```
No.      Time            Source               Destination          Protocol Length Info
      3 3.677318460     192.168.1.144        192.168.1.1          DNS      73     Standard query 0xd44b A
bitsy.mit.edu
Frame 3: 73 bytes on wire (584 bits), 73 bytes captured (584 bits) on interface 0
    Interface id: 0 (enp4s0f2)
    Encapsulation type: Ethernet (1)
    Arrival Time: Mar 14, 2020 13:33:04.066663758 EET
    [Time shift for this packet: 0.000000000 seconds]
    Epoch Time: 1584185584.066663758 seconds
    [Time delta from previous captured frame: 3.677239224 seconds]
    [Time delta from previous displayed frame: 0.000000000 seconds]
    [Time since reference or first frame: 3.677318460 seconds]
    Frame Number: 3
    Frame Length: 73 bytes (584 bits)
    Capture Length: 73 bytes (584 bits)
    [Frame is marked: False]
    [Frame is ignored: False]
    [Protocols in frame: eth:ethertype:ip:udp:dns]
    [Coloring Rule Name: UDP]
    [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_20:af:fb (30:85:a9:20:af:fb), Dst: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
    Destination: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
    Source: AsustekC_20:af:fb (30:85:a9:20:af:fb)
    Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.144, Dst: 192.168.1.1
    0100 .... = Version: 4
    .... 0101 = Header Length: 20 bytes (5)
    Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
        0000 00.. = Differentiated Services Codepoint: Default (0)
        .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
    Total Length: 59
    Identification: 0xdeaa (57002)
    Flags: 0x4000, Don't fragment
    Time to live: 64
    Protocol: UDP (17)
    Header checksum: 0xd825 [validation disabled]
    [Header checksum status: Unverified]
    Source: 192.168.1.144
    Destination: 192.168.1.1
User Datagram Protocol, Src Port: 40929, Dst Port: 53
    Source Port: 40929
    Destination Port: 53
    Length: 39
    Checksum: 0x4d4f [unverified]
    [Checksum Status: Unverified]
    [Stream index: 0]
Domain Name System (query)
    Transaction ID: 0xd44b
    Flags: 0x0100 Standard query
    Questions: 1
    Answer RRs: 0
    Authority RRs: 0
    Additional RRs: 0
    Queries
        bitsy.mit.edu: type A, class IN
    [Response In: 5]
No.      Time            Source               Destination          Protocol Length Info
      4 3.677617667     192.168.1.144        192.168.1.1          DNS      73     Standard query 0xd17d
AAAA bitsy.mit.edu
Frame 4: 73 bytes on wire (584 bits), 73 bytes captured (584 bits) on interface 0
    Interface id: 0 (enp4s0f2)
    Encapsulation type: Ethernet (1)
    Arrival Time: Mar 14, 2020 13:33:04.066962965 EET
    [Time shift for this packet: 0.000000000 seconds]
    Epoch Time: 1584185584.066962965 seconds
    [Time delta from previous captured frame: 0.000299207 seconds]
    [Time delta from previous displayed frame: 0.000299207 seconds]
    [Time since reference or first frame: 3.677617667 seconds]
    Frame Number: 4
    Frame Length: 73 bytes (584 bits)
    Capture Length: 73 bytes (584 bits)
    [Frame is marked: False]
    [Frame is ignored: False]
    [Protocols in frame: eth:ethertype:ip:udp:dns]
    [Coloring Rule Name: UDP]
    [Coloring Rule String: udp]
```

```
 Ethernet II, Src: AsustekC_20:af:fb (30:85:a9:20:af:fb), Dst: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
     Destination: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
     Source: AsustekC_20:af:fb (30:85:a9:20:af:fb)
     Type: IPv4 (0x0800)
 Internet Protocol Version 4, Src: 192.168.1.144, Dst: 192.168.1.1
     0100 .... = Version: 4
     .... 0101 = Header Length: 20 bytes (5)
     Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
         0000 00.. = Differentiated Services Codepoint: Default (0)
         .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
     Total Length: 59
     Identification: 0xdeab (57003)
     Flags: 0x4000, Don't fragment
     Time to live: 64
     Protocol: UDP (17)
     Header checksum: 0xd824 [validation disabled]
     [Header checksum status: Unverified]
     Source: 192.168.1.144
     Destination: 192.168.1.1
 User Datagram Protocol, Src Port: 37252, Dst Port: 53
     Source Port: 37252
     Destination Port: 53
     Length: 39
     Checksum: 0x437a [unverified]
     [Checksum Status: Unverified]
     [Stream index: 1]
 Domain Name System (query)
     Transaction ID: 0xd17d
     Flags: 0x0100 Standard query
     Questions: 1
     Answer RRs: 0
     Authority RRs: 0
     Additional RRs: 0
     Queries
         bitsy.mit.edu: type AAAA, class IN
     [Response In: 6]
No.     Time            Source              Destination         Protocol Length Info
     5 3.680289803     192.168.1.1         192.168.1.144       DNS      384     Standard query response
0xd44b A bitsy.mit.edu A 18.0.72.3 NS eur5.akam.net NS ns1-37.akam.net NS use2.akam.net NS asia1.akam.net
