

## 1. Dns filter

The image shows a Wireshark packet capture of DNS traffic. The packet list pane displays a series of DNS queries and responses between 192.168.29.1 and 192.168.29.174. The packet details pane shows the structure of a DNS query packet (Frame 46) with fields for Ethernet II, IP, UDP, and DNS.

Destination	Protocol	Length	Info
192.168.29.1	DNS	70	Standard query 0x6b62 A google.com
192.168.29.1	DNS	70	Standard query 0x3e64 AAAA google.com
192.168.29.174	DNS	86	Standard query response 0x6b62 A google.com A 142.251.43.110
192.168.29.174	DNS	98	Standard query response 0x3e64 AAAA google.com AAAA 2404:6800:4006:8000:0000:0000:0000:0000
192.168.29.1	DNS	74	Standard query 0x9a61 A www.google.com
192.168.29.1	DNS	74	Standard query 0x7a62 AAAA www.google.com
192.168.29.174	DNS	90	Standard query response 0x9a61 A www.google.com A 142.251.43.100
192.168.29.174	DNS	102	Standard query response 0x7a62 AAAA www.google.com AAAA 2404:6800:4006:8000:0000:0000:0000:0000
192.168.29.1	DNS	77	Standard query 0xb6b2 A fonts.gstatic.com
192.168.29.1	DNS	77	Standard query 0xb1b4 AAAA fonts.gstatic.com
192.168.29.1	DNS	75	Standard query 0xfc02 A www.gstatic.com
192.168.29.1	DNS	75	Standard query 0x010c AAAA www.gstatic.com
192.168.29.1	DNS	78	Standard query 0xfafa A csp.withgoogle.com
192.168.29.1	DNS	78	Standard query 0x42fb AAAA csp.withgoogle.com
192.168.29.174	DNS	105	Standard query response 0xb1b4 AAAA fonts.gstatic.com AAAA 2404:6800:4006:8000:0000:0000:0000:0000
192.168.29.174	DNS	93	Standard query response 0xb6b2 A fonts.gstatic.com A 142.250.183.100
192.168.29.174	DNS	103	Standard query response 0x010c AAAA www.gstatic.com AAAA 2404:6800:4006:8000:0000:0000:0000:0000
192.168.29.174	DNS	91	Standard query response 0xfc02 A www.gstatic.com A 142.250.193.100
192.168.29.174	DNS	94	Standard query response 0xfafa A csp.withgoogle.com A 142.250.77.100
192.168.29.174	DNS	106	Standard query response 0x42fb AAAA csp.withgoogle.com AAAA 2404:6800:4006:8000:0000:0000:0000:0000
192.168.29.1	DNS	87	Standard query 0x3270 A safebrowsing.googleapis.com
192.168.29.174	DNS	103	Standard query response 0x3270 A safebrowsing.googleapis.com A 142.250.183.100
192.168.29.1	DNS	70	Standard query 0x24c1 A o.pki.goog
192.168.29.174	DNS	121	Standard query response 0x24c1 A o.pki.goog CNAME pki-goog.l.google.com
192.168.29.1	DNS	88	Standard query 0x79b3 A ogads-pa.clients6.google.com
192.168.29.1	DNS	88	Standard query 0xf4bd AAAA ogads-pa.clients6.google.com
192.168.29.174	DNS	116	Standard query response 0xf4bd AAAA ogads-pa.clients6.google.com AAAA 2404:6800:4006:8000:0000:0000:0000:0000
192.168.29.174	DNS	104	Standard query response 0x79b3 A ogads-pa.clients6.google.com A 142.250.183.100
192.168.29.1	DNS	72	Standard query 0x6593 A info.cern.ch
192.168.29.1	DNS	72	Standard query 0x2f8c AAAA info.cern.ch
192.168.29.174	DNS	112	Standard query response 0x6593 A info.cern.ch CNAME webafs902.cern.ch
192.168.29.174	DNS	124	Standard query response 0x2f8c AAAA info.cern.ch CNAME webafs902.cern.ch

