

Name: Aya Salah Eldine

Id: 7361

Lab4

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

```
aya@DESKTOP-493J22T:~$ nslookup www.iitb.ac.in
Server:          192.168.1.1
Address:         192.168.1.1#53

Non-authoritative answer:
Name:   www.iitb.ac.in
Address: 103.21.124.133

aya@DESKTOP-493J22T:~$ █
```

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

```
aya@DESKTOP-493J22T:~$ nslookup www.iitb.ac.in
Server:          192.168.1.1
Address:         192.168.1.1#53

Non-authoritative answer:
Name:   www.iitb.ac.in
Address: 103.21.124.133

aya@DESKTOP-493J22T:~$ █
```

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

```
aya@DESKTOP-493J22T:~$ nslookup www.iitb.ac.in
Server:          192.168.1.1
Address:         192.168.1.1#53

Non-authoritative answer:
Name:   www.iitb.ac.in
Address: 103.21.124.133

aya@DESKTOP-493J22T:~$ █
```

4- Use the nslookup command to determine the name of the authoritative name server for the iit.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?

```
aya@DESKTOP-493J22T:~$ nslookup -type=NS iitb.ac.in
Server:          192.168.1.1
Address:         192.168.1.1#53

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

Authoritative answers can be found from:

aya@DESKTOP-493J22T:~$
```

5-Repeat the previous 4 steps using Python programming language and with the aid of the following packages:

- **socket** — Low-level networking interface — Python 3.12.3 documentation
- **The dns.resolver.Resolver and dns.resolver.Answer Classes** — dnspython 2.6.1 documentation from (dnspython · PyPI

```

Welcome import socket Untitled-1 1
1 import socket
2 import dns.resolver
3
4 # 1. Get the IP address of www.iitb.ac.in
5 def get_ip_address(hostname):
6     try:
7         ip_address = socket.gethostbyname(hostname)
8         return ip_address
9     except socket.error as e:
10        print(f"Error: {e}")
11        return None
12
13 iitb_ip = get_ip_address('www.iitb.ac.in')
14 print(f"1. IP address of www.iitb.ac.in: {iitb_ip}")
15
16 # 2. Get the IP address of the DNS server that provided the answer
17 resolver = dns.resolver.Resolver()
18 try:
19     response = resolver.resolve('www.iitb.ac.in')
20     dns_server_ip = resolver.nameservers[0] # Get the first DNS server used by the resolver
21     print(f"2. IP address of the DNS server that provided the answer: {dns_server_ip}")
22 except dns.resolver.NoAnswer:
23     print("No DNS server found")
24 except dns.exception.DNSException as e:
25     print(f"DNS Exception: {e}")
26
27 # 3. Determine if the answer is authoritative or non-authoritative
28 try:
29     response = resolver.resolve('www.iitb.ac.in', 'A', raise_on_no_answer=False)
30     if response.rdtype:
31         if response.rdtype.ttl == 0:
32             print("3. The answer is authoritative.")
33         else:
34             print("3. The answer is non-authoritative.")
35     else:
36         print("3. No answer found.")
37 except dns.resolver.NoAnswer:
38     print("3. No answer found.")
39
40 # 4. Get the authoritative name server for the iitb.ac.in domain
41 domain = "iitb.ac.in"
42 record_type = "NS"
43
44 try:
45     response = resolver.resolve(domain, record_type)
46     nameservers = [str(ns) for ns in response]
47     if nameservers:
48         print("4. Authoritative name servers for iitb.ac.in:")
49         for nameserver in nameservers:
50             print(f"    - {nameserver}")
51     else:
52         print("4. No authoritative name servers found.")
53 except dns.resolver.NXDOMAIN:
54     print("4. Domain does not exist.")
55 except dns.resolver.NoAnswer:
56     print("4. No authoritative name servers found.")
57 except dns.resolver.Timeout:
58     print("4. DNS query timed out.")
59 except dns.resolver.ResolverError as e:

```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

PS C:\Users\Dell> python -u "C:\Users\Dell\AppData\Local\Temp\tempCodeRunnerFile.python"
1. IP address of www.iitb.ac.in: 103.21.124.133
2. IP address of the DNS server that provided the answer: 192.168.1.1
3. The answer is non-authoritative.
4. Authoritative name servers for iitb.ac.in:
   - dns3.iitb.ac.in.
   - dns2.iitb.ac.in.
   - dns1.iitb.ac.in.
PS C:\Users\Dell>

```

6-Locate the first DNS query message resolving the name gaia.cs.umass.edu. What is the packet number in the trace for the DNS query message? Is this query message sent over UDP or TCP? Udp/15

dns-wireshark-trace1-1.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-/>

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	fe80::250:f1ff:fe80...	ff02::1	ICMPv6	174	Router Advertisement from 00:50:f1:80:00:00
2	0.511889	Sonos_25:3a:2a	Spanning-tree-(for-...	STP	60	Conf. Root = 36864/0/48:a6:b8:25:3a:2a Cost = 0 Port = 0x8001
3	1.433653	Sonos_25:3a:2a	Spanning-tree-(for-...	STP	60	Conf. Root = 36864/0/48:a6:b8:25:3a:2a Cost = 0 Port = 0x8001
4	2.457672	Sonos_25:3a:2a	Spanning-tree-(for-...	STP	60	Conf. Root = 36864/0/48:a6:b8:25:3a:2a Cost = 0 Port = 0x8001
5	2.764896	10.0.0.254	239.255.255.250	SSDP	317	NOTIFY * HTTP/1.1
6	2.765750	10.0.0.254	239.255.255.250	SSDP	317	NOTIFY * HTTP/1.1
7	2.766303	10.0.0.254	239.255.255.250	SSDP	326	NOTIFY * HTTP/1.1
8	2.766974	10.0.0.254	239.255.255.250	SSDP	326	NOTIFY * HTTP/1.1
9	2.767715	10.0.0.254	239.255.255.250	SSDP	381	NOTIFY * HTTP/1.1
10	2.768361	10.0.0.254	239.255.255.250	SSDP	381	NOTIFY * HTTP/1.1
11	2.769103	10.0.0.254	239.255.255.250	SSDP	391	NOTIFY * HTTP/1.1
12	2.769651	10.0.0.254	239.255.255.250	SSDP	391	NOTIFY * HTTP/1.1
13	3.072087	fe80::250:f1ff:fe80...	ff02::1	ICMPv6	174	Router Advertisement from 00:50:f1:80:00:00
14	3.323466	10.0.0.44	128.119.245.12	TCP	78	62041 → 80 [SYN] Seq=0 Win=65535 Len=0 MSS=1460 WS=64 TSval=574236613 TSecr=
15	3.325064	10.0.0.44	75.75.75.75	DNS	77	Standard query 0x3c29 A gaia.cs.umass.edu
16	3.325903	10.0.0.44	128.119.245.12	TCP	78	62042 → 80 [SYN] Seq=0 Win=65535 Len=0 MSS=1460 WS=64 TSval=574236615 TSecr=
17	3.348972	75.75.75.75	10.0.0.44	DNS	93	Standard query response 0x3c29 A gaia.cs.umass.edu A 128.119.245.12
18	3.366349	128.119.245.12	10.0.0.44	TCP	76	80 → 62041 [SYN, ACK] Seq=0 Ack=1 Win=28960 Len=0 MSS=1460 SACK_PERM TSval=3
19	3.366357	128.119.245.12	10.0.0.44	TCP	76	80 → 62042 [SYN, ACK] Seq=0 Ack=1 Win=28960 Len=0 MSS=1460 SACK_PERM TSval=3
