

Lab Assignment 2A

1.

- i. **A Record:** Maps a domain name to an IPv4 address.
AAAA Record: Maps a domain name to an IPv6 address.
CNAME Record: Provides an alias that points to another canonical domain name.
MX Record: Identifies the mail server(s) for handling email for the domain.
NS Record: Specifies the authoritative name servers for the domain.
PTR Record: Provides reverse DNS, mapping an IP address back to a hostname.
SOA Record: Holds administrative information about the domain (e.g., primary server, email of domain admin).
TXT Record: Stores text information, often used for verification and policies (like SPF, DKIM).
- ii. `nslookup [options] [domain-name] [dns-server]`
options → flags you can add (like `-type=MX` to look up mail records).
domain-name → the website or host you're querying (e.g., `www.google.com`)
dns-server → optional; lets you specify which DNS server to use (e.g., `8.8.8.8` for Google DNS).
- iii. The default DNS type is an A record (IPv4 address record).
- iv.

```
C:\Users\brwne>nslookup -type=CNAME www.microsoft.com
Server:  Unknown
Address:  fe80::3888:a4ff:fe10:9064

Non-authoritative answer:
www.microsoft.com      canonical name = www.microsoft.com-c-3.edgekey.net
```

- v. This means the response was given by a caching DNS resolver, not directly from Microsoft's authoritative DNS servers.

```
C:\Users\brwne>nslookup -type=CNAME www.microsoft.com
Server:  Unknown
Address:  fe80::3888:a4ff:fe10:9064

Non-authoritative answer:
www.microsoft.com      canonical name = www.microsoft.com-c-3.edgekey.net

C:\Users\brwne>nslookup -type=MX www.microsoft.com
Server:  Unknown
Address:  fe80::3888:a4ff:fe10:9064

Non-authoritative answer:
www.microsoft.com      canonical name = www.microsoft.com-c-3.edgekey.net
www.microsoft.com-c-3.edgekey.net canonical name = www.microsoft.com-c-3.edgekey.net.globalredir.akadns.net
www.microsoft.com-c-3.edgekey.net.globalredir.akadns.net canonical name = e13678.dscb.akamaiedge.net

dscb.akamaiedge.net
primary name server = n0dscb.akamaiedge.net
responsible mail addr = hostmaster.akamai.com
serial = 1758553442
refresh = 1000 (16 mins 40 secs)
retry = 1000 (16 mins 40 secs)
expire = 1000 (16 mins 40 secs)
default TTL = 1800 (30 mins)
```

- vi. A non-authoritative answer means the response was provided by a caching DNS resolver (such as Google DNS or my ISP's DNS) instead of coming directly from the FCC's authoritative name servers.

```
C:\Users\brwne>nslookup www.fcc.gov
Server: UnKnown
Address: fe80::3888:a4ff:fe10:9064

Non-authoritative answer:
Name: e4909.dscb.akamaiedge.net
Addresses: 2600:1407:7400:1082::132d
           2600:1407:7400:108e::132d
           2.17.83.123
Aliases: www.fcc.gov
          www.fcc.gov.edgekey.net
```

- vii. The “www” version of Cisco’s site uses Akamai CDN for load balancing and content delivery, while the bare domain (cisco.com) points directly to Cisco’s own servers.

```
C:\Users\brwne>nslookup www.cisco.com
Server: UnKnown
Address: fe80::3888:a4ff:fe10:9064

Non-authoritative answer:
Name: e2867.dsca.akamaiedge.net
Addresses: 2600:1407:3c00:1583::b33
           2600:1407:3c00:158c::b33
           184.31.100.119
Aliases: www.cisco.com
          www.cisco.com.akadns.net
          wwwds.cisco.com.edgekey.net
          wwwds.cisco.com.edgekey.net.globalredir.akadns.net

C:\Users\brwne>nslookup cisco.com
Server: UnKnown
Address: fe80::3888:a4ff:fe10:9064

Non-authoritative answer:
Name: cisco.com
Addresses: 2001:420:1101:1::185
           72.163.4.185
```

viii. The DNS query was sent to: fe80::3888:a4ff:fe10:9064
Yes, this is the local DNS resolver configured on my system.