Frame 46: 70 bytes on wire (560 bits), 70 bytes captured (560 bits) on interface eth0, 0 bytes from 192.168.29.174  
Ethernet II, Src: PCSSystemtec\_53:0d:f0 (08:00:27:53:0d:f0), Dst: 192.168.29.174 (08:00:27:53:0d:f0)  
Internet Protocol Version 4, Src: 192.168.29.174, Dst: 192.168.29.1  
User Datagram Protocol, Src Port: 33284, Dst Port: 53  
Domain Name System (query)  
0000 b4 a7 c6 a6 1b 3c 08 00 27 53 0d f0 08 00 45  
0010 00 38 af 9c 40 00 40 11 cf 18 c0 a8 1d ae c0  
0020 1d 01 82 04 00 35 00 24 bc 35 6b 62 01 00 00  
0030 00 00 00 00 00 00 06 67 6f 6f 67 6c 65 03 63  
0040 6d 00 00 01 00 01

## 2. Http

The image shows a Wireshark packet capture of an HTTP GET request. The packet list at the top shows the following entries:

Source	Destination	Protocol	Length	Info
192.168.29.174	142.250.77.227	OCSP	493	[TCP Previous segment not captured] Request
142.250.77.227	192.168.29.174	OCSP	1168	Response
192.168.29.174	142.250.77.227	OCSP	493	[TCP Previous segment not captured] Request
142.250.77.227	192.168.29.174	OCSP	1168	Response
192.168.29.174	142.250.77.227	OCSP	494	Request
192.168.29.174	142.250.77.227	OCSP	494	Request
142.250.77.227	192.168.29.174	OCSP	1169	Response
142.250.77.227	192.168.29.174	OCSP	1169	Response
142.250.77.227	192.168.29.174	OCSP	1169	Response
192.168.29.174	142.250.77.227	OCSP	493	Request
142.250.77.227	192.168.29.174	OCSP	1168	Response
192.168.29.174	188.184.67.127	HTTP	398	GET / HTTP/1.1
188.184.67.127	192.168.29.174	HTTP	944	HTTP/1.1 200 OK (text/html)
192.168.29.174	188.184.67.127	HTTP	413	GET /favicon.ico HTTP/1.1
188.184.67.127	192.168.29.174	HTTP	1720	HTTP/1.1 200 OK (image/vnd.microsoft.icon)

The packet details pane for the selected packet (Frame 63) shows the following structure:

- Frame 63: 493 bytes on wire (3944 bits), 493 bytes captured (3944 bits) on interface 0
- Ethernet II, Src: PCSSystemtec\_53:0d:f0 (08:00:27:53:0d:f0), Dst: 188.184.67.127 (08:00:27:53:0d:f0)
- Internet Protocol Version 4, Src: 192.168.29.174, Dst: 188.184.67.127
- Transmission Control Protocol, Src Port: 54866, Dst Port: 80
- Hypertext Transfer Protocol
- Online Certificate Status Protocol

The packet bytes pane shows the raw data of the frame, including the Ethernet II header, IP header, TCP header, and the HTTP GET request.

### 3. Tcp

The image shows a Wireshark packet capture window titled "elevate\_lab\_task5.pcapng". The filter bar at the top is set to "tcp". The packet list on the left shows a series of packets, with packet 63 highlighted in yellow. The packet details pane on the right shows the structure of packet 63, which is a TCP segment. The segment is from source 192.168.29.174 to destination 142.250.77.227, with source port 54866 and destination port 80. The segment is an ACK with sequence number 1, acknowledgment number 429, and window size 1049. The segment is 80 bytes long. The packet bytes pane at the bottom shows the raw data of the packet, with the TCP header and data fields highlighted in blue.

