```
5840 2018-10-17 16:13:13.307663
                                    10.173.88.157
                                                          202.117.112.3
                                                                                              Standard query 0xc111
                                                                                       80
A www.ietf.org
Frame 5840: 80 bytes on wire (640 bits), 80 bytes captured (640 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:13.307663000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763993.307663000 seconds
   [Time delta from previous captured frame: 0.065361000 seconds]
   [Time delta from previous displayed frame: 0.000000000 seconds]
   [Time since reference or first frame: 30.678426000 seconds]
   Frame Number: 5840
   Frame Length: 80 bytes (640 bits)
   Capture Length: 80 bytes (640 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe 3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 60
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 58
   Identification: 0x3783 (14211)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa56d [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 64179, Dst Port: 53
   Source Port: 64179
   Destination Port: 53
   Length: 38
   Checksum: 0x839f [unverified]
   [Checksum Status: Unverified]
   [Stream index: 1]
Domain Name System (query)
   Transaction ID: 0xc111
   Flags: 0x0100 Standard query
       0... .... = Response: Message is a query
       .000 0... = Opcode: Standard query (0)
       .... ..0. .... = Truncated: Message is not truncated
       \dots = Recursion desired: Do query recursively \dots = Z: reserved (0)
       .... ....0 .... = Non-authenticated data: Unacceptable
   Questions: 1
   Answer RRs: 0
   Authority RRs: 0
```

Source

Destination

Protocol Length Info

No.

Time

```
Additional RRs: 0
   Queries
       www.ietf.org: type A, class IN
           Name: www.ietf.org
           [Name Length: 12]
           [Label Count: 3]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   [Response In: 5841]
       Time
                                    Source
                                                          Destination
                                                                               Protocol Length Info
  5841 2018-10-17 16:13:13.309304
                                    202.117.112.3
                                                          10.173.88.157
                                                                               DNS
                                                                                        378
                                                                                               Standard query response
0xc111 A www.ietf.org CNAME www.ietf.org.cdn.cloudflare.net A 104.20.0.85 A 104.20.1.85 NS b.gtld-servers.net NS k.gtld-
servers.net NS h.gtld-servers.net NS f.gtld-servers.net NS j.gtld-servers.net NS l.gtld-servers.net NS d.gtld-servers.net NS
i.gtld-servers.net NS g.gtld-servers.net NS e.gtld-servers.net NS m.gtld-servers.net NS a.gtld-servers.net NS c.gtld-
servers.net
Frame 5841: 378 bytes on wire (3024 bits), 378 bytes captured (3024 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:13.309304000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763993.309304000 seconds
   [Time delta from previous captured frame: 0.001641000 seconds]
   [Time delta from previous displayed frame: 0.001641000 seconds]
   [Time since reference or first frame: 30.680067000 seconds]
   Frame Number: 5841
   Frame Length: 378 bytes (3024 bits)
   Capture Length: 378 bytes (3024 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 358
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 356
   Identification: 0x51af (20911)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8e17 [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 64179
   Source Port: 53
   Destination Port: 64179
   Length: 336
   Checksum: 0x9bb2 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 1]
```

```
Domain Name System (response)
   Transaction ID: 0xc111
   Flags: 0x8180 Standard query response, No error
       1... = Response: Message is a response
       .000 0... = Opcode: Standard query (0)
       \dots .0.. \dots = 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
       .... = 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: 3
   Authority RRs: 13
   Additional RRs: 0
   Queries
       www.ietf.org: type A, class IN
           Name: www.ietf.org
           [Name Length: 12]
           [Label Count: 3]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   Answers
       www.ietf.org: type CNAME, class IN, cname www.ietf.org.cdn.cloudflare.net
           Name: www.ietf.org
           Type: CNAME (Canonical NAME for an alias) (5)
           Class: IN (0x0001)
           Time to live: 220
           Data length: 33
           CNAME: www.ietf.org.cdn.cloudflare.net
       www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.20.0.85
           Name: www.ietf.org.cdn.cloudflare.net
           Type: A (Host Address) (1)
           Class: IN (0x0001)
           Time to live: 61
           Data length: 4
           Address: 104.20.0.85
       www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.20.1.85
           Name: www.ietf.org.cdn.cloudflare.net
           Type: A (Host Address) (1)
           Class: IN (0x0001)
           Time to live: 61
           Data length: 4
           Address: 104.20.1.85
   Authoritative nameservers
       net: type NS, class IN, ns b.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 17
           Name Server: b.gtld-servers.net
       net: type NS, class IN, ns k.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: k.gtld-servers.net
       net: type NS, class IN, ns h.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: h.gtld-servers.net
       net: type NS, class IN, ns f.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: f.gtld-servers.net
       net: type NS, class IN, ns j.gtld-servers.net
```

