Standard query
- Details:**
 - Message is a query
 - Standard query (0)
 - Truncated: Message is not truncated
 - Recursion desired: Do query recursively (0)
 - Z: reserved (0)
 - Non-authenticated data: Unacceptable
- Questions:** 1
- Answer RRs:** 0
- Authority RRs:** 0
- Additional RRs:** 0
- Queries:** > gaia.cs.umass.edu: type A, class IN [Response In: 782]

Full List (Bottom Window):

- Packet 781:** Standard query 0x9cd2 A gaia.cs.umass.edu
- Protocol:** DNS
- Length:** 77 bytes
- Info:** Response: Message is a query
- Flags:** 0x0100 Standard query
- Details:**
 - Message is a query
 - Standard query (0)
 - Truncated: Message is not truncated
 - Recursion desired: Do query recursively (0)
 - Z: reserved (0)
 - Non-authenticated data: Unacceptable
- Questions:** 1
- Answer RRs:** 0
- Authority RRs:** 0
- Additional RRs:** 0
- Queries:** > gaia.cs.umass.edu: type A, class IN [Response In: 782]

Ans: The query is sent over a UDP Protocol. The packet number is 781.

6. Now locate the corresponding DNS response to the initial DNS query. What is the packet number in the trace for the DNS response message? Is this response message received via UDP or TCP?

¹ Remember that this “packet number” is assigned by Wireshark for listing purposes only; it is NOT a packet number contained in any real packet header.

*Ethernet

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ip.addr == 10.30.7.191 & dns

No.	Time	Source	Destination	Protocol	Length	Info
444	12.562523	10.30.7.191	10.30.1.14	DNS	93	Standard query 0x9cd2 A browser.events.data.microsoft.com

```

> Internet Protocol Version 4, Src: 10.30.1.13, Dst: 10.30.7.191
 0100 .... = Version: 4
  .... 0101 = Header Length: 20 bytes (5)
  > Differentiated Services Field: 0x00 (DSFP: CS0, ECN: Not-ECT)
  Total Length: 79
  Identification: 0x1351 (4945)
  > Flags: 0x40, Don't fragment
  ..0 0000 0000 0000 = Fragment Offset: 0
  Time to Live: 127
  Protocol: UDP (17)
  Header Checksum: 0xcb45 [validation disabled]
  [Header checksum status: Unverified]
  Source Address: 10.30.1.13
  Destination Address: 10.30.7.191
> User Datagram Protocol, Src Port: 53, Dst Port: 52686
  > Domain Name System (response)
    Transaction ID: 0x9ab
    > Flags: 0x180 Standard query response, No error
    Questions: 1
    Answer RRs: 1
    Authority RRs: 0
    Additional RRs: 0
    > Queries
      > gaia.cs.umass.edu: type A, class IN
    > Answers
      > gaia.cs.umass.edu: type A, class IN, addr 128.119.245.12
        [Request Id: 781]
        [Time: 0.001260000 seconds]

0000  04 a9 3e 87 79 93 c8 f9 f9 58 32 00 08 00 45 00  .> y... X2... E...
0010  00 4f 13 51 40 00 7f 11 cb 45 0a 1e 01 0d 0a 1e  .0 08... E.....
0020  07 bf 00 35 cd ce 00 3b f1 9c 59 ab 81 80 00 01  .5...1 Y.....
0030  00 01 00 00 00 00 04 67 61 69 61 02 63 73 05 75  ....g aia.cs.u...
0040  6d 61 73 73 03 65 64 75 00 00 01 00 01 00 0c 00  mass.edu .....
0050  01 00 01 00 00 09 36 00 04 80 77 f5 0c  .....G...W.....

```

Packets: 1495 · Displayed: 58 (3.9%) · Dropped: 0 (0.0%) · Profile: Default

Ans: The message is received via UDP and packet number is 782.

7. What is the destination port for the DNS query message? What is the source port of the DNS response message?

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ip.addr == 10.30.7.191 & dns