NS ns1-173.akam.net NS use5.akam.net NS usw2.akam.net NS asia2.akam.net A 23.74.25.64 A 96.7.49.64 A
2.16.40.64 A 184.26.161.64 A 95.100.175.64 A 95.101.36.64 A 193.108.91.37 A 193.108.91.173
 Frame 5: 384 bytes on wire (3072 bits), 384 bytes captured (3072 bits) on interface 0
     Interface id: 0 (enp4s0f2)
     Encapsulation type: Ethernet (1)
     Arrival Time: Mar 14, 2020 13:33:04.069635101 EET
     [Time shift for this packet: 0.000000000 seconds]
     Epoch Time: 1584185584.069635101 seconds
     [Time delta from previous captured frame: 0.002672136 seconds]
     [Time delta from previous displayed frame: 0.002672136 seconds]
     [Time since reference or first frame: 3.680289803 seconds]
     Frame Number: 5
     Frame Length: 384 bytes (3072 bits)
     Capture Length: 384 bytes (3072 bits)
     [Frame is marked: False]
     [Frame is ignored: False]
     [Protocols in frame: eth:ethertype:ip:udp:dns]
     [Coloring Rule Name: UDP]
     [Coloring Rule String: udp]
 Ethernet II, Src: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49), Dst: AsustekC_20:af:fb (30:85:a9:20:af:fb)
     Destination: AsustekC_20:af:fb (30:85:a9:20:af:fb)
     Source: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
     Type: IPv4 (0x0800)
 Internet Protocol Version 4, Src: 192.168.1.1, Dst: 192.168.1.144
     0100 .... = Version: 4
     .... 0101 = Header Length: 20 bytes (5)
     Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
         0000 00.. = Differentiated Services Codepoint: Default (0)
         .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
     Total Length: 370
     Identification: 0x0000 (0)
     Flags: 0x4000, Don't fragment
     Time to live: 64
     Protocol: UDP (17)
     Header checksum: 0xb599 [validation disabled]
     [Header checksum status: Unverified]
     Source: 192.168.1.1
```

```
        Destination: 192.168.1.144
    User Datagram Protocol, Src Port: 53, Dst Port: 40929
        Source Port: 53
        Destination Port: 40929
        Length: 350
        Checksum: 0x3381 [unverified]
        [Checksum Status: Unverified]
        [Stream index: 0]
    Domain Name System (response)
        Transaction ID: 0xd44b
        Flags: 0x8180 Standard query response, No error
        Questions: 1
        Answer RRs: 1
        Authority RRs: 8
        Additional RRs: 8
        Queries
            bitsy.mit.edu: type A, class IN
        Answers
        Authoritative nameservers
        Additional records
        [Request In: 3]
        [Time: 0.002971343 seconds]
No.      Time              Source                  Destination           Protocol Length Info
      6 3.709589924     192.168.1.1             192.168.1.144           DNS      138    Standard query response
0xd17d AAAA bitsy.mit.edu SOA use2.akam.net
Frame 6: 138 bytes on wire (1104 bits), 138 bytes captured (1104 bits) on interface 0
    Interface id: 0 (enp4s0f2)
    Encapsulation type: Ethernet (1)
    Arrival Time: Mar 14, 2020 13:33:04.098935222 EET
    [Time shift for this packet: 0.000000000 seconds]
    Epoch Time: 1584185584.098935222 seconds
    [Time delta from previous captured frame: 0.029300121 seconds]
    [Time delta from previous displayed frame: 0.029300121 seconds]
    [Time since reference or first frame: 3.709589924 seconds]
    Frame Number: 6
    Frame Length: 138 bytes (1104 bits)
    Capture Length: 138 bytes (1104 bits)
    [Frame is marked: False]
    [Frame is ignored: False]
    [Protocols in frame: eth:ethertype:ip:udp:dns]
    [Coloring Rule Name: UDP]
    [Coloring Rule String: udp]
Ethernet II, Src: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49), Dst: AsustekC_20:af:fb (30:85:a9:20:af:fb)
    Destination: AsustekC_20:af:fb (30:85:a9:20:af:fb)
    Source: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
    Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.1, Dst: 192.168.1.144
    0100 .... = Version: 4
    .... 0101 = Header Length: 20 bytes (5)
    Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
        0000 00.. = Differentiated Services Codepoint: Default (0)
        .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
    Total Length: 124
    Identification: 0x0000 (0)
    Flags: 0x4000, Don't fragment
    Time to live: 64
    Protocol: UDP (17)
    Header checksum: 0xb68f [validation disabled]
    [Header checksum status: Unverified]
    Source: 192.168.1.1
    Destination: 192.168.1.144
    User Datagram Protocol, Src Port: 53, Dst Port: 37252
        Source Port: 53
        Destination Port: 37252
        Length: 104
        Checksum: 0xffe5 [unverified]
        [Checksum Status: Unverified]
        [Stream index: 1]
    Domain Name System (response)
        Transaction ID: 0xd17d
        Flags: 0x8180 Standard query response, No error
        Questions: 1
        Answer RRs: 0