Name: net

```
Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: j.gtld-servers.net
       net: type NS, class IN, ns l.gtld-servers.net
           Name: net
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
            Data length: 4
           Name Server: 1.gtld-servers.net
       net: type NS, class IN, ns d.gtld-servers.net
            Name: net
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170590
            Data length: 4
            Name Server: d.gtld-servers.net
       net: type NS, class IN, ns i.gtld-servers.net
            Name: net
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
            Data length: 4
           Name Server: i.gtld-servers.net
       net: type NS, class IN, ns g.gtld-servers.net
           Name: net
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170590
            Data length: 4
            Name Server: g.gtld-servers.net
       net: type NS, class IN, ns e.gtld-servers.net
           Name: net
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: e.gtld-servers.net
       net: type NS, class IN, ns m.gtld-servers.net
           Name: net
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170590
           Data length: 4
           Name Server: m.gtld-servers.net
       net: type NS, class IN, ns a.gtld-servers.net
            Name: net
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
            Time to live: 170590
           Data length: 4
           Name Server: a.gtld-servers.net
       net: type NS, class IN, ns c.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170590
           Data length: 4
           Name Server: c.gtld-servers.net
   [Request In: 5840]
   [Time: 0.001641000 seconds]
                                      Source
                                                            Destination
                                                                                   Protocol Length Info
       Time
  5842 2018-10-17 16:13:13.310611
                                      10.173.88.157
                                                             202.117.112.3
                                                                                            99
                                                                                                   Standard query 0x8993
A www.ietf.org.cdn.cloudflare.net
Frame 5842: 99 bytes on wire (792 bits), 99 bytes captured (792 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:13.310611000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763993.310611000 seconds
   [Time delta from previous captured frame: 0.001307000 seconds]
   [Time delta from previous displayed frame: 0.001307000 seconds]
   [Time since reference or first frame: 30.681374000 seconds]
```

Frame Number: 5842

```
Frame Length: 99 bytes (792 bits)
   Capture Length: 99 bytes (792 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... ..0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 79
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 77
   Identification: 0x3784 (14212)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa559 [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 50677, Dst Port: 53
   Source Port: 50677
   Destination Port: 53
   Length: 57
   Checksum: 0x9d54 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 2]
Domain Name System (query)
   Transaction ID: 0x8993
   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
       .... = Z: reserved (0)
       .... .... 0 .... = Non-authenticated data: Unacceptable
   Questions: 1
   Answer RRs: 0
   Authority RRs: 0
   Additional RRs: 0
   Queries
       www.ietf.org.cdn.cloudflare.net: type A, class IN
           Name: www.ietf.org.cdn.cloudflare.net
           [Name Length: 31]
           [Label Count: 6]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   [Response In: 5843]
       Time
                                    Source
                                                         Destination
                                                                              Protocol Length Info
  5843 2018-10-17 16:13:13.311570
                                    202.117.112.3
                                                         10.173.88.157
                                                                              DNS
                                                                                       352
                                                                                              Standard query response
0x8993 A www.ietf.org.cdn.cloudflare.net A 104.20.1.85 A 104.20.0.85 NS k.gtld-servers.net NS a.gtld-servers.net NS e.gtld-
servers.net NS d.gtld-servers.net NS c.gtld-servers.net NS m.gtld-servers.net NS l.gtld-servers.net NS i.gtld-servers.net NS
b.gtld-servers.net NS g.gtld-servers.net NS f.gtld-servers.net NS h.gtld-servers.net NS j.gtld-servers.net
```

```
Frame 5843: 352 bytes on wire (2816 bits), 352 bytes captured (2816 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:13.311570000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763993.311570000 seconds
   [Time delta from previous captured frame: 0.000959000 seconds]
   [Time delta from previous displayed frame: 0.000959000 seconds]
   [Time since reference or first frame: 30.682333000 seconds]
   Frame Number: 5843
   Frame Length: 352 bytes (2816 bits)
   Capture Length: 352 bytes (2816 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: HuaweiTe 3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe 3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... ... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 332
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 330
   Identification: 0x51b0 (20912)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8e30 [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 50677
   Source Port: 53
   Destination Port: 50677
   Length: 310
   Checksum: 0x3c3f [unverified]
   [Checksum Status: Unverified]
   [Stream index: 2]
Domain Name System (response)
   Transaction ID: 0x8993
   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
       .... = 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: 2

```
Authority RRs: 13
Additional RRs: 0
Oueries
    www.ietf.org.cdn.cloudflare.net: type A, class IN
        Name: www.ietf.org.cdn.cloudflare.net
        [Name Length: 31]
        [Label Count: 6]
        Type: A (Host Address) (1)
        Class: IN (0x0001)
Answers
    www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.20.1.85
        Name: www.ietf.org.cdn.cloudflare.net
        Type: A (Host Address) (1)
        Class: IN (0x0001)
        Time to live: 61
        Data length: 4
        Address: 104.20.1.85
    www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.20.0.85
        Name: www.ietf.org.cdn.cloudflare.net
        Type: A (Host Address) (1)
        Class: IN (0x0001)
        Time to live: 61
        Data length: 4
        Address: 104.20.0.85
Authoritative nameservers
    net: type NS, class IN, ns k.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
        Class: IN (0x0001)
        Time to live: 170590
        Data length: 17
        Name Server: k.gtld-servers.net
    net: type NS, class IN, ns a.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
        Class: IN (0x0001)
        Time to live: 170590
        Data length: 4
        Name Server: a.gtld-servers.net
    net: type NS, class IN, ns e.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
        Class: IN (0x0001)
        Time to live: 170590
        Data length: 4
        Name Server: e.gtld-servers.net
    net: type NS, class IN, ns d.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
        Class: IN (0x0001)
        Time to live: 170590
        Data length: 4
        Name Server: d.gtld-servers.net
    net: type NS, class IN, ns c.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
        Class: IN (0x0001)
        Time to live: 170590
        Data length: 4
        Name Server: c.gtld-servers.net
    net: type NS, class IN, ns m.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
        Class: IN (0x0001)
        Time to live: 170590
        Data length: 4
        Name Server: m.gtld-servers.net
    net: type NS, class IN, ns l.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
        Class: IN (0x0001)
        Time to live: 170590
        Data length: 4
        Name Server: 1.gtld-servers.net
    net: type NS, class IN, ns i.gtld-servers.net
        Name: net
        Type: NS (authoritative Name Server) (2)
```

