UE23CS252B COMPUTER NETWORKS

LAB 3.1   14-02-2025   PESU ECC   CSE(AIML)
          SEM-4

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dig www.google.com

Query

Transaction id	0xe8b8
Flags	0x0100 standard query
Questions	1, www.google.co.in
Answers	-
Query type	A
Response time	-

```
> Frame 147: 96 bytes on wire (768 bits), 96 bytes captured (768 bits) on interface en0, id 0
> Ethernet II, Src: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f), Dst: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58)
> Internet Protocol Version 6, Src: 2406:7400:81:7c16:7dba:b2af:a56d:db02, Dst: 2406:7400:a:10::2
> User Datagram Protocol, Src Port: 63976, Dst Port: 53
v Domain Name System (query)
    Transaction ID: 0xe8b8
  > Flags: 0x0100 Standard query
    Questions: 1
    Answer RRs: 0
    Authority RRs: 0
    Additional RRs: 0
  v Queries
    > www.google.co.in: type A, class IN
    [Response In: 150]
```

Response

Transaction id	0xe8b8
Flags	0x8180 standard query response
Questions	1, www.google.co.in
Answers	142.250.193.163
Query type	A
Response time	0.012049000

```
> Frame 150: 112 bytes on wire (896 bits), 112 bytes captured (896 bits) on interface en0, id 0
> Ethernet II, Src: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58), Dst: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f)
> Internet Protocol Version 6, Src: 2406:7400:a:10::2, Dst: 2406:7400:81:7c16:7dba:b2af:a56d:db02
> User Datagram Protocol, Src Port: 53, Dst Port: 63976
∨ Domain Name System (response)
    Transaction ID: 0xe8b8
  > Flags: 0x8180 Standard query response, No error
    Questions: 1
    Answer RRs: 1
    Authority RRs: 0
    Additional RRs: 0
  ∨ Queries
    > www.google.co.in: type A, class IN
  ∨ Answers
    > www.google.co.in: type A, class IN, addr 142.250.193.163
    [Request In: 147]
    [Time: 0.012049000 seconds]
```

dig www.amazon.com

Query

Transaction id	0x2665
Flags	0x0120 standard query
Questions	1, www.amazon.com
Answers	-
Query type	A
Response time	-

```
> Frame 41145: 101 bytes on wire (808 bits), 101 bytes captured (808 bits) on interface en0, id 0
> Ethernet II, Src: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f), Dst: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58)
> Internet Protocol Version 6, Src: 2406:7400:81:7c16:7dba:b2af:a56d:db02, Dst: 2406:7400:a:10::2
> User Datagram Protocol, Src Port: 60939, Dst Port: 53
∨ Domain Name System (query)
    Transaction ID: 0x2665
  > Flags: 0x0120 Standard query
    Questions: 1
    Answer RRs: 0
    Authority RRs: 0
    Additional RRs: 1
  ∨ Queries
    > amazon.com: type A, class IN
  ∨ Additional records
    > <Root>: type OPT
    [Response In: 41146]
```

Response

Transaction id	0x2665
Flags	0x8180 standard query response
Questions	1, www.amazon.com
Answers	205.251.242.103 52.94.236.248 54.239.28.85
Query type	A
Response time	0.012044000 seconds

```
> Frame 41146: 149 bytes on wire (1192 bits), 149 bytes captured (1192 bits) on interface en0, id 0
> Ethernet II, Src: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58), Dst: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f)
> Internet Protocol Version 6, Src: 2406:7400:a:10::2, Dst: 2406:7400:81:7c16:7dba:b2af:a56d:db02
> User Datagram Protocol, Src Port: 53, Dst Port: 60939
∨ Domain Name System (response)
    Transaction ID: 0x2665
  > Flags: 0x8180 Standard query response, No error
    Questions: 1
    Answer RRs: 3
    Authority RRs: 0
    Additional RRs: 1
  ∨ Queries
    > amazon.com: type A, class IN
  ∨ Answers
    > amazon.com: type A, class IN, addr 205.251.242.103
    > amazon.com: type A, class IN, addr 52.94.236.248
    > amazon.com: type A, class IN, addr 54.239.28.85
  ∨ Additional records
    > <Root>: type OPT
    [Request In: 41145]
    [Time: 0.012044000 seconds]
```

dig www.flipkart.com

Query

Transaction id	0x6ae7
Flags	0x0120 standard query
Questions	1, www.flipkart.com
Answers	-
Query type	A
Response time	-

```
> Frame 49295: 103 bytes on wire (824 bits), 103 bytes captured (824 bits) on interface en0, id 0
> Ethernet II, Src: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f), Dst: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58)
> Internet Protocol Version 6, Src: 2406:7400:81:7c16:7dba:b2af:a56d:db02, Dst: 2406:7400:a:10::2
> User Datagram Protocol, Src Port: 51777, Dst Port: 53
∨ Domain Name System (query)
    Transaction ID: 0x6ae7
  > Flags: 0x0120 Standard query
    Questions: 1
    Answer RRs: 0
    Authority RRs: 0
    Additional RRs: 1
  ∨ Queries
    > flipkart.com: type A, class IN
  ∨ Additional records
    > <Root>: type OPT
    [Response In: 49296]
```