No.	Time	Source	Destination	Protocol	Length	Info
452	12.719541	10.30.1.14	10.30.7.191	DNS	214	Standard query response 0x9cd2 A browser.events.data.microsoft.com CNAME browser.events.data.trafficmanager.net
781	23.468212	10.30.7.191	10.30.1.13	DNS	77	Standard query 0x9ab A gaia.cs.umass.edu
782	23.469472	10.30.1.13	10.30.7.191	DNS	93	Standard query response 0x9ab A gaia.cs.umass.edu A 128.119.245.12

```

784 23.470176 10.30.7.191 10.30.1.13 DNS 77 Standard query 0x34af A gaia.cs.umass.edu
786 23.471365 10.30.1.13 10.30.7.191 DNS 93 Standard query response 0x34af A gaia.cs.umass.edu A 128.119.245.12
787 23.471702 10.30.7.191 10.30.1.13 DNS 77 Standard query 0x6d89 AAAA gaia.cs.umass.edu
795 23.383395 10.30.1.13 10.30.7.191 DNS 130 Standard query response 0x6d89 AAAA gaia.cs.umass.edu unix1.cs.umass.edu
818 24.379829 10.30.7.191 10.30.1.13 DNS 86 Standard query 0xf29a A stackpath.bootstrapcdncdn.com
819 24.381012 10.30.1.13 10.30.7.191 DNS 118 Standard query response 0xf29a A stackpath.bootstrapcdncdn.com A 104.18.11.207 A 104.18.10.207
821 24.381681 10.30.7.191 10.30.1.13 DNS 86 Standard query 0x69e4 A stackpath.bootstrapcdncdn.com
823 24.382426 10.30.7.191 10.30.1.13 DNS 75 Standard query 0x321f A code.jquery.com
824 24.382451 10.30.1.13 10.30.7.191 DNS 118 Standard query response 0x69e4 A stackpath.bootstrapcdncdn.com A 104.18.10.207 A 104.18.11.207
825 24.382817 10.30.7.191 10.30.1.13 DNS 86 Standard query 0x1268 AAAA stackpath.bootstrapcdncdn.com
826 24.383648 10.30.1.13 10.30.7.191 DNS 142 Standard query response 0x1268 AAAA stackpath.bootstrapcdncdn.com AAAA 2606:4700::6812:bef AAAA 2606:4700::6812:
833 24.444976 10.30.1.13 10.30.7.191 DNS 143 Standard query response 0x321f A code.jquery.com CNAME cds.s5x3j6q5.hwdcan.net A 69.16.175.42 A 69.16.175.10

[Header checksum status: Unverified]
Source Address: 10.30.1.13
Destination Address: 10.30.7.191
> User Datagram Protocol, Src Port: 53, Dst Port: 52686
  Source Port: 53
  Destination Port: 52686
  Length: 59
  Checksum: 0xf195 [unverified]
  [Checksum Status: Unverified]
  [Stream index: 97]
  > [Timestamps]
  UDP payload (51 bytes)
  > Domain Name System (response)

0000  04 a9 3e 87 79 93 c8 f9 f9 58 32 00 08 00 45 00  .> y... X2... E...
0010  00 4f 13 51 40 00 7f 11 cb 45 0a 1e 01 0d 0a 1e  .0 08... E.....
0020  07 bf 00 35 cd ce 00 3b f1 9c 59 ab 81 80 00 01  .5...1 Y.....
0030  00 01 00 00 00 00 04 67 61 69 61 02 63 73 05 75  ....g aia.cs.u...
0040  6d 61 73 73 03 65 64 75 00 00 01 00 01 00 0c 00  mass.edu .....
0050  01 00 01 00 00 09 36 00 04 80 77 f5 0c  .....G...W.....

```

User Datagram Protocol (udp), 8 bytes

Packets: 1495 · Displayed: 58 (3.9%) · Dropped: 0 (0.0%) · Profile: Default

Ans: The port number of destination port for query and source source port of response is 53.

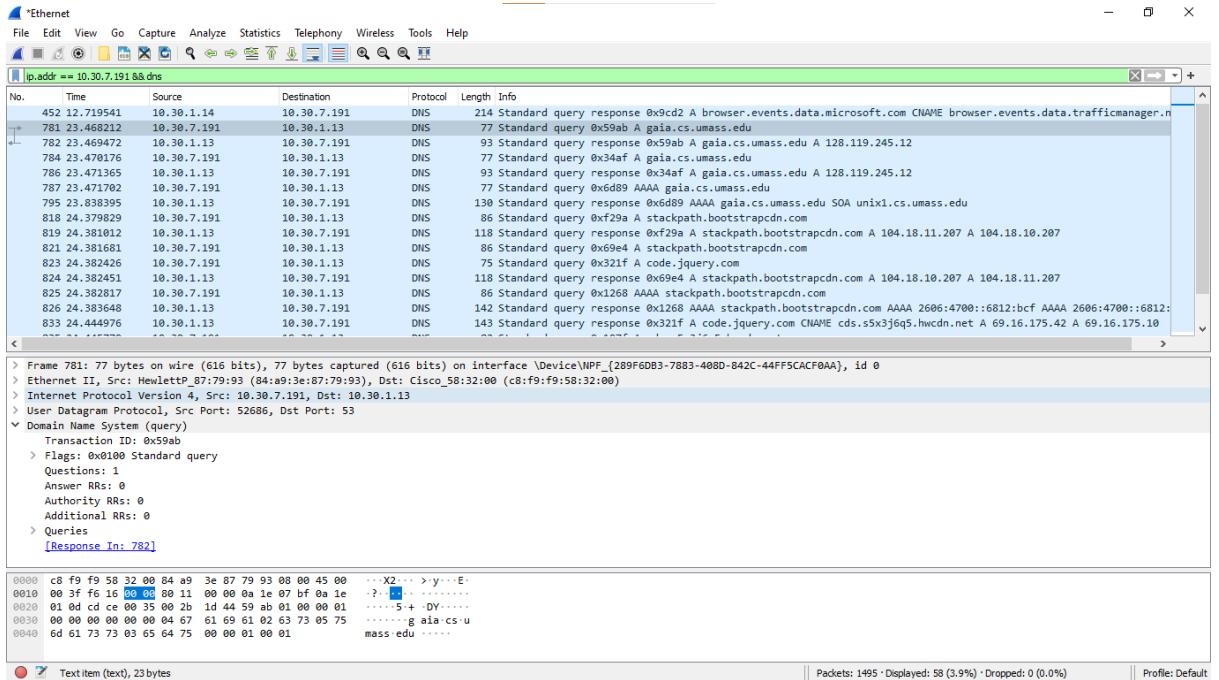
8. To what IP address is the DNS query message sent?

Ans: IP Address: 10.30.1.13

9. Examine the DNS query message. How many “questions” does this DNS message contain?

How many “answers” answers does it contain?