        Authority RRs: 1
        Additional RRs: 0
        Queries
```

```
        bitsy.mit.edu: type AAAA, class IN
    Authoritative nameservers
    [Request In: 4]
    [Time: 0.031972257 seconds]
No.    Time          Source              Destination        Protocol Length Info
     7 3.711105767   192.168.1.144        18.0.72.3          DNS       74    Standard query 0xc6b7 A
www.aiit.or.kr
Frame 7: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0
    Interface id: 0 (enp4s0f2)
    Encapsulation type: Ethernet (1)
    Arrival Time: Mar 14, 2020 13:33:04.100451065 EET
    [Time shift for this packet: 0.000000000 seconds]
    Epoch Time: 1584185584.100451065 seconds
    [Time delta from previous captured frame: 0.001515843 seconds]
    [Time delta from previous displayed frame: 0.001515843 seconds]
    [Time since reference or first frame: 3.711105767 seconds]
    Frame Number: 7
    Frame Length: 74 bytes (592 bits)
    Capture Length: 74 bytes (592 bits)
    [Frame is marked: False]
    [Frame is ignored: False]
    [Protocols in frame: eth:ethertype:ip:udp:dns]
    [Coloring Rule Name: UDP]
    [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_20:af:fb (30:85:a9:20:af:fb), Dst: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
    Destination: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
    Source: AsustekC_20:af:fb (30:85:a9:20:af:fb)
    Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.144, Dst: 18.0.72.3
    0100 .... = Version: 4
    .... 0101 = Header Length: 20 bytes (5)
    Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
        0000 00.. = Differentiated Services Codepoint: Default (0)
        .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
    Total Length: 60
    Identification: 0x44e1 (17633)
    Flags: 0x0000
    Time to live: 64
    Protocol: UDP (17)
    Header checksum: 0x1995 [validation disabled]
    [Header checksum status: Unverified]
    Source: 192.168.1.144
    Destination: 18.0.72.3
User Datagram Protocol, Src Port: 56518, Dst Port: 53
    Source Port: 56518
    Destination Port: 53
    Length: 40
    Checksum: 0xfe12 [unverified]
    [Checksum Status: Unverified]
    [Stream index: 2]
Domain Name System (query)
    Transaction ID: 0xc6b7
    Flags: 0x0100 Standard query
    Questions: 1
    Answer RRs: 0
    Authority RRs: 0
    Additional RRs: 0
    Queries
        www.aiit.or.kr: type A, class IN
No.    Time          Source              Destination        Protocol Length Info
    11 8.710918990   192.168.1.144        18.0.72.3          DNS       74    Standard query 0xc6b7 A
www.aiit.or.kr
Frame 11: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0
    Interface id: 0 (enp4s0f2)
    Encapsulation type: Ethernet (1)
    Arrival Time: Mar 14, 2020 13:33:09.100264288 EET
    [Time shift for this packet: 0.000000000 seconds]
    Epoch Time: 1584185589.100264288 seconds
    [Time delta from previous captured frame: 3.972158903 seconds]
    [Time delta from previous displayed frame: 4.999813223 seconds]
    [Time since reference or first frame: 8.710918990 seconds]
    Frame Number: 11
    Frame Length: 74 bytes (592 bits)
    Capture Length: 74 bytes (592 bits)
    [Frame is marked: False]
    [Frame is ignored: False]
```

```
        [Protocols in frame: eth:ethertype:ip:udp:dns]
        [Coloring Rule Name: UDP]
        [Coloring Rule String: udp]
    Ethernet II, Src: AsustekC_20:af:fb (30:85:a9:20:af:fb), Dst: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
        Destination: 44:8a:5d:9f:a6:49 (44:8a:5d:9f:a6:49)
        Source: AsustekC_20:af:fb (30:85:a9:20:af:fb)
        Type: IPv4 (0x0800)
    Internet Protocol Version 4, Src: 192.168.1.144, Dst: 18.0.72.3
        0100 .... = Version: 4
        .... 0101 = Header Length: 20 bytes (5)
        Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
            0000 00.. = Differentiated Services Codepoint: Default (0)
            .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
        Total Length: 60
        Identification: 0x4939 (18745)
        Flags: 0x0000
        Time to live: 64
        Protocol: UDP (17)
        Header checksum: 0x153d [validation disabled]
        [Header checksum status: Unverified]
        Source: 192.168.1.144
        Destination: 18.0.72.3
    User Datagram Protocol, Src Port: 56518, Dst Port: 53
        Source Port: 56518
        Destination Port: 53
        Length: 40
        Checksum: 0xfe12 [unverified]
        [Checksum Status: Unverified]
        [Stream index: 2]
    Domain Name System (query)
        Transaction ID: 0xc6b7
        Flags: 0x0100 Standard query
        Questions: 1
        Answer RRs: 0
        Authority RRs: 0
        Additional RRs: 0
        Queries
            www.aiit.or.kr: type A, class IN
        [Retransmitted request. Original request in: 7]
        [Retransmission: True]
```