20	3.366509	10.0.0.44	128.119.245.12	TCP	66	62041 → 80 [ACK] Seq=1 Ack=1 Win=131712 Len=0 TSval=574236655 TSecr=37189254
21	3.366510	10.0.0.44	128.119.245.12	TCP	66	62042 → 80 [ACK] Seq=1 Ack=1 Win=131712 Len=0 TSval=574236655 TSecr=37189254
22	3.367054	10.0.0.44	128.119.245.12	HTTP	831	GET /kumona.nrcf/ HTTP/1.1

> Frame 15: 77 bytes on wire (616 bits), 77 bytes captured (616 bits) on interface en0, id 0

> Ethernet II, Src: Apple_98:d9:27 (78:4f:43:98:d9:27), Dst: Maxlinear_80:00:00 (00:50:f1:80:00:00)

> Internet Protocol Version 4, Src: 10.0.0.44, Dst: 75.75.75.75

> User Datagram Protocol, Src Port: 58350, Dst Port: 53

> Domain Name System (query)

7-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? 17/udp

dns-wireshark-trace1-1.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Destination	Protocol	Length	Info
15	3.325064	10.0.0.44	75.75.75.75	DNS	77	Standard query 0x3c29 A gaia.cs.umass.edu
17	3.348972	75.75.75.75	10.0.0.44	DNS	93	Standard query response 0x3c29 A gaia.cs.umass.edu A 128.119.245.12
30	3.427392	10.0.0.44	75.75.75.75	DNS	83	Standard query 0xeda4 A maxcdn.bootstrapcdn.com
31	3.428514	10.0.0.44	75.75.75.75	DNS	79	Standard query 0xa79 A ajax.googleapis.com
35	3.445049	75.75.75.75	10.0.0.44	DNS	135	Standard query response 0xeda4 A maxcdn.bootstrapcdn.com CNAME cds.j3z9t3p6.f
36	3.448906	75.75.75.75	10.0.0.44	DNS	95	Standard query response 0xa79 A ajax.googleapis.com A 172.217.12.202
521	3.678228	10.0.0.44	75.75.75.75	DNS	75	Standard query 0xdcfa A www.pearson.com
522	3.678393	10.0.0.44	75.75.75.75	DNS	79	Standard query 0xb436 A www.vitalsource.com
523	3.678598	10.0.0.44	75.75.75.75	DNS	72	Standard query 0xd3a3 A redshelf.com
526	3.695928	75.75.75.75	10.0.0.44	DNS	169	Standard query response 0xdcfa A www.pearson.com CNAME wilcard.pearson.com.e
527	3.698647	10.0.0.44	75.75.75.75	DNS	74	Standard query 0xe1a9 A www.amazon.com
528	3.703716	75.75.75.75	10.0.0.44	DNS	159	Standard query response 0xb436 A www.vitalsource.com A 104.17.67.241 A 104.17
529	3.704968	75.75.75.75	10.0.0.44	DNS	88	Standard query response 0xd3a3 A redshelf.com A 34.196.10.62
530	3.718156	75.75.75.75	10.0.0.44	DNS	169	Standard query response 0xe1a9 A www.amazon.com CNAME tp.47cf2c8c9-frontier.a
541	6.801907	10.0.0.44	75.75.75.75	DNS	96	Standard query 0x6cf4 A ss-prod-ue1-notif-63.aws.adobess.com
542	6.818616	75.75.75.75	10.0.0.44	DNS	144	Standard query response 0x6cf4 A ss-prod-ue1-notif-63.aws.adobess.com A 52.26