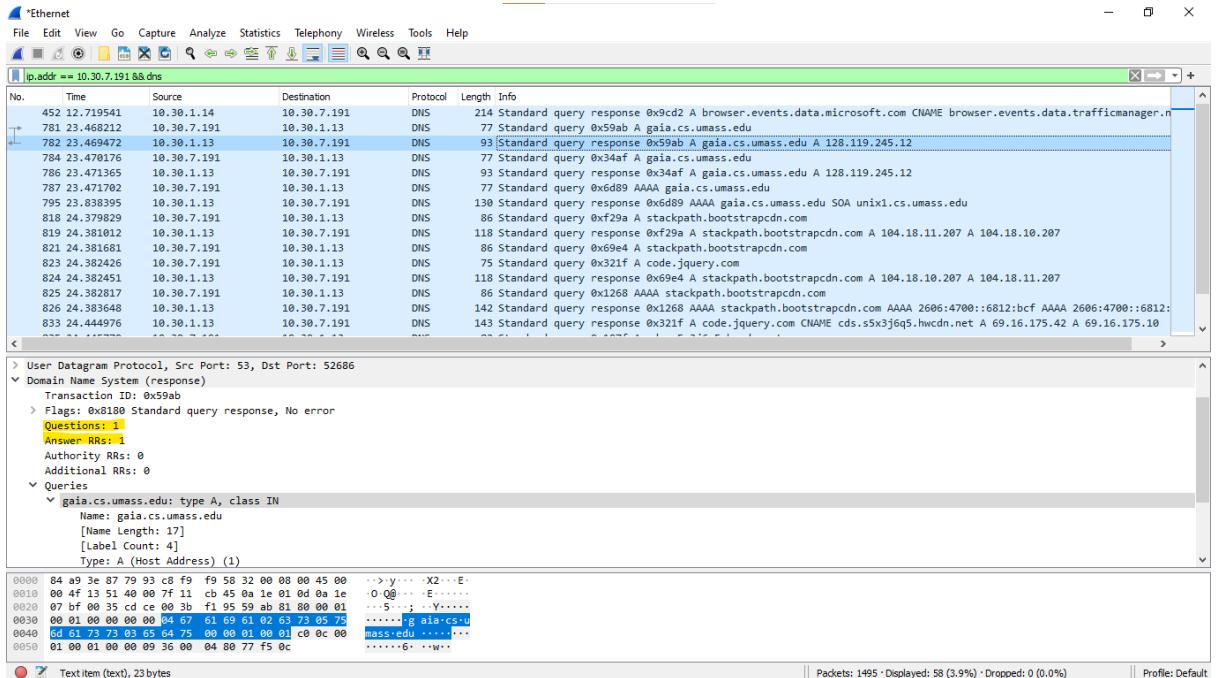
Ans:



Question is 1 and the answer is 0.

10. Examine the DNS response message to the initial query message. How many “questions” does this DNS message contain? How many “answers” answers does it contain?

Ans:

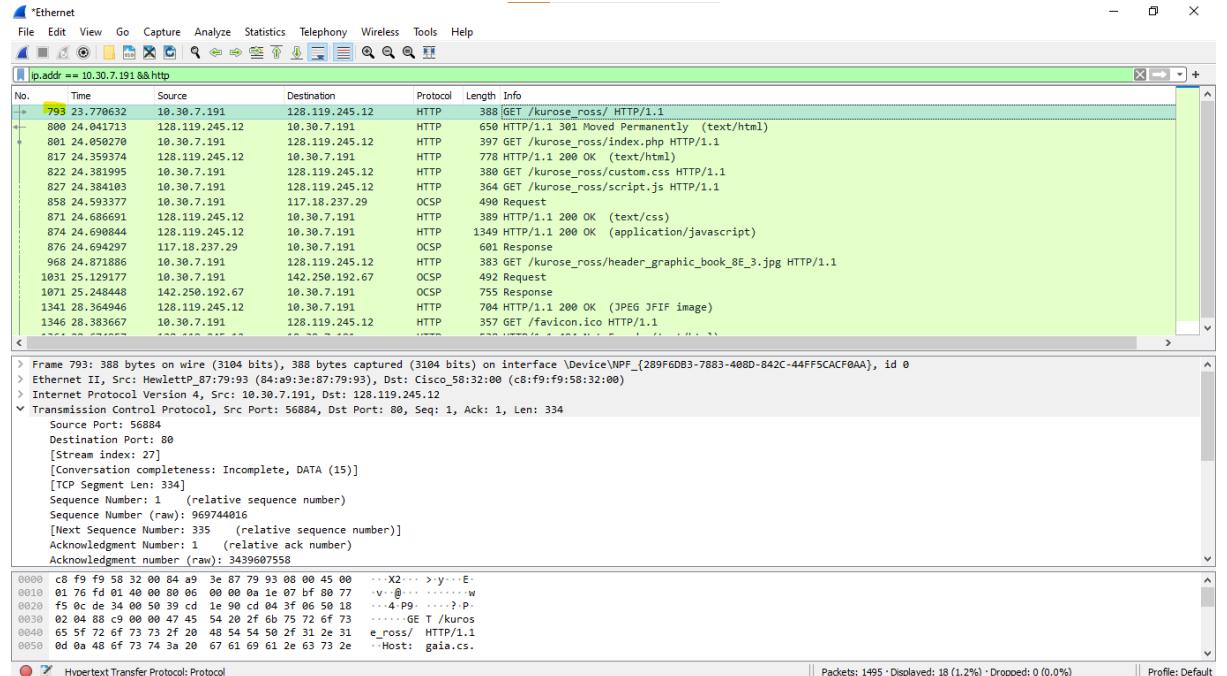


Question is 1 and Answer is 1.