```
Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: i.gtld-servers.net
       net: type NS, class IN, ns b.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: b.gtld-servers.net
       net: type NS, class IN, ns g.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: g.gtld-servers.net
       net: type NS, class IN, ns f.gtld-servers.net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: f.gtld-servers.net
       net: type NS, class IN, ns h.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: h.gtld-servers.net
       net: type NS, class IN, ns j.gtld-servers.net
           Name: net
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170590
           Data length: 4
           Name Server: j.gtld-servers.net
   [Request In: 5842]
   [Time: 0.000959000 seconds]
                                                                                Protocol Length Info
       Time
                                     Source
                                                          Destination
  5859 2018-10-17 16:13:14.244070
                                    10.173.88.157
                                                          202.117.112.3
                                                                                         88
                                                                                                Standard query 0x28ed
A datatracker.ietf.org
Frame 5859: 88 bytes on wire (704 bits), 88 bytes captured (704 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.244070000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.244070000 seconds
   [Time delta from previous captured frame: 0.507052000 seconds]
   [Time delta from previous displayed frame: 0.932500000 seconds]
   [Time since reference or first frame: 31.614833000 seconds]
   Frame Number: 5859
   Frame Length: 88 bytes (704 bits)
   Capture Length: 88 bytes (704 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe 3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... ..0. .... .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
```

Session ID: 0x629d

```
Payload Length: 68
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 66
   Identification: 0x3785 (14213)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa563 [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 58656, Dst Port: 53
   Source Port: 58656
   Destination Port: 53
   Length: 46
   Checksum: 0xa2a9 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 3]
Domain Name System (query)
   Transaction ID: 0x28ed
   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
       .... = Z: reserved (0)
       .... .... ...0 .... = Non-authenticated data: Unacceptable
   Questions: 1
   Answer RRs: 0
   Authority RRs: 0
   Additional RRs: 0
   Oueries
       datatracker.ietf.org: type A, class IN
           Name: datatracker.ietf.org
           [Name Length: 20]
           [Label Count: 3]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   [Response In: 5862]
                                                                                Protocol Length Info
                                    Source
                                                          Destination
  5860 2018-10-17 16:13:14.245564
                                    10.173.88.157
                                                          202.117.112.3
                                                                                DNS
                                                                                        81
                                                                                               Standard query 0xf57a
A iaoc.ietf.org
Frame 5860: 81 bytes on wire (648 bits), 81 bytes captured (648 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.245564000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.245564000 seconds
   [Time delta from previous captured frame: 0.001494000 seconds]
   [Time delta from previous displayed frame: 0.001494000 seconds]
   [Time since reference or first frame: 31.616327000 seconds]
   Frame Number: 5860
   Frame Length: 81 bytes (648 bits)
   Capture Length: 81 bytes (648 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
```

```
Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 61
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 59
   Identification: 0x3786 (14214)
   Flags: 0x0000
       0... .... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa569 [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 58075, Dst Port: 53
   Source Port: 58075
   Destination Port: 53
   Length: 39
   Checksum: 0x69d1 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 4]
Domain Name System (query)
   Transaction ID: 0xf57a
   Flags: 0x0100 Standard query
       0... .... = Response: Message is a query
       .000 0... = Opcode: Standard query (0)
       .... ..0. .... = Truncated: Message is not truncated
       \dots 1 \dots = Recursion desired: Do query recursively
       .... = Z: reserved (0)
       .... .... ...0 .... = Non-authenticated data: Unacceptable
   Questions: 1
   Answer RRs: 0
   Authority RRs: 0
   Additional RRs: 0
       iaoc.ietf.org: type A, class IN
           Name: iaoc.ietf.org
           [Name Length: 13]
           [Label Count: 3]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   [Response In: 5863]
                                                                               Protocol Length Info
No.
       Time
                                    Source
                                                          Destination
  5861 2018-10-17 16:13:14.245586
                                    10.173.88.157
                                                          202.117.112.3
                                                                                        82
                                                                                               Standard query 0x1ab6
A rfc-editor.org
Frame 5861: 82 bytes on wire (656 bits), 82 bytes captured (656 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.245586000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.245586000 seconds
   [Time delta from previous captured frame: 0.000022000 seconds]
   [Time delta from previous displayed frame: 0.000022000 seconds]
   [Time since reference or first frame: 31.616349000 seconds]
   Frame Number: 5861
   Frame Length: 82 bytes (656 bits)
   Capture Length: 82 bytes (656 bits)
   [Frame is marked: False]
```

[Frame is ignored: False]