ix. 4:
google.com nameserver = ns1.google.com
google.com nameserver = ns2.google.com
google.com nameserver = ns4.google.com
google.com nameserver = ns3.google.com

ns1.google.com

IPv4: 216.239.32.10

IPv6: 2001:4860:4802:32::a

ns2.google.com

IPv4: 216.239.34.10

IPv6: 2001:4860:4802:34::a

ns3.google.com

IPv4: 216.239.36.10

IPv6: 2001:4860:4802:36::a

ns4.google.com

IPv4: 216.239.38.10

IPv6: 2001:4860:4802:38::a

x.

```
C:\Users\brwne>nslookup www.microsoft.com 8.8.8.8
Server:      dns.google
Address:     8.8.8.8

Non-authoritative answer:
Name:        e13678.dscb.akamaiedge.net
Addresses:   2600:1407:7400:1087::356e
              2600:1407:7400:1083::356e
              23.205.97.201
Aliases:     www.microsoft.com
              www.microsoft.com-c-3.edgekey.net
              www.microsoft.com-c-3.edgekey.net.globalredir.akadns.net
```

2a.

i. **Transport protocol: UDP**

Source Port: 43943 (this is a random high port chosen by the client)

Destination Port: 53 (standard DNS port)

- Normally used by the DNS protocol to send and receive domain name queries and responses.

```
5745|134.124.144.242|134.124.2.1|DNS|71|2019-09-13 19:45:01.882930 Standard query 0xeffe A sdc.itu.int

> Frame 5745: 71 bytes on wire (568 bits), 71 bytes captured (568 bits) on interface 0
> Ethernet II, Src: Apple_1d:e2:61 (28:cf:e9:1d:e2:61), Dst: Cisco_ff:fd:90 (00:08:e3:ff:fd:90)
> Internet Protocol Version 4, Src: 134.124.144.242, Dst: 134.124.2.1
> User Datagram Protocol, Src Port: 43943, Dst Port: 53
  Source Port: 43943
  Destination Port: 53
  Length: 37
  Checksum: 0x6f89 [unverified]
  [Checksum Status: Unverified]
  [Stream index: 537]
  [Stream Packet Number: 1]
  > [Timestamps]
  UDP payload (29 bytes)
  > Domain Name System (query)
```

ii. **Answer RRs: 3**

Authority RRs: 3

Additional RRs: 4

Query sent at 19:45:01.882930

Response received at 19:45:02.029136

Difference \approx 0.146 seconds (146 ms)

Answers:

```
Answers
> www.itu.int: type CNAME, class IN, cname www.site.itu.ch
> www.site.itu.ch: type CNAME, class IN, cname mirror.itu.ch
> mirror.itu.ch: type A, class IN, addr 156.106.202.5
Authoritative nameservers
> itu.ch: type NS, class IN, ns ns3.itu.ch
> itu.ch: type NS, class IN, ns ns2.itu.ch
> itu.ch: type NS, class IN, ns ns.itu.ch
Additional records
> ns2.itu.ch: type A, class IN, addr 206.155.102.70
> ns3.itu.ch: type A, class IN, addr 128.9.128.127
> ns.itu.ch: type A, class IN, addr 156.106.192.121
> ns.itu.ch: type AAAA, class IN, addr 2a00:7580:60:2141::10
[Request In: 9709]
```

iii. **DNS query target: www.itu.int**

Resolved IP: 156.106.202.5

WHOIS results: The IP belongs to a legacy block administered by RIPE NCC (Europe's regional registry).