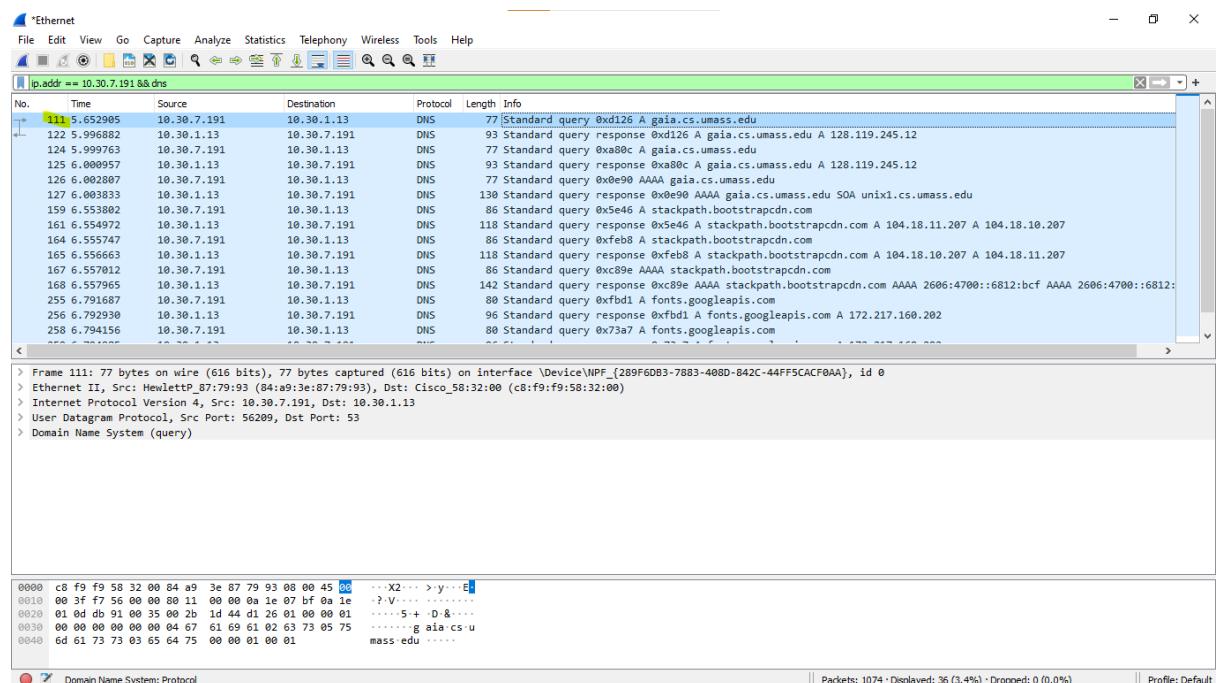
11. The web page for the base file http://gaia.cs.umass.edu/kurose_ross/ references the image object http://gaia.cs.umass.edu/kurose_ross/header_graphic_book_8E_2.jpg, which, like the base webpage, is on gaia.cs.umass.edu. What is the packet number in the trace for the initial HTTP GET request for the base file http://gaia.cs.umass.edu/kurose_ross/? What is the packet number in the trace of the DNS query made to resolve gaia.cs.umass.edu so that

this initial HTTP request can be sent to the gaia.cs.umass.edu IP address? What is the packet number in the trace of the received DNS response? What is the packet number in the trace for the HTTP GET request for the image object http://gaia.cs.umass.edu/kurose_ross/header_graphic_book_8E2.jpg? What is the packet number in the DNS query made to resolve gaia.cs.umass.edu so that this second HTTP request can be sent to the gaia.cs.umass.edu IP address? Discuss how DNS caching affects the answer to this last question.

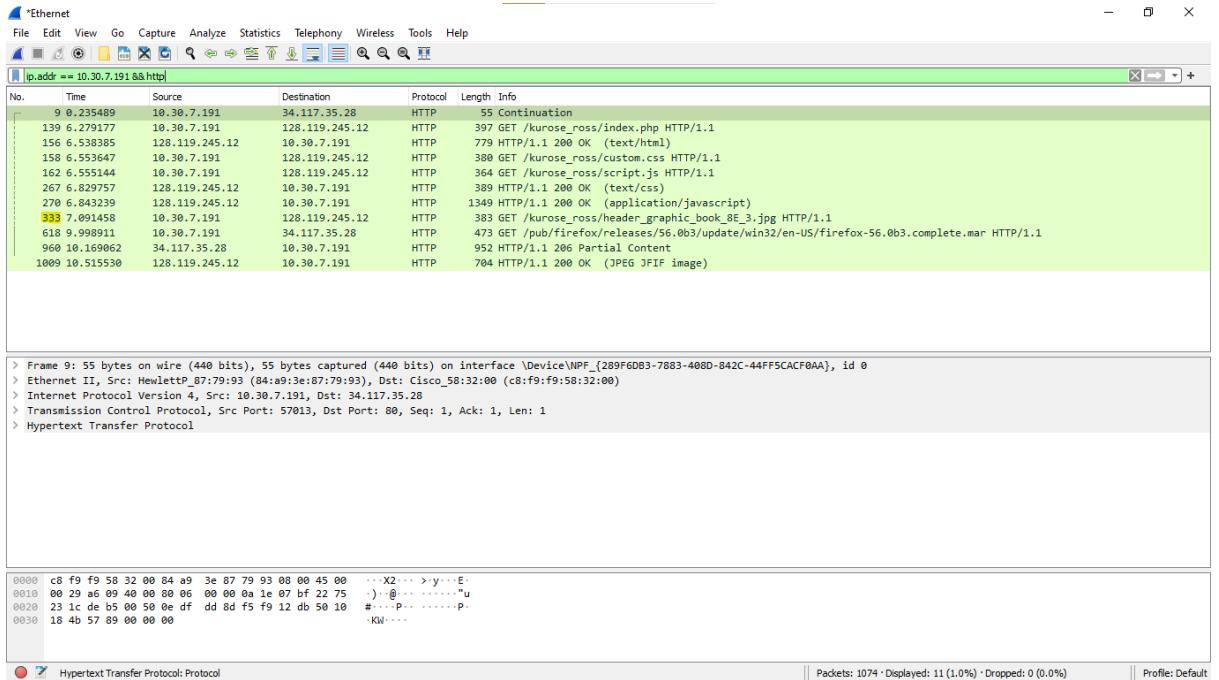
Ans:



Packet Number for initial HTTP is 793.