```
[Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... ..0. .... .... = LG bit: Globally unique address (factory default)
       .... ...0 .... .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 62
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 0x3787 (14215)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa567 [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 59427, Dst Port: 53
   Source Port: 59427
   Destination Port: 53
   Length: 40
   Checksum: 0x9e3f [unverified]
   [Checksum Status: Unverified]
   [Stream index: 5]
Domain Name System (query)
   Transaction ID: 0x1ab6
   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
       .... = Z: reserved (0)
       .... ....0 .... = Non-authenticated data: Unacceptable
   Questions: 1
   Answer RRs: 0
   Authority RRs: 0
   Additional RRs: 0
   Queries
       rfc-editor.org: type A, class IN
           Name: rfc-editor.org
           [Name Length: 14]
           [Label Count: 2]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   [Response In: 5865]
       Time
                                                         Destination
                                                                               Protocol Length Info
No.
                                    Source
                                                                                              Standard query response
  5862 2018-10-17 16:13:14.247581
                                    202.117.112.3
                                                         10.173.88.157
                                                                               DNS
                                                                                       256
0x28ed A datatracker.ietf.org CNAME ietf.org A 127.0.0.1 NS a0.org.afilias-nst.info NS b0.org.afilias-nst.org NS
a2.org.afilias-nst.info NS c0.org.afilias-nst.info NS d0.org.afilias-nst.org NS b2.org.afilias-nst.org
Frame 5862: 256 bytes on wire (2048 bits), 256 bytes captured (2048 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
```

Arrival Time: Oct 17, 2018 16:13:14.247581000 中国标准时间

```
[Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.247581000 seconds
   [Time delta from previous captured frame: 0.001995000 seconds]
   [Time delta from previous displayed frame: 0.001995000 seconds]
   [Time since reference or first frame: 31.618344000 seconds]
   Frame Number: 5862
   Frame Length: 256 bytes (2048 bits)
   Capture Length: 256 bytes (2048 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... ..0. .... = LG bit: Globally unique address (factory default) .... ...0 .... = IG bit: Individual address (unicast)
   Source: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... ..0. .... (factory default)
       .... ...0 .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 236
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 234
   Identification: 0x51b1 (20913)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8e8f [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 58656
   Source Port: 53
   Destination Port: 58656
   Length: 214
   Checksum: 0x3a22 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 3]
Domain Name System (response)
   Transaction ID: 0x28ed
   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
       .... = Z: reserved (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: 2
   Authority RRs: 6
   Additional RRs: 0
   Oueries
       datatracker.ietf.org: type A, class IN
```

Name: datatracker.ietf.org

```
[Name Length: 20]
            [Label Count: 3]
            Type: A (Host Address) (1)
            Class: IN (0x0001)
   Answers
       datatracker.ietf.org: type CNAME, class IN, cname ietf.org
           Name: datatracker.ietf.org
            Type: CNAME (Canonical NAME for an alias) (5)
            Class: IN (0x0001)
           Time to live: 1228
           Data length: 2
           CNAME: ietf.org
       ietf.org: type A, class IN, addr 127.0.0.1
           Name: ietf.org
           Type: A (Host Address) (1)
           Class: IN (0x0001)
           Time to live: 0
            Data length: 4
           Address: 127.0.0.1
   Authoritative nameservers
       org: type NS, class IN, ns a0.org.afilias-nst.info
            Name: org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 25
           Name Server: a0.org.afilias-nst.info
       org: type NS, class IN, ns b0.org.afilias-nst.org
           Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
            Data length: 21
           Name Server: b0.org.afilias-nst.org
       org: type NS, class IN, ns a2.org.afilias-nst.info
           Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: a2.org.afilias-nst.info
       org: type NS, class IN, ns c0.org.afilias-nst.info
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
           Data length: 5
           Name Server: c0.org.afilias-nst.info
       org: type NS, class IN, ns d0.org.afilias-nst.org
           Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: d0.org.afilias-nst.org
       org: type NS, class IN, ns b2.org.afilias-nst.org
           Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
           Data length: 5
           Name Server: b2.org.afilias-nst.org
   [Request In: 5859]
   [Time: 0.003511000 seconds]
                                      Source
                                                            Destination
                                                                                   Protocol Length Info
  5863 2018-10-17 16:13:14.247582
                                      202.117.112.3
                                                            10.173.88.157
                                                                                   DNS
                                                                                            249
                                                                                                   Standard query response
0xf57a A iaoc.ietf.org CNAME ietf.org A 127.0.0.1 NS a2.org.afilias-nst.info NS b2.org.afilias-nst.org NS d0.org.afilias-
nst.org NS b0.org.afilias-nst.org NS a0.org.afilias-nst.info NS c0.org.afilias-nst.info
Frame 5863: 249 bytes on wire (1992 bits), 249 bytes captured (1992 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.247582000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.247582000 seconds
   [Time delta from previous captured frame: 0.000001000 seconds]
```

[Time delta from previous displayed frame: 0.000001000 seconds]

```
[Time since reference or first frame: 31.618345000 seconds]
   Frame Number: 5863
   Frame Length: 249 bytes (1992 bits)
   Capture Length: 249 bytes (1992 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... | LG bit: Globally unique address (factory default)
       .... ...0 .... .... = IG bit: Individual address (unicast)
   Source: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... ..0. .... = LG bit: Globally unique address (factory default) .... ...0 .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 229
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 227
   Identification: 0x51b2 (20914)
   Flags: 0x0000
       0... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8e95 [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 58075
   Source Port: 53
   Destination Port: 58075
   Length: 207
   Checksum: 0x7035 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 4]
Domain Name System (response)
   Transaction ID: 0xf57a
   Flags: 0x8180 Standard query response, No error
       1... = Response: Message is a response
       .000 0... = Opcode: Standard query (0)
       \dots .0.. \dots = 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
       .... = Z: reserved (0)
       .... ..... = Answer authenticated: Answer/authority portion was not authenticated by the server
       .... .... o .... = Non-authenticated data: Unacceptable
       .... .... 0000 = Reply code: No error (0)
   Questions: 1
   Answer RRs: 2
   Authority RRs: 6
   Additional RRs: 0
       iaoc.ietf.org: type A, class IN
           Name: iaoc.ietf.org
           [Name Length: 13]
           [Label Count: 3]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
```