City/Country: Not explicitly listed in WHOIS. However, since the domain is .int and administered by the International Telecommunication Union (ITU), the real host is located in Geneva, Switzerland.

```
% IANA WHOIS server
```

```
% for more information on IANA, visit http://www.iana.org
```

```
% This query returned 1 object
```

```
refer:      whois.arin.net
```

```
inetnum:    156.0.0.0 - 156.255.255.255
```

```
organisation: Administered by ARIN
```

```
status:     LEGACY
```

```
whois:      whois.arin.net
```

```
changed:    1993-05
```

```
source:     IANA
```

You searched for: **156.106.202.5**

Network	
Net Range	156.106.0.0 - 156.106.255.255
CIDR	156.106.0.0/16
Name	RIPE-ERX-156-106-0-0
Handle	NET-156-106-0-0-1
Parent	NET156 (NET-156-0-0-0-0)
Net Type	Early Registrations, Transferred to RIPE NCC
Organization	RIPE Network Coordination Centre (RIPE)
Registration Date	2004-01-07
Last Updated	2025-02-10
Comments	These addresses have been further assigned to users in the RIPE NCC region. Please note that the organization and point of contact details listed below are those of the RIPE NCC not the current address holder. ** You can find user contact information for the current address holder in the RIPE database at http://www.ripe.net/whois .
RESTful Link	https://whois.arin.net/rest/net/NET-156-106-0-0-1
See Also	Related POC records.
See Also	Related organization's POC records.
See Also	Resource links.
See Also	Related delegations.

iv. CNAME chain:

www.itu.int → www.site.itu.ch → mirror.itu.ch → A = 156.106.202.5

Authoritative Nameservers:

ns3.itu.ch
ns2.itu.ch
ns.itu.ch

DNS addresses returned (Additional Records):

ns2.itu.ch = 206.155.102.70
ns3.itu.ch = 128.9.128.127
ns.itu.ch = 156.106.192.121 (IPv4)
ns.itu.ch = 2a00:7580:60:2141::10 (IPv6)

- v. **DNS queried (line 2362):** www.googletagmanager.com
Type of DNS in the response: A (IPv4 record)

IP Addresses: www.googletagmanager.com →

www-googletagmanager.l.google.com → 108.177.9.97

```
✓ Answers
  > www.googletagmanager.com: type CNAME, class IN, cname www-googletagmanager.l.google.com
  > www-googletagmanager.l.google.com: type A, class IN, addr 108.177.9.97
✓ Authoritative nameservers
  > google.com: type NS, class IN, ns ns1.google.com
  > google.com: type NS, class IN, ns ns3.google.com
  > google.com: type NS, class IN, ns ns2.google.com
  > google.com: type NS, class IN, ns ns4.google.com
✓ Additional records
  > ns2.google.com: type A, class IN, addr 216.239.34.10
  > ns2.google.com: type AAAA, class IN, addr 2001:4860:4802:34::a
  > ns1.google.com: type A, class IN, addr 216.239.32.10
  > ns1.google.com: type AAAA, class IN, addr 2001:4860:4802:32::a
  > ns3.google.com: type A, class IN, addr 216.239.36.10
  > ns3.google.com: type AAAA, class IN, addr 2001:4860:4802:36::a
  > ns4.google.com: type A, class IN, addr 216.239.38.10
  > ns4.google.com: type AAAA, class IN, addr 2001:4860:4802:38::a
```

2b.

- i. **My IPv4 address (from ipconfig):** 172.20.10.8
Public IPv4 (from website): 174.243.56.132

The image shows two side-by-side screenshots. The left screenshot is a Windows network status window titled 'My IP Address is:'. It displays the IPv6 address '2600:100a:b1e2:375d:a138:c7ac:ef6e:8fb8' and the IPv4 address '174.243.56.132'. Below the IPv4 address, it says 'Your location may be exposed!'. The right screenshot is a Windows command prompt window showing the output of the 'ipconfig /all' command. It displays details for the 'Wireless LAN adapter Wi-Fi', including the 'Connection-specific DNS Suffix' (empty), 'IPv6 Address' (2600:100a:b1e2:375d:b329:222d:52c1:7e7c), 'Temporary IPv6 Address' (2600:100a:b1e2:375d:a138:c7ac:ef6e:8fb8), 'Link-local IPv6 Address' (fe80::663:c7ac:9343:790a%23), 'IPv4 Address' (172.20.10.8), 'Subnet Mask' (255.255.255.240), and 'Default Gateway' (fe80::3888:a4ff:fe10:9064%23).