Packet number is 111, In response to query the packet number is 112

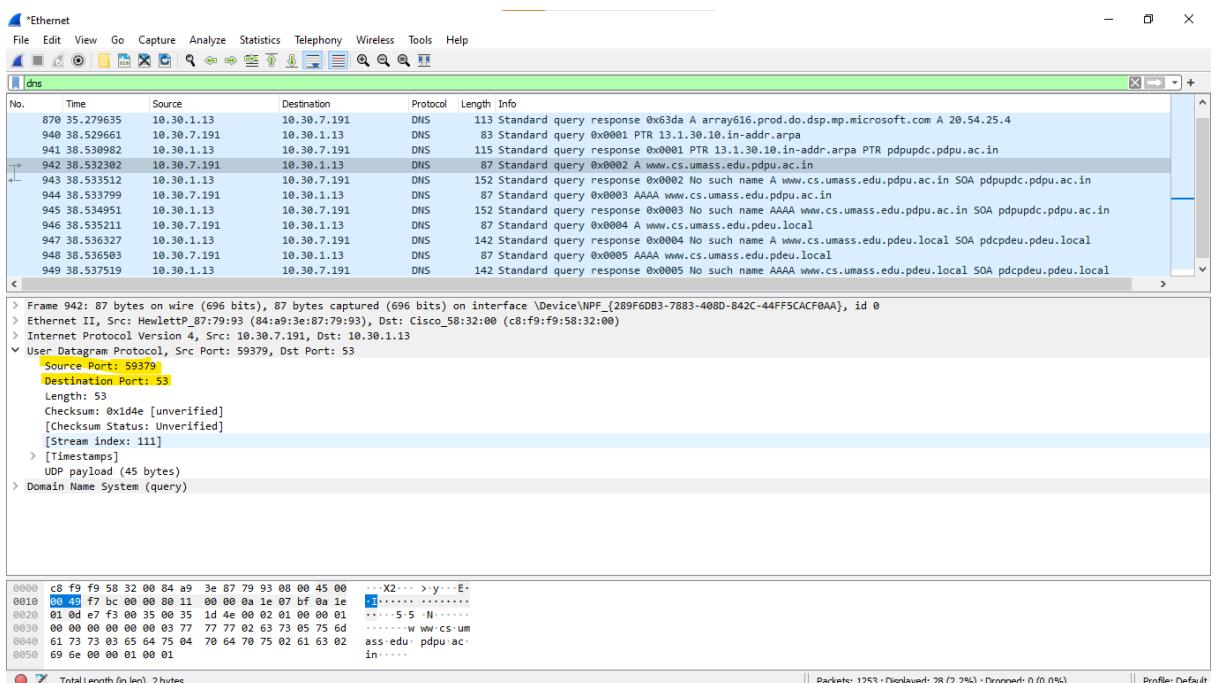


Packet number is 333.

No DNS query is sent for the second HTTP GET request. Because the IP address is already stored in local DNS cache memory.

12. What is the destination port for the DNS query message? What is the source port of the DNS response message?

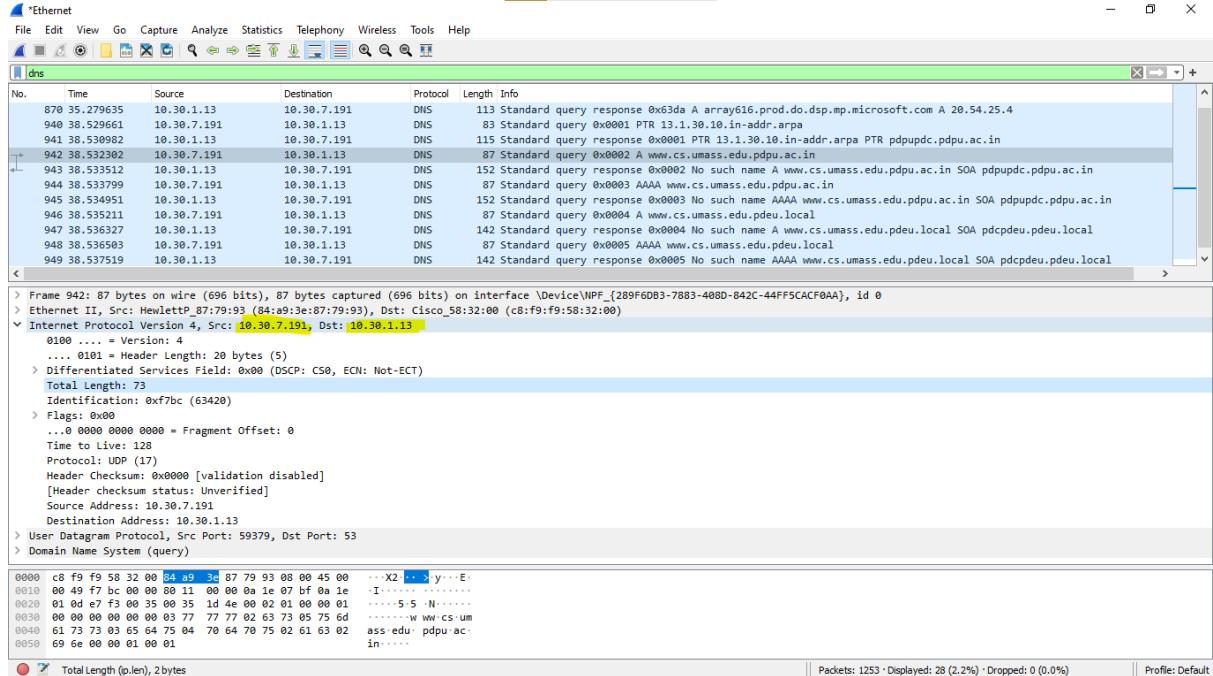
Ans:



The port number of destination for query and source for response is 53.