```
Answers
       iaoc.ietf.org: type CNAME, class IN, cname ietf.org
           Name: iaoc.ietf.org
            Type: CNAME (Canonical NAME for an alias) (5)
            Class: IN (0x0001)
            Time to live: 1229
           Data length: 2
           CNAME: ietf.org
       ietf.org: type A, class IN, addr 127.0.0.1
           Name: ietf.org
           Type: A (Host Address) (1)
           Class: IN (0x0001)
           Time to live: 0
           Data length: 4
           Address: 127.0.0.1
   Authoritative nameservers
       org: type NS, class IN, ns a2.org.afilias-nst.info
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
           Time to live: 170599
           Data length: 25
           Name Server: a2.org.afilias-nst.info
       org: type NS, class IN, ns b2.org.afilias-nst.org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 21
           Name Server: b2.org.afilias-nst.org
       org: type NS, class IN, ns d0.org.afilias-nst.org
            Name: org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: d0.org.afilias-nst.org
       org: type NS, class IN, ns b0.org.afilias-nst.org
            Name: org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: b0.org.afilias-nst.org
       org: type NS, class IN, ns a0.org.afilias-nst.info
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: a0.org.afilias-nst.info
       org: type NS, class IN, ns c0.org.afilias-nst.info
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: c0.org.afilias-nst.info
   [Request In: 5860]
   [Time: 0.002018000 seconds]
                                                                                   Protocol Length Info
       Time
                                      Source
                                                            Destination
  5864 2018-10-17 16:13:14.250727
                                      10.173.88.157
                                                            202.117.112.3
                                                                                   DNS
                                                                                            76
                                                                                                   Standard query 0xb5f8
A ietf.org
Frame 5864: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.250727000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.250727000 seconds
   [Time delta from previous captured frame: 0.003145000 seconds]
   [Time delta from previous displayed frame: 0.003145000 seconds]
   [Time since reference or first frame: 31.621490000 seconds]
   Frame Number: 5864
   Frame Length: 76 bytes (608 bits)
   Capture Length: 76 bytes (608 bits)
```

[Frame is marked: False]

```
[Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... ..0. .... (factory default)
       .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 56
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 54
   Identification: 0x3788 (14216)
   Flags: 0x0000
       0... .... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa56c [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 65423, Dst Port: 53
   Source Port: 65423
   Destination Port: 53
   Length: 34
   Checksum: 0x04d3 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 6]
Domain Name System (query)
   Transaction ID: 0xb5f8
   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
       .... = Z: reserved (0)
       .... ....0 .... = Non-authenticated data: Unacceptable
   Questions: 1
   Answer RRs: 0
   Authority RRs: 0
   Additional RRs: 0
   Oueries
       ietf.org: type A, class IN
           Name: ietf.org
           [Name Length: 8]
           [Label Count: 2]
           Type: A (Host Address) (1)
          Class: IN (0x0001)
   [Response In: 5866]
No.
       Time
                                   Source
                                                        Destination
                                                                             Protocol Length Info
  5865 2018-10-17 16:13:14.253146
                                   202.117.112.3
                                                        10.173.88.157
                                                                             DNS
                                                                                     236
                                                                                            Standard query response
0x1ab6 A rfc-editor.org A 4.31.198.49 NS a0.org.afilias-nst.info NS c0.org.afilias-nst.info NS b2.org.afilias-nst.org NS
d0.org.afilias-nst.org NS b0.org.afilias-nst.org NS a2.org.afilias-nst.info
Frame 5865: 236 bytes on wire (1888 bits), 236 bytes captured (1888 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
```

```
Arrival Time: Oct 17, 2018 16:13:14.253146000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.253146000 seconds
   [Time delta from previous captured frame: 0.002419000 seconds]
   [Time delta from previous displayed frame: 0.002419000 seconds]
   [Time since reference or first frame: 31.623909000 seconds]
   Frame Number: 5865
   Frame Length: 236 bytes (1888 bits)
   Capture Length: 236 bytes (1888 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... ..0. .... (factory default)
       .... ...0 .... .... = IG bit: Individual address (unicast)
   Source: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... - IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 216
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 214
   Identification: 0x51b3 (20915)
   Flags: 0x0000
       0... ... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8ea1 [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 59427
   Source Port: 53
   Destination Port: 59427
   Length: 194
   Checksum: 0xc0bc [unverified]
   [Checksum Status: Unverified]
   [Stream index: 5]
Domain Name System (response)
   Transaction ID: 0x1ab6
   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
       .... = Z: reserved (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: 6
   Additional RRs: 0
   Queries
```

rfc-editor.org: type A, class IN