Destination	Protocol	Length	Info
142.251.43.110	TLSv1.3	158	Application Data
142.251.43.110	TLSv1.3	654	Application Data
192.168.29.174	TCP	66	443 → 43718 [ACK] Seq=6644 Ack=1403 Win=267776 Len=0 TSval=22960
192.168.29.174	TLSv1.3	680	Application Data, Application Data
192.168.29.174	TLSv1.3	97	Application Data
192.168.29.174	TLSv1.3	642	Application Data
192.168.29.174	TLSv1.3	317	Application Data
192.168.29.174	TLSv1.3	97	Application Data
192.168.29.174	TLSv1.3	105	Application Data
142.251.43.110	TCP	66	43718 → 443 [ACK] Seq=1403 Ack=7258 Win=81152 Len=0 TSval=185719
142.251.43.110	TCP	66	43718 → 443 [ACK] Seq=1403 Ack=7289 Win=81152 Len=0 TSval=185719
142.251.43.110	TCP	66	43718 → 443 [ACK] Seq=1403 Ack=7865 Win=83968 Len=0 TSval=185719
142.251.43.110	TCP	66	43718 → 443 [ACK] Seq=1403 Ack=8116 Win=86656 Len=0 TSval=185719
142.251.43.110	TCP	66	43718 → 443 [ACK] Seq=1403 Ack=8147 Win=86656 Len=0 TSval=185719
142.251.43.110	TCP	66	43718 → 443 [ACK] Seq=1403 Ack=8186 Win=86656 Len=0 TSval=185719
142.251.43.110	TLSv1.3	97	Application Data
142.251.43.110	TLSv1.3	105	Application Data
192.168.29.174	TCP	66	443 → 43718 [ACK] Seq=8186 Ack=1473 Win=267776 Len=0 TSval=22960
2404:6800:4002:80b::...	TCP	94	52696 → 443 [SYN] Seq=0 Win=64800 Len=0 MSS=1440 SACK_PERM TSval=
142.251.43.100	TCP	74	60276 → 443 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=
192.168.29.174	TCP	74	443 → 60276 [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=1412 SACK
142.251.43.100	TCP	66	60276 → 443 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=184012517 TS
142.251.43.100	TLSv1.3	728	Client Hello (SNI=www.google.com)
192.168.29.174	TCP	66	443 → 60276 [ACK] Seq=1 Ack=663 Win=268288 Len=0 TSval=296719151
192.168.29.174	TLSv1.3	1466	Server Hello, Change Cipher Spec
142.251.43.100	TCP	66	60276 → 443 [ACK] Seq=663 Ack=1401 Win=67200 Len=0 TSval=1840125
192.168.29.174	TCP	1466	443 → 60276 [PSH, ACK] Seq=1401 Ack=663 Win=268288 Len=1400 TSva
192.168.29.174	TLSv1.3	1367	Application Data
142.251.43.100	TCP	66	60276 → 443 [ACK] Seq=663 Ack=2801 Win=70144 Len=0 TSval=1840125
142.251.43.100	TCP	66	60276 → 443 [ACK] Seq=663 Ack=4102 Win=72960 Len=0 TSval=1840125
142.250.77.227	OCSP	493	[TCP Previous segment not captured] Request
192.168.29.174	TCP	66	80 → 54872 [ACK] Seq=1 Ack=429 Win=1049 Len=0 TSval=3670956471 T

Frame 63: 493 bytes on wire (3944 bits), 493 bytes captured (3944 bits) on interface 0  
Ethernet II, Src: PCSSystemtec\_53:0d:f0 (08:00:27:53:0d:f0), Dst: 142.250.77.227 (01:00:0c:00:00:00)  
Internet Protocol Version 4, Src: 192.168.29.174, Destination: 142.250.77.227  
Transmission Control Protocol, Src Port: 54866, Dst Port: 80  
Hypertext Transfer Protocol  
Online Certificate Status Protocol

Transmission Control Protocol: Protocol Packets: 1476 · Displayed: 1195 (81.0%) Profile: Default

#### 4. Icmp

The image shows a Wireshark packet capture of ICMP Echo (ping) traffic. The packet list on the left shows 16 requests and 16 replies between 8.8.8.8 and 192.168.29.174. The packet details for frame 1265 are expanded, showing the following structure:

- Frame 1265: 98 bytes on wire (784 bits), 98 bytes captured (784 bits) on interface 0
- Ethernet II, Src: PCSSystemtec\_53:0d:f0 (08:00:27:53:0d:f0), Dst: 192.168.29.174 (08:00:27:53:0d:f0)
- Internet Protocol Version 4, Src: 192.168.29.174, Dst: 8.8.8.8
- Internet Control Message Protocol, Seq=16/4096, TTL=64, Len=28

The packet bytes pane shows the raw data for the selected packet, with the ICMP Echo (ping) request data highlighted in blue.