Response

Transaction id	0x6ae7
Flags	0x8180 standard query response
Questions	1, www.flipkart.com
Answers	163.53.76.86
Query type	A
Response time	`0.011877000 seconds`

```
> Frame 49296: 119 bytes on wire (952 bits), 119 bytes captured (952 bits) on interface en0, id 0
> Ethernet II, Src: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58), Dst: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f)
> Internet Protocol Version 6, Src: 2406:7400:a:10::2, Dst: 2406:7400:81:7c16:7dba:b2af:a56d:db02
> User Datagram Protocol, Src Port: 53, Dst Port: 51777
∨ Domain Name System (response)
    Transaction ID: 0x6ae7
  > Flags: 0x8180 Standard query response, No error
    Questions: 1
    Answer RRs: 1
    Authority RRs: 0
    Additional RRs: 1
  ∨ Queries
    > flipkart.com: type A, class IN
  ∨ Answers
    > flipkart.com: type A, class IN, addr 163.53.76.86
  ∨ Additional records
    > <Root>: type OPT
    [Request In: 49295]
    [Time: 0.011877000 seconds]
```

dig www.google.com AAAA

Query

Transaction id	0x1c72
Flags	0x0120 standard query
Questions	1, www.google.com
Answers	-
Query type	A
Response time	-

```
> Frame 59384: 105 bytes on wire (840 bits), 105 bytes captured (840 bits) on interface en0, id 0
> Ethernet II, Src: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f), Dst: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58)
> Internet Protocol Version 6, Src: 2406:7400:81:7c16:7dba:b2af:a56d:db02, Dst: 2406:7400:a:10::2
> User Datagram Protocol, Src Port: 61655, Dst Port: 53
∨ Domain Name System (query)
    Transaction ID: 0x1c72
  > Flags: 0x0120 Standard query
    Questions: 1
    Answer RRs: 0
    Authority RRs: 0
    Additional RRs: 1
  ∨ Queries
    > www.google.com: type AAAA, class IN
  ∨ Additional records
    > <Root>: type OPT
    [Response In: 59385]
```

Response

Transaction id	0x1c72
Flags	0x8180 standard query response
Questions	1, www.google.com
Answers	2404:6800:4007:825::2004
Query type	A
Response time	0.012316000 seconds

```
> Frame 59385: 133 bytes on wire (1064 bits), 133 bytes captured (1064 bits) on interface en0, id 0
> Ethernet II, Src: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58), Dst: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f)
> Internet Protocol Version 6, Src: 2406:7400:a:10::2, Dst: 2406:7400:81:7c16:7dba:b2af:a56d:db02
> User Datagram Protocol, Src Port: 53, Dst Port: 61655
v Domain Name System (response)
    Transaction ID: 0x1c72
  > Flags: 0x8180 Standard query response, No error
    Questions: 1
    Answer RRs: 1
    Authority RRs: 0
    Additional RRs: 1
  v Queries
    > www.google.com: type AAAA, class IN
  v Answers
    v www.google.com: type AAAA, class IN, addr 2404:6800:4007:825::2004
        Name: www.google.com
        Type: AAAA (28) (IP6 Address)
        Class: IN (0x0001)
        Time to live: 208 (3 minutes, 28 seconds)
        Data length: 16
        AAAA Address: 2404:6800:4007:825::2004
  v Additional records
    > <Root>: type OPT
    [Request In: 59384]
    [Time: 0.012316000 seconds]
```

dig www.google.com MX

Query

Transaction id	0x46f8
Flags	0x0120 standard query
Questions	1, www.google.com
Answers	-
Query type	A
Response time	-

```
> Frame 70132: 105 bytes on wire (840 bits), 105 bytes captured (840 bits) on interface en0, id 0
> Ethernet II, Src: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f), Dst: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58)
> Internet Protocol Version 6, Src: 2406:7400:81:7c16:7dba:b2af:a56d:db02, Dst: 2406:7400:a:10::2
> User Datagram Protocol, Src Port: 59403, Dst Port: 53
∨ Domain Name System (query)
     Transaction ID: 0x46f8
   > Flags: 0x0120 Standard query
     Questions: 1
     Answer RRs: 0
     Authority RRs: 0
     Additional RRs: 1
   ∨ Queries
     > www.google.com: type MX, class IN
   ∨ Additional records
     ∨ <Root>: type OPT
         Name: <Root>
         Type: OPT (41)
         UDP payload size: 4096
         Higher bits in extended RCODE: 0x00
         EDNS0 version: 0
       ∨ Z: 0x0000
           0... .... .... .... = DO bit: Cannot handle DNSSEC security RRs
           .000 0000 0000 0000 = Reserved: 0x0000
         Data length: 0
     [Response In: 70133]
```