```
> Frame 17: 93 bytes on wire (744 bits), 93 bytes captured (744 bits) on interface en0, id 0
> Ethernet II, Src: Maxlinear_80:00:00 (00:50:f1:80:00:00), Dst: Apple_98:d9:27 (78:4f:43:98:d9:27)
> Internet Protocol Version 4, Src: 75.75.75.75, Dst: 10.0.0.44
> User Datagram Protocol, Src Port: 53, Dst Port: 58350
> Domain Name System (response)
```

8. What is the destination port for the DNS query message?

What is the source port of the DNS response message? 53

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

75.75.75.75

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

Questions: 1 Answer :0

```
✓ Domain Name System (query)
  Transaction ID: 0x3c29
  > Flags: 0x0100 Standard query
  Questions: 1
  Answer RRs: 0
  Authority RRs: 0
  Additional RRs: 0
  > Queries
```

11.. 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?

```
▼ Domain Name System (response)
  Transaction ID: 0x3c29
  > Flags: 0x8180 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 In: 15]
    [Time: 0.023908000 seconds]
```

12. 22 – 15 – 17 - 205 – 15 – no because it is cached

dns-wireshark-trace1-1.pcapng

No.	Time	Source	Destination	Protocol	Length	Info
22	3.367054	10.0.0.44	128.119.245.12	HTTP	831	GET /kurose_ross/ HTTP/1.1
28	3.395005	128.119.245.12	10.0.0.44	HTTP	857	HTTP/1.1 200 OK (text/html)
205	3.570142	10.0.0.44	128.119.245.12	HTTP	817	GET /kurose_ross/header_graphic_book_8E_2.jpg HTTP/1.1
516	3.670350	128.119.245.12	10.0.0.44	HTTP	454	HTTP/1.1 200 OK (JPEG JFIF image)
520	3.673776	10.0.0.44	128.119.245.12	HTTP	788	GET /favicon.ico HTTP/1.1
524	3.692288	128.119.245.12	10.0.0.44	HTTP	550	HTTP/1.1 404 Not Found (text/html)

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

dns-wireshark-trace2-1.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Destination	Protocol	Length	Info
19	6.003804	10.0.0.44	75.75.75.75	DNS	76	Standard query 0x609b A www.cs.umass.edu
20	6.037987	75.75.75.75	10.0.0.44	DNS	92	Standard query response 0x609b A www.cs.umass.edu A 128.11
31	10.494907	10.0.0.44	75.75.75.75	DNS	80	Standard query 0x1462 A cc-api-data.adobe.io
32	10.512877	75.75.75.75	10.0.0.44	DNS	208	Standard query response 0x1462 A cc-api-data.adobe.io A 52

> Frame 19: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface en0, id 0

> Ethernet II, Src: Apple_98:d9:27 (78:4f:43:98:d9:27), Dst: Maxlinear_80:00:00 (00:50:f1:80:00:00)

> Internet Protocol Version 4, Src: 10.0.0.44, Dst: 75.75.75.75

> User Datagram Protocol, Src Port: 57837, Dst Port: 53

▼ Domain Name System (query)

Transaction ID: 0x609b

> Flags: 0x0100 Standard query

Questions: 1

Answer RRs: 0

Authority RRs: 0

Additional RRs: 0

▼ Queries

> www.cs.umass.edu: type A, class IN

[\[Response In: 20\]](#)

dns-wireshark-trace2-1.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Destination	Protocol	Length	Info
19	6.003804	10.0.0.44	75.75.75.75	DNS	76	Standard query 0x609b A www.cs.umass.edu
20	6.037987	75.75.75.75	10.0.0.44	DNS	92	Standard query response 0x609b A www.cs.umass.edu A 128.119.240.84
31	10.494907	10.0.0.44	75.75.75.75	DNS	80	Standard query 0x1462 A cc-api-data.adobe.io
32	10.512877	75.75.75.75	10.0.0.44	DNS	208	Standard query response 0x1462 A cc-api-data.adobe.io A 52.5.6.70 A

> Frame 20: 92 bytes on wire (736 bits), 92 bytes captured (736 bits) on interface en0, id 0

> Ethernet II, Src: Maxlinear_80:00:00 (00:50:f1:80:00:00), Dst: Apple_98:d9:27 (78:4f:43:98:d9:27)

> Internet Protocol Version 4, Src: 75.75.75.75, Dst: 10.0.0.44

> User Datagram Protocol, Src Port: 53, Dst Port: 57837

▼ Domain Name System (response)

Transaction ID: 0x609b

> Flags: 0x8180 Standard query response, No error

Questions: 1

Answer RRs: 1

Authority RRs: 0

Additional RRs: 0

▼ Queries

> www.cs.umass.edu: type A, class IN

▼ Answers

> www.cs.umass.edu: type A, class IN, addr 128.119.240.84

[\[Request In: 19\]](#)

[Time: 0.034183000 seconds]

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

75.75.75.75 – yes

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

dns-wireshark-trace2-1.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Destination	Protocol	Length	Info
19	6.003804	10.0.0.44	75.75.75.75	DNS	76	Standard query 0x609b A www.cs.umass.edu
20	6.037987	75.75.75.75	10.0.0.44	DNS	92	Standard query response 0x609b A www.cs.umass.edu A 128
31	10.494907	10.0.0.44	75.75.75.75	DNS	80	Standard query 0x1462 A cc-api-data.adobe.io
32	10.512877	75.75.75.75	10.0.0.44	DNS	208	Standard query response 0x1462 A cc-api-data.adobe.io A

> Frame 19: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface en0, id 0

> Ethernet II, Src: Apple_98:d9:27 (78:4f:43:98:d9:27), Dst: Maxlinear_80:00:00 (00:50:f1:80:00:00)