```
Name: rfc-editor.org
            [Name Length: 14]
            [Label Count: 2]
            Type: A (Host Address) (1)
            Class: IN (0x0001)
   Answers
       rfc-editor.org: type A, class IN, addr 4.31.198.49
            Name: rfc-editor.org
            Type: A (Host Address) (1)
            Class: IN (0x0001)
            Time to live: 1233
            Data length: 4
            Address: 4.31.198.49
   Authoritative nameservers
       org: type NS, class IN, ns a0.org.afilias-nst.info
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
            Data length: 25
            Name Server: a0.org.afilias-nst.info
       org: type NS, class IN, ns c0.org.afilias-nst.info
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
            Data length: 5
            Name Server: c0.org.afilias-nst.info
       org: type NS, class IN, ns b2.org.afilias-nst.org
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
            Data length: 21
            Name Server: b2.org.afilias-nst.org
       org: type NS, class IN, ns d0.org.afilias-nst.org
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
            Data length: 5
            Name Server: d0.org.afilias-nst.org
       org: type NS, class IN, ns b0.org.afilias-nst.org
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
            Data length: 5
            Name Server: b0.org.afilias-nst.org
       org: type NS, class IN, ns a2.org.afilias-nst.info
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
            Time to live: 170599
            Data length: 5
           Name Server: a2.org.afilias-nst.info
    [Request In: 5861]
   [Time: 0.007560000 seconds]
                                                             Destination
                                                                                    Protocol Length Info
       Time
                                       Source
  5866 2018-10-17 16:13:14.253147
                                      202.117.112.3
                                                             10.173.88.157
                                                                                    DNS
                                                                                              230
                                                                                                     Standard query response
0xb5f8 A ietf.org A 127.0.0.1 NS c0.org.afilias-nst.info NS a0.org.afilias-nst.info NS b2.org.afilias-nst.org NS
b0.org.afilias-nst.org NS d0.org.afilias-nst.org NS a2.org.afilias-nst.info
Frame 5866: 230 bytes on wire (1840 bits), 230 bytes captured (1840 bits) on interface 0
   \label{local_equation_local_equation} Interface \ id: \ 0 \ (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
        Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.253147000 中国标准时间
    [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.253147000 seconds
    [Time delta from previous captured frame: 0.000001000 seconds]
    [Time delta from previous displayed frame: 0.000001000 seconds]
    [Time since reference or first frame: 31.623910000 seconds]
   Frame Number: 5866
   Frame Length: 230 bytes (1840 bits)
   Capture Length: 230 bytes (1840 bits)
    [Frame is marked: False]
```

[Frame is ignored: False]

```
[Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... .... = IG bit: Individual address (unicast)
   Source: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 210
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 208
   Identification: 0x51b4 (20916)
   Flags: 0x0000
       0... .... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8ea6 [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 65423
   Source Port: 53
   Destination Port: 65423
   Length: 188
   Checksum: 0x9990 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 6]
Domain Name System (response)
   Transaction ID: 0xb5f8
   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
       .... = Z: reserved (0)
       .... ....0 .... = Non-authenticated data: Unacceptable
       .... .... 0000 = Reply code: No error (0)
   Questions: 1
   Answer RRs: 1
   Authority RRs: 6
   Additional RRs: 0
   Queries
       ietf.org: type A, class IN
          Name: ietf.org
           [Name Length: 8]
           [Label Count: 2]
          Type: A (Host Address) (1)
          Class: IN (0x0001)
   Answers
       ietf.org: type A, class IN, addr 127.0.0.1
           Name: ietf.org
           Type: A (Host Address) (1)
          Class: IN (0x0001)
          Time to live: 0
```

```
Data length: 4
           Address: 127.0.0.1
   Authoritative nameservers
       org: type NS, class IN, ns c0.org.afilias-nst.info
           Name: org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 25
           Name Server: c0.org.afilias-nst.info
       org: type NS, class IN, ns a0.org.afilias-nst.info
           Name: org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: a0.org.afilias-nst.info
       org: type NS, class IN, ns b2.org.afilias-nst.org
            Name: org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
            Time to live: 170599
           Data length: 21
           Name Server: b2.org.afilias-nst.org
       org: type NS, class IN, ns b0.org.afilias-nst.org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: b0.org.afilias-nst.org
       org: type NS, class IN, ns d0.org.afilias-nst.org
           Name: org
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: d0.org.afilias-nst.org
       org: type NS, class IN, ns a2.org.afilias-nst.info
           Name: org
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: a2.org.afilias-nst.info
   [Request In: 5864]
   [Time: 0.002420000 seconds]
       Time
                                                                                  Protocol Length Info
                                      Source
                                                            Destination
  5867 2018-10-17 16:13:14.258774
                                     10.173.88.157
                                                            202.117.112.3
                                                                                           84
                                                                                                   Standard query 0x6b0e
A trustee.ietf.org
Frame 5867: 84 bytes on wire (672 bits), 84 bytes captured (672 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.258774000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.258774000 seconds
   [Time delta from previous captured frame: 0.005627000 seconds]
   [Time delta from previous displayed frame: 0.005627000 seconds]
   [Time since reference or first frame: 31.629537000 seconds]
   Frame Number: 5867
   Frame Length: 84 bytes (672 bits)
   Capture Length: 84 bytes (672 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
        .... ..0. .... .... = LG bit: Globally unique address (factory default)
        .... ...0 .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
        .... ..0. .... = LG bit: Globally unique address (factory default)
        .... ...0 .... .... = IG bit: Individual address (unicast)
```