Response

Transaction id	0x46f8
Flags	0x8180 standard query response
Questions	1, www.google.com
Answers	-
Query type	A
Response time	0.041849000 seconds

```
> Frame 70133: 155 bytes on wire (1240 bits), 155 bytes captured (1240 bits) on interface en0, id 0
> Ethernet II, Src: TpLinkTechno_ec:1d:58 (d8:07:b6:ec:1d:58), Dst: 12:d1:f7:71:fe:9f (12:d1:f7:71:fe:9f)
> Internet Protocol Version 6, Src: 2406:7400:a:10::2, Dst: 2406:7400:81:7c16:7dba:b2af:a56d:db02
> User Datagram Protocol, Src Port: 53, Dst Port: 59403
∨ Domain Name System (response)
     Transaction ID: 0x46f8
   > Flags: 0x8180 Standard query response, No error
     Questions: 1
     Answer RRs: 0
     Authority RRs: 1
     Additional RRs: 1
   ∨ Queries
     > www.google.com: type MX, class IN
   ∨ Authoritative nameservers
     ∨ google.com: type SOA, class IN, mname ns1.google.com
         Name: google.com
         Type: SOA (6) (Start Of a zone of Authority)
         Class: IN (0x0001)
         Time to live: 60 (1 minute)
         Data length: 38
         Primary name server: ns1.google.com
         Responsible authority's mailbox: dns-admin.google.com
         Serial Number: 726401740
         Refresh Interval: 900 (15 minutes)
         Retry Interval: 900 (15 minutes)
         Expire limit: 1800 (30 minutes)
         Minimum TTL: 60 (1 minute)
   ∨ Additional records
     ∨ <Root>: type OPT
         Name: <Root>
         Type: OPT (41)
         UDP payload size: 512
         Higher bits in extended RCODE: 0x00
         EDNS0 version: 0
       ∨ Z: 0x0000
           0... .... .... .... = DO bit: Cannot handle DNSSEC security RRs
           .000 0000 0000 0000 = Reserved: 0x0000
         Data length: 0
     [Request In: 70132]
     [Time: 0.041849000 seconds]
```

```
Last login: Fri Feb 14 21:23:50 on ttys000
[abhishekp@Abhisheks-MacBook-Air-3 ~ % dig www.google.com

; <<>> DiG 9.10.6 <<>> www.google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 7324
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;www.google.com.                        IN      A

;; ANSWER SECTION:
www.google.com.         272     IN      A       142.250.195.132

;; Query time: 12 msec
;; SERVER: 2406:7400:a:10::2#53(2406:7400:a:10::2)
;; WHEN: Fri Feb 14 21:24:37 IST 2025
;; MSG SIZE  rcvd: 59

[abhishekp@Abhisheks-MacBook-Air-3 ~ % dig amazon.com

; <<>> DiG 9.10.6 <<>> amazon.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 9829
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;amazon.com.                    IN      A

;; ANSWER SECTION:
amazon.com.             600     IN      A       205.251.242.103
amazon.com.             600     IN      A       52.94.236.248
amazon.com.             600     IN      A       54.239.28.85

;; Query time: 12 msec
;; SERVER: 2406:7400:a:10::2#53(2406:7400:a:10::2)
;; WHEN: Fri Feb 14 21:49:47 IST 2025
;; MSG SIZE  rcvd: 87

[abhishekp@Abhisheks-MacBook-Air-3 ~ % dig flipkart.com

; <<>> DiG 9.10.6 <<>> flipkart.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 27367
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;flipkart.com.                  IN      A

;; ANSWER SECTION:
flipkart.com.           529     IN      A       163.53.76.86

;; Query time: 12 msec
;; SERVER: 2406:7400:a:10::2#53(2406:7400:a:10::2)
;; WHEN: Fri Feb 14 21:56:42 IST 2025
;; MSG SIZE  rcvd: 57

[abhishekp@Abhisheks-MacBook-Air-3 ~ % dig www.google.com AAAA

; <<>> DiG 9.10.6 <<>> www.google.com AAAA
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 7282
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;www.google.com.                        IN      AAAA

;; ANSWER SECTION:
www.google.com.         208     IN      AAAA    2404:6800:4007:825::2004

;; Query time: 12 msec
;; SERVER: 2406:7400:a:10::2#53(2406:7400:a:10::2)
;; WHEN: Fri Feb 14 22:03:09 IST 2025
;; MSG SIZE  rcvd: 71

[abhishekp@Abhisheks-MacBook-Air-3 ~ % dig www.google.com MX

; <<>> DiG 9.10.6 <<>> www.google.com MX
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 18168
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;www.google.com.                        IN      MX

;; AUTHORITY SECTION:
google.com.             60      IN      SOA     ns1.google.com. dns-admin.google.com. 726401740 900 900 1800 60
```