13. To what IP address is the DNS query message sent? Is this the IP address of your default local DNS server?

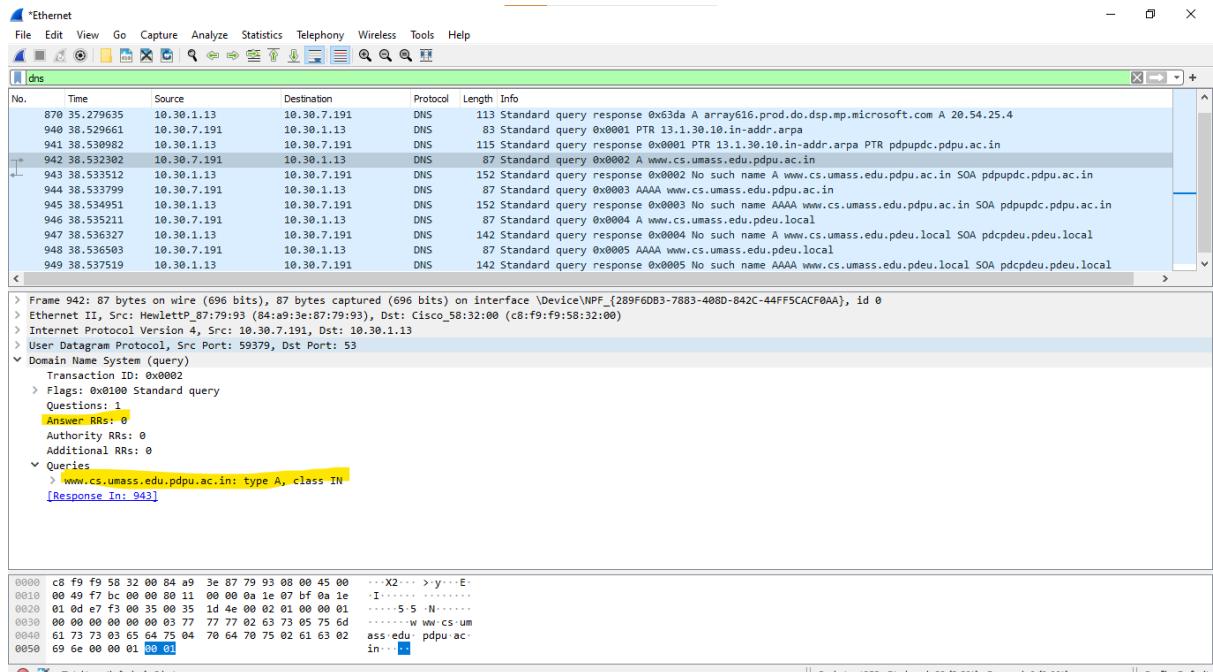
Ans:



It is a local dns server.

14. Examine the DNS query message. What “Type” of DNS query is it? Does the query message contain any “answers”?

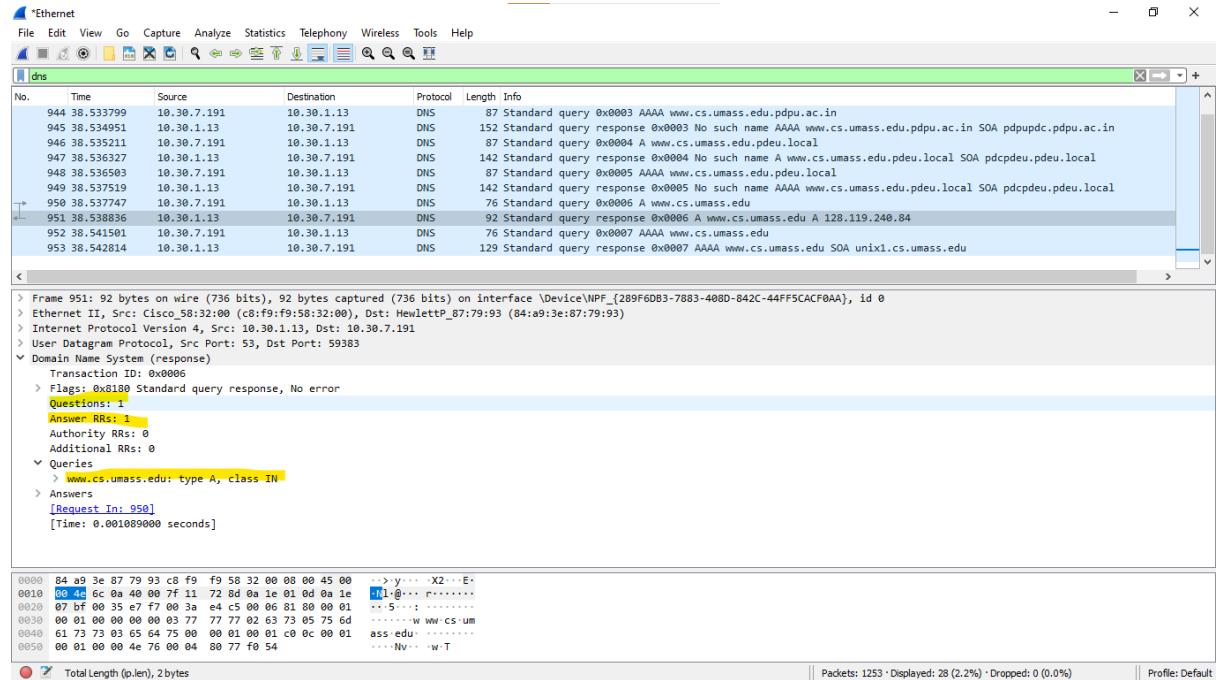
Ans:



Type is A, It contains 0 answers.