```
Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 64
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 62
   Identification: 0x3789 (14217)
   Flags: 0x0000
       0... .... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
        ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa563 [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 56551, Dst Port: 53
   Source Port: 56551
   Destination Port: 53
   Length: 42
   Checksum: 0x1f92 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 7]
Domain Name System (query)
   Transaction ID: 0x6b0e
   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
   Oueries
       trustee.ietf.org: type A, class IN
           Name: trustee.ietf.org
           [Name Length: 16]
           [Label Count: 3]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   [Response In: 5869]
       Time
                                     Source
                                                           Destination
                                                                                 Protocol Length Info
  5868 2018-10-17 16:13:14.263024
                                     10.173.88.157
                                                           202.117.112.3
                                                                                 DNS
                                                                                                Standard query 0x319e
                                                                                         76
Frame 5868: 76 bytes on wire (608 bits), 76 bytes captured (608 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.263024000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.263024000 seconds
   [Time delta from previous captured frame: 0.004250000 seconds]
   [Time delta from previous displayed frame: 0.004250000 seconds]
   [Time since reference or first frame: 31.633787000 seconds]
   Frame Number: 5868
   Frame Length: 76 bytes (608 bits)
   Capture Length: 76 bytes (608 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
```

```
Ethernet II, Src: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0), Dst: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
   Destination: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       ......0. .... (factory default)
       .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 56
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 10.173.88.157, Dst: 202.117.112.3
   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: 54
   Identification: 0x378a (14218)
   Flags: 0x0000
       0... .... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 64
   Protocol: UDP (17)
   Header checksum: 0xa56a [validation disabled]
   [Header checksum status: Unverified]
   Source: 10.173.88.157
   Destination: 202.117.112.3
User Datagram Protocol, Src Port: 56904, Dst Port: 53
   Source Port: 56904
   Destination Port: 53
   Length: 34
   Checksum: 0xaa74 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 8]
Domain Name System (query)
   Transaction ID: 0x319e
   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
       .... = Z: reserved (0)
       .... .... ...0 .... = Non-authenticated data: Unacceptable
   Questions: 1
   Answer RRs: 0
   Authority RRs: 0
   Additional RRs: 0
   Queries
       ietf.org: type A, class IN
           Name: ietf.org
           [Name Length: 8]
           [Label Count: 2]
          Type: A (Host Address) (1)
          Class: IN (0x0001)
   [Response In: 5870]
       Time
                                   Source
                                                        Destination
                                                                             Protocol Length Info
  5869 2018-10-17 16:13:14.266894
                                   202.117.112.3
                                                        10.173.88.157
                                                                             DNS
                                                                                    252
                                                                                            Standard query response
0x6b0e A trustee.ietf.org CNAME ietf.org A 127.0.0.1 NS a2.org.afilias-nst.info NS b0.org.afilias-nst.org NS a0.org.afilias-
nst.info NS c0.org.afilias-nst.info NS b2.org.afilias-nst.org NS d0.org.afilias-nst.org
Frame 5869: 252 bytes on wire (2016 bits), 252 bytes captured (2016 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.266894000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.266894000 seconds
   [Time delta from previous captured frame: 0.003870000 seconds]
```

```
[Time delta from previous displayed frame: 0.003870000 seconds]
   [Time since reference or first frame: 31.637657000 seconds]
   Frame Number: 5869
   Frame Length: 252 bytes (2016 bits)
   Capture Length: 252 bytes (2016 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... ...0 .... = IG bit: Individual address (unicast)
   Source: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... ..0. .... .... = LG bit: Globally unique address (factory default)
       .... ...0 .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 232
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 230
   Identification: 0x51b5 (20917)
   Flags: 0x0000
       0... ... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8e8f [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 56551
   Source Port: 53
   Destination Port: 56551
   Length: 210
   Checksum: 0xc72c [unverified]
   [Checksum Status: Unverified]
   [Stream index: 7]
Domain Name System (response)
   Transaction ID: 0x6b0e
   Flags: 0x8180 Standard query response, No error
       1... = Response: Message is a response
       .000 0... = Opcode: Standard query (0)
       \ldots .0.. \ldots = 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
       .... = 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: 2
   Authority RRs: 6
   Additional RRs: 0
       trustee.ietf.org: type A, class IN
           Name: trustee.ietf.org
           [Name Length: 16]
           [Label Count: 3]
           Type: A (Host Address) (1)
```