- ii. .

ipaddr == 172.20.10.8									
No.	Source	Source Port	Destination	Destination Port	Protocol	Length	Host	Time	Info
10401	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [ACK] Seq=4677 Ack=2576 Win=72576 Len=1368 [TCP
10402	184.31.100.79	443	172.20.10.8	58653	TLSv1.3	637		2025-09-23 15:09:27.976727	Application Data
10403	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [ACK] Seq=6628 Ack=2576 Win=72576 Len=1368 [TCP
10404	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [PSH, ACK] Seq=7996 Ack=2576 Win=72576 Len=1368
10405	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [ACK] Seq=9364 Ack=2576 Win=72576 Len=1368 [TCP
10406	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [PSH, ACK] Seq=10732 Ack=2576 Win=72576 Len=1368
10407	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [ACK] Seq=12100 Ack=2576 Win=72576 Len=1368 [TCP
10408	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [PSH, ACK] Seq=13468 Ack=2576 Win=72576 Len=1368
10409	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [ACK] Seq=14836 Ack=2576 Win=72576 Len=1368 [TCP
10410	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [PSH, ACK] Seq=16204 Ack=2576 Win=72576 Len=1368
10411	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [ACK] Seq=17572 Ack=2576 Win=72576 Len=1368 [TCP
10412	184.31.100.79	443	172.20.10.8	58653	TCP	1422		2025-09-23 15:09:27.976727	443 → 58653 [PSH, ACK] Seq=18940 Ack=2576 Win=72576 Len=1368
10413	184.31.100.79	443	172.20.10.8	58653	TLSv1.3	367		2025-09-23 15:09:27.976727	Application Data
10414	172.20.10.8	58653	184.31.100.79	443	TCP	54		2025-09-23 15:09:27.976840	58653 → 443 [ACK] Seq=2576 Ack=20621 Win=65280 Len=0
10415	172.20.10.8	53384	34.89.238.75	443	TLSv1.3	1268		2025-09-23 15:09:27.983618	Application Data
10416	34.89.238.75	443	172.20.10.8	50922	TCP	54		2025-09-23 15:09:28.071633	443 → 50922 [ACK] Seq=26310 Ack=6905 Win=11008 Len=0
10417	34.89.238.75	443	172.20.10.8	50922	TCP	54		2025-09-23 15:09:28.071633	443 → 50922 [ACK] Seq=26310 Ack=6958 Win=11061 Len=0
10418	34.89.238.75	443	172.20.10.8	50922	TLSv1.3	566		2025-09-23 15:09:28.102429	Application Data
10419	34.89.238.75	443	172.20.10.8	53384	TCP	54		2025-09-23 15:09:28.152812	443 → 53384 [ACK] Seq=12502 Ack=9144 Win=13247 Len=0
10420	34.89.238.75	443	172.20.10.8	53384	TCP	1422		2025-09-23 15:09:28.152812	443 → 53384 [ACK] Seq=12502 Ack=9144 Win=13247 Len=1368 [TCP
10421	34.89.238.75	443	172.20.10.8	53384	TLSv1.3	469		2025-09-23 15:09:28.152812	Application Data
10422	172.20.10.8	53384	34.89.238.75	443	TCP	54		2025-09-23 15:09:28.152927	53384 → 443 [ACK] Seq=9144 Ack=14285 Win=65535 Len=0

iii. UDP (User Datagram Protocol)

Source Port: 51847

Destination Port: 53 (DNS)

iv. DNS response came from: 172.20.10.1

WHOIS lookup result: Belongs to the 172.16.0.0/12 private address block, reserved by IANA under RFC1918.

Meaning: This is my local gateway/hotspot DNS forwarder, not a publicly identifiable server. It forwards my queries to an upstream public DNS resolver.

v. The source and destination port numbers are found in the Transport Layer.