15. Examine the DNS response message to the query message. How many “questions” does this DNS response message contain? How many “answers”?

Ans:



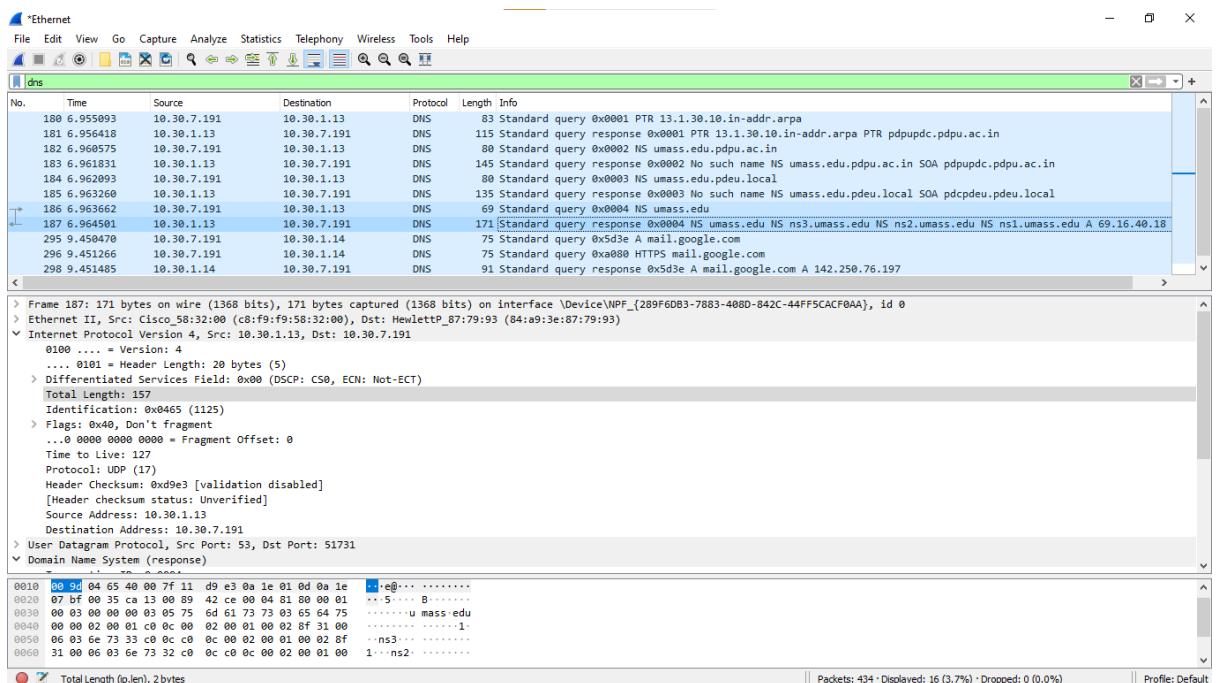
It is type A and it contains 1 question and 1 answer.

```
C:\Users\wcclab>nslookup -type=NS umass.edu
Server: pdpupdc.pdpv.ac.in
Address: 10.30.1.13

Non-authoritative answer:
umass.edu      nameserver = ns3.umass.edu
umass.edu      nameserver = ns2.umass.edu
umass.edu      nameserver = ns1.umass.edu

ns3.umass.edu  internet address = 69.16.40.18
ns2.umass.edu  internet address = 128.119.16.28
ns1.umass.edu  internet address = 128.119.10.27

C:\Users\wcclab>
```



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dns

No.	Time	Source	Destination	Protocol	Length	Info
180	6.955093	10.30.1.13	10.30.1.13	DNS	83	Standard query 0x0001 PTR 13.1.30.10.in-addr.arpa
181	6.956418	10.30.1.13	10.30.1.13	DNS	115	Standard query response 0x0001 PTR 13.1.30.10.in-addr.arpa PTR pdpupdc.pdp.ac.in
182	6.960575	10.30.1.13	10.30.1.13	DNS	80	Standard query 0x0002 NS umass.edu.pdp.ac.in
183	6.961831	10.30.1.13	10.30.1.13	DNS	145	Standard query response 0x0002 No such name NS umass.edu.pdp.ac.in SOA pdpupdc.pdp.ac.in
184	6.962693	10.30.1.13	10.30.1.13	DNS	88	Standard query 0x0003 NS umass.edu.pdeu.local
185	6.963260	10.30.1.13	10.30.1.13	DNS	135	Standard query response 0x0003 No such name NS umass.edu.pdeu.local SOA pdcpdeu.pdeu.local
186	6.963662	10.30.1.13	10.30.1.13	DNS	69	Standard query 0x0004 NS umass.edu
187	6.964501	10.30.1.13	10.30.1.13	DNS	171	Standard query response 0x0004 NS umass.edu NS ns3.umass.edu NS ns2.umass.edu NS ns1.umass.edu A 69.16.40.18
295	9.450478	10.30.1.13	10.30.1.14	DNS	75	Standard query 0x5d3e A mail.google.com
296	9.451266	10.30.1.13	10.30.1.14	DNS	75	Standard query 0xa080 HTTPS mail.google.com
298	9.451485	10.30.1.14	10.30.1.13	DNS	91	Standard query response 0x5d3e A mail.google.com A 142.250.76.197

```
> Frame 186: 69 bytes on wire (552 bits), 69 bytes captured (552 bits) on interface \Device\NPF_{289F6DB3-7883-408D-842C-44FF5CACF0AA}, id 0
> Ethernet II, Src: Hewlett_P_87:79:93 (04:a9:3e:87:79:93), Dst: Cisco_58:32:00 (c8:f9:58:32:00)
> Internet Protocol Version 4, Src: 10.30.1.13, Dst: 10.30.1.13
> User Datagram Protocol, Src Port: 51731, Dst Port: 53
  Domain Name System (query)
    Transaction ID: 0x0004
    Flags: 0x0100 Standard query
      Questions: 1
        Answer RRs: 0
        Authority RRs: 0
        Additional RRs: 0
      Queries
        > umass.edu: type NS, class IN
        [Response In: 187]
```