```
Class: IN (0x0001)
   Answers
       trustee.ietf.org: type CNAME, class IN, cname ietf.org
           Name: trustee.ietf.org
            Type: CNAME (Canonical NAME for an alias) (5)
            Class: IN (0x0001)
           Time to live: 1230
           Data length: 2
           CNAME: ietf.org
       ietf.org: type A, class IN, addr 127.0.0.1
           Name: ietf.org
            Type: A (Host Address) (1)
            Class: IN (0x0001)
           Time to live: 0
           Data length: 4
           Address: 127.0.0.1
   Authoritative nameservers
       org: type NS, class IN, ns a2.org.afilias-nst.info
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
            Time to live: 170599
           Data length: 25
           Name Server: a2.org.afilias-nst.info
       org: type NS, class IN, ns b0.org.afilias-nst.org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 21
           Name Server: b0.org.afilias-nst.org
       org: type NS, class IN, ns a0.org.afilias-nst.info
            Name: org
            Type: NS (authoritative Name Server) (2)
            Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: a0.org.afilias-nst.info
       org: type NS, class IN, ns c0.org.afilias-nst.info
           Name: org
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
            Data length: 5
            Name Server: c0.org.afilias-nst.info
       org: type NS, class IN, ns b2.org.afilias-nst.org
            Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
            Time to live: 170599
           Data length: 5
           Name Server: b2.org.afilias-nst.org
       org: type NS, class IN, ns d0.org.afilias-nst.org
           Name: org
           Type: NS (authoritative Name Server) (2)
           Class: IN (0x0001)
           Time to live: 170599
           Data length: 5
           Name Server: d0.org.afilias-nst.org
   [Request In: 5867]
   [Time: 0.008120000 seconds]
                                                            Destination
                                                                                   Protocol Length Info
       Time
                                      Source
  5870 2018-10-17 16:13:14.266895
                                      202.117.112.3
                                                            10.173.88.157
                                                                                   DNS
                                                                                                   Standard query response
                                                                                            230
0x319e A ietf.org A 127.0.0.1 NS c0.org.afilias-nst.info NS a2.org.afilias-nst.info NS a0.org.afilias-nst.info NS
d0.org.afilias-nst.org NS b2.org.afilias-nst.org NS b0.org.afilias-nst.org
Frame 5870: 230 bytes on wire (1840 bits), 230 bytes captured (1840 bits) on interface 0
   Interface id: 0 (\Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6})
       Interface name: \Device\NPF_{5D52E7A2-EE68-4250-BF9F-5249138CADE6}
   Encapsulation type: Ethernet (1)
   Arrival Time: Oct 17, 2018 16:13:14.266895000 中国标准时间
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1539763994.266895000 seconds
   [Time delta from previous captured frame: 0.000001000 seconds]
   [Time delta from previous displayed frame: 0.000001000 seconds]
   [Time since reference or first frame: 31.637658000 seconds]
   Frame Number: 5870
```

Frame Length: 230 bytes (1840 bits)

```
Capture Length: 230 bytes (1840 bits)
   [Frame is marked: False]
   [Frame is ignored: False]
   [Protocols in frame: eth:ethertype:pppoes:ppp:ip:udp:dns]
   [Coloring Rule Name: UDP]
   [Coloring Rule String: udp]
Ethernet II, Src: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf), Dst: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
   Destination: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       Address: AsustekC_e2:8a:f0 (34:97:f6:e2:8a:f0)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: HuaweiTe 3e:8f:cf (94:db:da:3e:8f:cf)
       Address: HuaweiTe_3e:8f:cf (94:db:da:3e:8f:cf)
       .... ..0. .... .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Type: PPPoE Session (0x8864)
PPP-over-Ethernet Session
   0001 .... = Version: 1
   .... 0001 = Type: 1
   Code: Session Data (0x00)
   Session ID: 0x629d
   Payload Length: 210
Point-to-Point Protocol
   Protocol: Internet Protocol version 4 (0x0021)
Internet Protocol Version 4, Src: 202.117.112.3, Dst: 10.173.88.157
   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: 208
   Identification: 0x51b6 (20918)
   Flags: 0x0000
       0... .... = Reserved bit: Not set
       .0.. .... = Don't fragment: Not set
       ..0. .... = More fragments: Not set
       ...0 0000 0000 0000 = Fragment offset: 0
   Time to live: 60
   Protocol: UDP (17)
   Header checksum: 0x8ea4 [validation disabled]
   [Header checksum status: Unverified]
   Source: 202.117.112.3
   Destination: 10.173.88.157
User Datagram Protocol, Src Port: 53, Dst Port: 56904
   Source Port: 53
   Destination Port: 56904
   Length: 188
   Checksum: 0xfd51 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 8]
Domain Name System (response)
   Transaction ID: 0x319e
   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
       .... = Z: reserved (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: 6
   Additional RRs: 0
   Queries
       ietf.org: type A, class IN
           Name: ietf.org
           [Name Length: 8]
           [Label Count: 2]
           Type: A (Host Address) (1)
           Class: IN (0x0001)
   Answers
       ietf.org: type A, class IN, addr 127.0.0.1
           Name: ietf.org
```

Type: A (Host Address) (1) Class: IN (0x0001) Time to live: 0 Data length: 4 Address: 127.0.0.1 Authoritative nameservers org: type NS, class IN, ns c0.org.afilias-nst.info Name: org Type: NS (authoritative Name Server) (2) Class: IN (0x0001) Time to live: 170599 Data length: 25 Name Server: c0.org.afilias-nst.info org: type NS, class IN, ns a2.org.afilias-nst.info Name: org Type: NS (authoritative Name Server) (2) Class: IN (0x0001) Time to live: 170599 Data length: 5 Name Server: a2.org.afilias-nst.info org: type NS, class IN, ns a0.org.afilias-nst.info Name: org Type: NS (authoritative Name Server) (2) Class: IN (0x0001) Time to live: 170599 Data length: 5 Name Server: a0.org.afilias-nst.info org: type NS, class IN, ns d0.org.afilias-nst.org Name: org Type: NS (authoritative Name Server) (2) Class: IN (0x0001) Time to live: 170599 Data length: 21 Name Server: d0.org.afilias-nst.org org: type NS, class IN, ns b2.org.afilias-nst.org Name: org Type: NS (authoritative Name Server) (2) Class: IN (0x0001) Time to live: 170599 Data length: 5 Name Server: b2.org.afilias-nst.org org: type NS, class IN, ns b0.org.afilias-nst.org Name: org Type: NS (authoritative Name Server) (2) Class: IN (0x0001) Time to live: 170599 Data length: 5 Name Server: b0.org.afilias-nst.org [Request In: 5868] [Time: 0.003871000 seconds]