Example from my capture: Source Port = 53, Destination Port = 64215.

dns									
No.	Source	Source Port	Destination	Destination Port	Protocol	Length	Host	Time	Info
9000	172.20.10.8	56422	172.20.10.1	53	DNS	86		2025-09-23 15:09:18.865126	Standard query 0x285d A s7.addthis.com
9002	172.20.10.8	55722	172.20.10.1	53	DNS	86		2025-09-23 15:09:18.865175	Standard query 0x513f HTTPS s7.addthis.com
9012	172.20.10.1	53	172.20.10.8	52311	DNS	157		2025-09-23 15:09:18.871724	Standard query response 0x3a23 No such name AAAA s7.a
9015	172.20.10.1	53	172.20.10.8	56422	DNS	157		2025-09-23 15:09:18.873420	Standard query response 0x285d No such name A s7.add
9017	172.20.10.1	53	172.20.10.8	55722	DNS	157		2025-09-23 15:09:18.873420	Standard query response 0x513f No such name HTTPS s7
9272	172.20.10.8	56312	172.20.10.1	53	DNS	84		2025-09-23 15:09:24.701058	Standard query 0x5912 AAAA jobs.itu.int
9278	172.20.10.8	58254	172.20.10.1	53	DNS	84		2025-09-23 15:09:24.702242	Standard query 0xb96c HTTPS jobs.itu.int
9280	172.20.10.8	64215	172.20.10.1	53	DNS	84		2025-09-23 15:09:24.702346	Standard query 0x85fe A jobs.itu.int
9290	172.20.10.1	53	172.20.10.8	64215	DNS	102		2025-09-23 15:09:24.762040	Standard query response 0x85fe A jobs.itu.int A 34.8
9296	172.20.10.1	53	172.20.10.8	56312	DNS	142		2025-09-23 15:09:24.938229	Standard query response 0x5912 AAAA jobs.itu.int SOA
9301	172.20.10.1	53	172.20.10.8	58254	DNS	142		2025-09-23 15:09:24.947914	Standard query response 0xb96c HTTPS jobs.itu.int SO
9369	172.20.10.8	51439	172.20.10.1	53	DNS	97		2025-09-23 15:09:25.932957	Standard query 0x9482 AAAA rmkcdn.successfactors.com
9375	172.20.10.8	53159	172.20.10.1	53	DNS	97		2025-09-23 15:09:25.934252	Standard query 0x6b44 HTTPS rmkcdn.successfactors.com
9377	172.20.10.8	63308	172.20.10.1	53	DNS	97		2025-09-23 15:09:25.934304	Standard query 0x0790 A rmkcdn.successfactors.com
9396	172.20.10.1	53	172.20.10.8	63308	DNS	201		2025-09-23 15:09:25.988611	Standard query response 0x0790 A rmkcdn.successfactors.com
9401	172.20.10.1	53	172.20.10.8	51439	DNS	243		2025-09-23 15:09:26.021267	Standard query response 0x9482 AAAA rmkcdn.successfactors.com
9406	172.20.10.1	53	172.20.10.8	53159	DNS	243		2025-09-23 15:09:26.026108	Standard query response 0x6b44 HTTPS rmkcdn.successfactors.com
10425	fe80::663:c7ac:9343...		fe80::3888:a4ff:fe1...		DNS	114		2025-09-23 15:09:29.195493	Standard query 0x8a06 A p2p-ordl.discovery.steamserve
10426	172.20.10.8		172.20.10.1		DNS	94		2025-09-23 15:09:29.226894	Standard query 0x8a06 A p2p-ordl.discovery.steamserve
10427	fe80::3888:a4ff:fe1...		fe80::663:c7ac:9343...		DNS	178		2025-09-23 15:09:29.247192	Standard query response 0x8a06 A p2p-ordl.discovery.steamserve
10428	172.20.10.1		172.20.10.8		DNS	158		2025-09-23 15:09:29.247640	Standard query response 0x8a06 A p2p-ordl.discovery.steamserve