> Internet Protocol Version 4, Src: 10.0.0.44, Dst: 75.75.75.75

> User Datagram Protocol, Src Port: 57837, Dst Port: 53

✓ Domain Name System (query)

Transaction ID: 0x609b

▼ Flags: 0x0100 Standard query

- 0... .. = Response: Message is a query
- .000 0... .. = Opcode: Standard query (0)
-0. = Truncated: Message is not truncated
-1 = Recursion desired: Do query recursively
-0... .. = Z: reserved (0)
-0 = Non-authenticated data: Unacceptable

Questions: 1

Answer RRs: 0

Authority RRs: 0

Additional RRs: 0

▼ Queries

- > www.cs.umass.edu: type A, class IN

[\[Response In: 20\]](#)

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

dns-wireshark-trace2-1.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Destination	Protocol	Length	Info
19	6.003804	10.0.0.44	75.75.75.75	DNS	76	Standard query 0x609b A www.cs.umass.edu
20	6.037987	75.75.75.75	10.0.0.44	DNS	92	Standard query response 0x609b A www.cs.umass.edu A 128.119.240.84
31	10.494907	10.0.0.44	75.75.75.75	DNS	80	Standard query 0x1462 A cc-api-data.adobe.io
32	10.512877	75.75.75.75	10.0.0.44	DNS	208	Standard query response 0x1462 A cc-api-data.adobe.io A 52.5.60.10

> Frame 20: 92 bytes on wire (736 bits), 92 bytes captured (736 bits) on interface en0, id 0

> Ethernet II, Src: Maxlinear_80:00:00 (00:50:f1:80:00:00), Dst: Apple_98:d9:27 (78:4f:43:98:d9:27)

> Internet Protocol Version 4, Src: 75.75.75.75, Dst: 10.0.0.44

> User Datagram Protocol, Src Port: 53, Dst Port: 57837

▼ Domain Name System (response)

Transaction ID: 0x609b

▼ Flags: 0x8180 Standard query response, No error

1... .. = Response: Message is a response

.000 0... .. = Opcode: Standard query (0)

.... .0... .. = Authoritative: Server is not an authority for domain

.... ..0... .. = Truncated: Message is not truncated

....1... .. = Recursion desired: Do query recursively

....1... .. = Recursion available: Server can do recursive queries

....0... .. = Z: reserved (0)

....0... .. = Answer authenticated: Answer/authority portion was not authenticated by the server

....0... .. = Non-authenticated data: Unacceptable

....0000 = Reply code: No error (0)

Questions: 1

Answer RRs: 1

Authority RRs: 0

Additional RRs: 0

▼ Queries

> www.cs.umass.edu: type A, class IN

▼ Answers

> www.cs.umass.edu: type A, class IN, addr 128.119.240.84

[\[Request In: 19\]](#)

[Time: 0.034183000 seconds]

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

75.75.75.75 – yes

18. Examine the DNS query message. How many questions does the query have? Does the query message contain any “answers”?

Questions: 1 Answer :0

19. Examine the DNS response message (in particular the DNS response message that has type “NS”). 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 (if additional information is returned)?

dns-wireshark-trace3-1.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-/>

No.	Time	Source	Destination	Protocol	Length	Info
6	0.003521	10.0.0.254	239.255.255.250	SSDP	381	NOTIFY * HTTP/1.1
7	0.004313	10.0.0.254	239.255.255.250	SSDP	391	NOTIFY * HTTP/1.1
8	0.004934	10.0.0.254	239.255.255.250	SSDP	391	NOTIFY * HTTP/1.1
9	0.511860	Sonos_25:3a:2a	Spanning-tree-(for-...	STP	60	Conf. Root = 36864/0/48:a6:b8:25:3a:2a Cost = 0 Port
10	1.433513	Sonos_25:3a:2a	Spanning-tree-(for-...	STP	60	Conf. Root = 36864/0/48:a6:b8:25:3a:2a Cost = 0 Port
11	2.355063	fe80::a4f1:94ff:fec...	ff02::1	ICMPv6	174	Router Advertisement from 00:50:f1:80:00:00
12	2.457497	Sonos_25:3a:2a	Spanning-tree-(for-...	STP	60	Conf. Root = 36864/0/48:a6:b8:25:3a:2a Cost = 0 Port
13	3.425869	10.0.0.44	75.75.75.75	DNS	69	Standard query 0x6683 NS umass.edu
14	3.450501	75.75.75.75	10.0.0.44	DNS	171	Standard query response 0x6683 NS umass.edu NS ns1.uma
15	3.481560	Sonos_25:3a:2a	Spanning-tree-(for-...	STP	60	Conf. Root = 36864/0/48:a6:b8:25:3a:2a Cost = 0 Port

> Frame 14: 171 bytes on wire (1368 bits), 171 bytes captured (1368 bits) on interface en0, id 0

> Ethernet II, Src: Maxlinear_80:00:00 (00:50:f1:80:00:00), Dst: Apple_98:d9:27 (78:4f:43:98:d9:27)

> Internet Protocol Version 4, Src: 75.75.75.75, Dst: 10.0.0.44

> User Datagram Protocol, Src Port: 53, Dst Port: 59963

▼ Domain Name System (response)

Transaction ID: 0x6683

> Flags: 0x8180 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 ns1.umass.edu

> umass.edu: type NS, class IN, ns ns3.umass.edu

> umass.edu: type NS, class IN, ns ns2.umass.edu

▼ Additional records

> ns2.umass.edu: type A, class IN, addr 128.119.10.28

> ns1.umass.edu: type A, class IN, addr 128.119.10.27

> ns3.umass.edu: type A, class IN, addr 128.103.38.68

[Request In: 13]

[Time: 0.024632000 seconds]