Aufgabe 2 (a)

DNS Resolve

1.) Data link (Source MAC = aa:aa:aa:aa:aa:aa, Destination = 01:01:01:01:01:01) /
IP (Source IP = 10.0.0.2 Destination IP = 10.0.0.1)
UDP (Port 53)
DNS (IP-Get-request = http://www.example.com)

2.) IP (Source IP = 19.19.19.19 Destination IP = 4.0.0.1)/
UDP (Port 53)/
DNS (IP-Get-request = http://www.example.com)

3.) IP (Source IP = 4.0.0.1 Destination IP = 19.19.19.19)/
UDP (Port 53)/
DNS (IP-Get-response = “4.0.0.2” resolved = “false”)

4.) IP (Source IP = 19.19.19.19 Destination IP = 4.0.0.2)/
UDP (Port 53)/
DNS (IP-Get-request = http://www.example.com)

5.) IP (Source IP = 4.0.0.2 Destination IP = 19.19.19.19)/
UDP (Port 53)/
DNS (IP-Get-response = “4.0.0.3” resolved = “false”)

6.) IP (Source IP = 19.19.19.19 Destination IP = 4.0.0.3)/
UDP (Port 53)/
DNS (IP-Get-request = http://www.example.com)

7.) IP (Source IP = 4.0.0.3 Destination IP = 19.19.19.19)/
UDP (Port 53)/
DNS (IP-Get-response = “1.2.3.4” resolved = “true”)

8.) Data link (Source MAC = 01:01:01:01:01:01, Destination = aa:aa:aa:aa:aa:aa) /
IP (Source IP = 10.0.0.1 Destination IP = 10.0.0.2)/
UDP (Port 53)/
DNS (IP-Get-response = “1.2.3.4” resolved = “true”)

TCP Connection

9.) Data link (Source MAC = aa:aa:aa:aa:aa:aa, Destination = 01:01:01:01:01:01) /
IP (Source IP = 10.0.0.2 Destination IP = 1.2.3.4)/
TCP (Port 80)
HTTP (GET request “\”)

10.) IP (Source IP = 19.19.19.19 Destination IP = 1.2.3.4)/
TCP (Port 80)
HTTP (GET request “\”)
…

Aufgabe 2 (b)

DNS Resolve

1.) Data link (Source MAC = 66:66:66:66:66:66, Destination = aa:aa:aa:aa:aa:aa, ARP= "MAC für 10.0.0.1 ist 66:66:66:66:66:66") /
IP (Source IP = 10.0.0.6 Destination IP = 10.0.0.2)

2.) Data link (Source MAC = 66:66:66:66:66:66, Destination = 01:01:01:01:01:01, ARP= "MAC für 10.0.0.2 ist 66:66:66:66:66:66") /
IP (Source IP = 10.0.0.6 Destination IP = 10.0.0.1)

3.) Data link (Source MAC = aa:aa:aa:aa:aa:aa, Destination = 66:66:66:66:66:66) /
IP (Source IP = 10.0.0.2 Destination IP = 10.0.0.1)
UDP (Port 53)
DNS (IP-Get-request = http://www.example.com)

..dann analog zu 1) oder direkte Antwort-Seite an Alice

TCP Connection

4.) Data link (Source MAC = aa:aa:aa:aa:aa:aa, Destination = 66:66:66:66:66:66) /
IP (Source IP = 10.0.0.2 Destination IP = 1.2.3.4)/
TCP (Port 80)
HTTP (GET request "\")

5.) Data link (Source MAC = 66:66:66:66:66:66, Destination = 01:01:01:01:01:01) /
IP (Source IP = 10.0.0.6 Destination IP = 1.2.3.4)/
TCP (Port 80)
HTTP (GET request "\")

6.) IP (Source IP = 19.19.19.19 Destination IP = 1.2.3.4)/
TCP (Port 80)
HTTP (GET request "\")

…