> Frame 9290: 102 bytes on wire (816 bits), 102 bytes captured (816 bits) on interface \Device\NPF_{CBCD0730-F6BE-44F0-9631-5AC2C3628F0A}, id 0 > Ethernet II, Src: 3a:88:a4:10:90:64 (3a:88:a4:10:90:64), Dst: Intel_3e:d2:c1 (2c:7b:a0:3e:d2:c1) > Internet Protocol Version 4, Src: 172.20.10.1, Dst: 172.20.10.8 > Transmission Control Protocol, Src Port: 53, Dst Port: 64215, Seq: 1, Ack: 33, Len: 48 Source Port: 53 Destination Port: 64215									
								0000	2c 7b a0 3e
								0010	00 58 00 00
								0020	0a 08 00 35
								0030	10 00 29 09
								0040	00 00 00 00
								0050	74 00 00 01
								0060	00 00 22 59

vi. Packet 9290:

Answer RRs: 1

Authority RRs: 0

Additional RRs: 0

jobs.itu.int → A record = 34.89.238.75

9290	172.20.10.1	53	172.20.10.8	64215	DNS	102
9296	172.20.10.1	53	172.20.10.8	56312	DNS	142
9301	172.20.10.1	53	172.20.10.8	58254	DNS	142
9369	172.20.10.8	51439	172.20.10.1	53	DNS	97
9375	172.20.10.8	53159	172.20.10.1	53	DNS	97
9377	172.20.10.8	63308	172.20.10.1	53	DNS	97
9396	172.20.10.1	53	172.20.10.8	63308	DNS	201
9401	172.20.10.1	53	172.20.10.8	51439	DNS	243
9406	172.20.10.1	53	172.20.10.8	53159	DNS	243
10425	fe80::663:c7ac:9343...		fe80::3888:a4ff:fe1...		DNS	114
10426	172.20.10.8		172.20.10.1		DNS	94
10427	fe80::3888:a4ff:fe1...		fe80::663:c7ac:9343...		DNS	178
10428	172.20.10.1		172.20.10.8		DNS	158

```

Frame 9290: 102 bytes on wire (816 bits), 102 bytes captured (816 bits) on interface \Device\NPF{...}
Ethernet II, Src: 3a:88:a4:10:90:64 (3a:88:a4:10:90:64), Dst: Intel_3e:d2:c1 (2c:7b:a0:12:1:3e:d2:c1)
Internet Protocol Version 4, Src: 172.20.10.1, Dst: 172.20.10.8
Transmission Control Protocol, Src Port: 53, Dst Port: 64215, Seq: 1, Ack: 33, Len: 48
Domain Name System (response)
  Length: 46
  Transaction ID: 0x85fe
  > Flags: 0x8180 Standard query response, No error
    Questions: 1
    Answer RRs: 1
    Authority RRs: 0
    Additional RRs: 0
  > Queries
  < Answers
    > jobs.itu.int: type A, class IN, addr 34.89.238.75
    [Request In: 9280]
    [Time: 0.059694000 seconds]

```

- vii. 0.059694000 seconds
- viii. Recursion Desired (RD): 1 → The client requested recursion.
 Recursion Available (RA): 1 → The DNS server allowed recursion.
 Therefore, the recursive query method was allowed.

dns							
	Source	Source Port	Destination	Destination Port	Protocol	Length	Host
9000	172.20.10.8	56422	172.20.10.1	53	DNS	86	
9002	172.20.10.8	55722	172.20.10.1	53	DNS	86	
9012	172.20.10.1	53	172.20.10.8	52311	DNS	157	
9015	172.20.10.1	53	172.20.10.8	56422	DNS	157	
9017	172.20.10.1	53	172.20.10.8	55722	DNS	157	
9272	172.20.10.8	56312	172.20.10.1	53	DNS	84	
9278	172.20.10.8	58254	172.20.10.1	53	DNS	84	
9280	172.20.10.8	64215	172.20.10.1	53	DNS	84	
9290	172.20.10.1	53	172.20.10.8	64215	DNS	102	
9296	172.20.10.1	53	172.20.10.8	56312	DNS	142	
9301	172.20.10.1	53	172.20.10.8	58254	DNS	142	
9369	172.20.10.8	51439	172.20.10.1	53	DNS	97	
9375	172.20.10.8	53159	172.20.10.1	53	DNS	97	
9377	172.20.10.8	63308	172.20.10.1	53	DNS	97	
9396	172.20.10.1	53	172.20.10.8	63308	DNS	201	
9401	172.20.10.1	53	172.20.10.8	51439	DNS	243	
9406	172.20.10.1	53	172.20.10.8	53159	DNS	243	
10425	fe80::663:c7ac:9343...		fe80::3888:a4ff:fe1...		DNS	114	
10426	172.20.10.8		172.20.10.1		DNS	94	
10427	fe80::3888:a4ff:fe1...		fe80::663:c7ac:9343...		DNS	178	
10428	172.20.10.1		172.20.10.8		DNS	158	