0000	c8 f9 f9 58 32 00 00 84 a9 3e 67 79 93 08 00 45 00	X2: .. > y .. E..
0010	00 00 67 d7 00 00 00 11 00 00 00 1e 07 bf 00 00 1e#
0020	01 0d ca 13 00 35 00 23 1d 2c 00 04 01 00 00 015 # <.....
0030	00 00 00 00 00 00 05 75 6d 61 73 73 03 65 64 75u mass.edu
0040	00 00 02 00 01

Total Length (p.len), 2 bytes || Packets: 434 • Displayed: 16 (3.7%) • Dropped: 0 (0.0%) || Profile: Default

*Ethernet

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dns

No.	Time	Source	Destination	Protocol	Length	Info
186	6.963662	10.30.1.13	10.30.1.13	DNS	69	Standard query 0x0004 NS umass.edu
187	6.964501	10.30.1.13	10.30.1.13	DNS	171	Standard query response 0x0004 NS umass.edu NS ns3.umass.edu NS ns2.umass.edu NS ns1.umass.edu A 69.16.40.18
295	9.450478	10.30.1.13	10.30.1.14	DNS	75	Standard query 0x5d3e A mail.google.com

```
> Frame 187: 171 bytes on wire (1368 bits), 171 bytes captured (1368 bits) on interface \Device\NPF_{289F6DB3-7883-408D-842C-44FF5CACF0AA}, id 0
> Ethernet II, Src: Cisco_58:32:00 (c8:f9:58:32:00), Dst: Hewlett_P_87:79:93 (04:a9:3e:87:79:93)
> Internet Protocol Version 4, Src: 10.30.1.13, Dst: 10.30.1.13
> User Datagram Protocol, Src Port: 53, Dst Port: 51731
  Domain Name System (response)
    Transaction ID: 0x0004
    Flags: 0x0100 Standard query response, No error
    Questions: 1
      Answer RRs: 3
      Authority RRs: 0
      Additional RRs: 3
    Queries
      > umass.edu: type NS, class IN
    Answers
      > umass.edu: type NS, class IN, ns ns3.umass.edu
      > umass.edu: type NS, class IN, ns ns2.umass.edu
      > umass.edu: type NS, class IN, ns ns1.umass.edu
    Additional records
      > ns3.umass.edu: type A, class IN, addr 69.16.40.18
      > ns2.umass.edu: type A, class IN, addr 128.119.10.28
      > ns1.umass.edu: type A, class IN, addr 128.119.10.27
    [Request In: 186]
    [Time: 0.000839000 seconds]
```

0010	00 9d 04 65 40 00 7f 11 d9 e3 0a 1e 01 8d 0a 1e	..@e@.
0020	07 bf 00 35 ca 13 00 89 42 ce 00 04 81 80 00 01	.. 5 .. B ..
0030	00 03 00 00 00 03 05 75 6d 61 73 73 03 65 64 75u mass.edu
0040	00 00 02 00 01 c0 0c 0c 02 00 01 00 02 8f 31 001..
0050	06 03 6e 73 33 c0 0c 0c 00 02 00 01 00 02 6f	..ns3.. ..
0060	31 00 06 03 06 73 32 c0 0c c0 0c 00 02 00 01 00	1..ns2.. ..

Total Length (p.len), 2 bytes || Packets: 434 • Displayed: 16 (3.7%) • Dropped: 0 (0.0%) || Profile: Default

16. To what IP address is the DNS query message sent? Is this the IP address of your default local DNS server?
Ans: IP Address : 10.30.1.13 It is a local DNS Server.
17. Examine the DNS query message. How many questions does the query have? Does the query message contain any “answers”?
It contains 1 question and 0 answers.
18. Examine the DNS response message. How many answers does the response have? What information is contained in the answers? How many additional resource records are returned? What additional information is included in these additional resource records?
It contains 3 answers. It contained the name,type,class and browser name address. It also contains additional information about authoritative server information and their IP Address.

3. Implement a DNS server in packet tracer and understand how it works.

PC0

Physical Config Desktop Programming Attributes

Web Browser

URL <http://www.janakar.com> Go Stop

you are visiting www.janakar.com

Server0

Physical Config Services Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DNS

DNS Service On Off

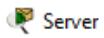
Resource Records

Name	Type
www.janakar.com	A Record

Address 192.168.1.1

Add Save Remove

No.	Name	Type	Detail
0	www.janakar.com	A Record	192.168.1.1



- □ ×

Physical Config Services Desktop Programming Attributes

IP Configuration

X

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.1

Subnet Mask

255.255.255.0

Default Gateway

0.0.0.0

DNS Server

192.168.1.1

IPv6 Configuration

Automatic

Static

IPv6 Address

/

Link Local Address

FE80::201:63FF:FEC1:CB8A

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

▼

Username

Password

PC

Physical Config Desktop **Programming** Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

DHCP Static

IPv4 Address: 192.168.1.5

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 192.168.1.1

IPv6 Configuration

Automatic Static

IPv6 Address: /

Link Local Address: FE80:206:2AFF:FE75:B4A3

Default Gateway:

DNS Server:

802.1X

Use 802.1X Security

Authentication: MD5

Username:

Password:

PC

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>|
```

Server0

Physical Config Services Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DCHPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

File Name: index.html

```
<html>
you are visiting www.janakar.com
</html>
```