>	Transmission Control Protocol, Src Port: 53, Dst Port: 58254, Seq: 1, Ack: 33, Len:	0000	2
✓	Domain Name System (response)	0010	0
	Length: 86	0020	0
	Transaction ID: 0xb96c	0030	1
	Flags: 0x8180 Standard query response, No error	0040	0
	1... .. = Response: Message is a response	0050	7
	.000 0... .. = Opcode: Standard query (0)	0060	0
0.. .. = Authoritative: Server is not an authority for domain	0070	7
0. = Truncated: Message is not truncated	0080	0
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 a		
0 = Non-authenticated data: Unacceptable		
0000 = Reply code: No error (0)		
	Questions: 1		
	Answer RRs: 0		
	Authority RRs: 1		

Time		DNS_Time	Info	
2025-09-23	15:08:55.926109	0.094740000	Standard query response	0x1b50 A analytics.goo
2025-09-23	15:08:55.926109	0.094890000	Standard query response	0x2f2f AAAA analytics.
2025-09-23	15:04:47.383911	0.095250000	Standard query response	0x8a07 AAAA settings-w
2025-09-23	15:04:47.383911	0.096227000	Standard query response	0x453e A settings-win.
2025-09-23	15:08:55.034042	0.099374000	Standard query response	0x9d91 HTTPS static.ho
2025-09-23	15:08:55.934994	0.103501000	Standard query response	0xd29c HTTPS analytics
2025-09-23	15:07:53.374353	0.124181000	Standard query response	0xaaef AAAA v10.events
2025-09-23	15:03:03.613295	0.127572000	Standard query response	0x50f3 HTTPS chatgpt.c
2025-09-23	15:07:53.382436	0.132199000	Standard query response	0x0c9f A v10.events.da
2025-09-23	15:08:55.691112	0.142624000	Standard query response	0xd88d HTTPS www.googl
2025-09-23	15:08:55.088152	0.156898000	Standard query response	0x0ded AAAA static.hot
2025-09-23	15:07:53.373741	0.157978000	Standard query response	0xaaef AAAA v10.events
2025-09-23	15:07:53.381516	0.165866000	Standard query response	0x0c9f A v10.events.da
2025-09-23	15:09:24.938229	0.237171000	Standard query response	0x5912 AAAA jobs.itu.i
2025-09-23	15:09:24.947914	0.245672000	Standard query response	0xb96c HTTPS jobs.itu.
2025-09-23	15:02:35.663952	0.276912000	Standard query response	0xe030 A teams.events.
2025-09-23	15:08:51.486405	0.287033000	Standard query response	0xfdc6 A www.itu.int C
2025-09-23	15:08:51.486405	0.287211000	Standard query response	0xdf70 AAAA www.itu.in
2025-09-23	15:08:51.504278	0.303834000	Standard query response	0x1443 HTTPS www.itu.i
2025-09-23	15:02:35.699940	0.312817000	Standard query response	0x72c5 HTTPS teams.eve
2025-09-23	15:02:35.707435	0.320567000	Standard query response	0x4514 AAAA teams.even

- x. Checked multiple DNS responses.
All responses had rcode = 0 (No error).
Therefore, no DNS errors were observed in my capture.