

# CS408 Computer Networks Spring 2024

## Homework 3

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March 2024

### 1 IP address of `http://info.cern.ch`

It is 188.184.100.182. This information was gathered from the `http.host == info.cern.ch` filter.

### 2 HTTP Port Source and Destination of `http://info.cern.ch`

Src Port: 62257, Dst Port: 80 This information can be gathered by looking at the TCP trace of the request.

### 3 IP Address of `example.com` domain

IP address of the `example.com` domain can be found when the ping command was executed and the ICMP Echo was successful. It is : 93.184.216.34

### 4 IP address of my default gateway

IP address of the default gateway is 192.168.1.1 and this can be found via the `ipconfig \all` command.

### 5 MAC addresses of ICMP Echo request source and destination

Source is : b4:8c:9d:5d:81:2d and Destination is : 34:da:b7:86:77:c8. This information was gathered by filtering by ICMP and finding a packet with source 192.168.1.72.

## **6 Length of the Data field of ICMP Echo reply from `http://example.com`**

Frame 448: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface, id 0. Therefore, it is 592 bits in total. However, the Data field is 32 bits. It is something like this: 6162636465666768696a6b6c6d6e6f7071727374757677616263646566676869

## **7 Wireshark filter for showing packets with destination IP address 192.168.19.05 and destination port 1023**

`ip.dst == 192.168.19.5 && (tcp.dstport == 1023 || udp.dstport == 1023)` is a filter that can be applied in this case. Zeros are not allowed after the most significant digit, and we have to consider for the UDP ports as well.

## **8 Target IP Address of your ARP Request packet**

Target IP Address is : 192.168.1.1 because ARP protocol is about sending a request to the default gateway to resolve MAC addresses.

## **9 Value of the User-Agent header field of HTTP requests sent by your browser**

Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/123.0.0.0 Safari/537.36

## **10 HTTP Status Code of HTTP response for “`http://info.cern.ch/cs408`”**

Due to the fact that the subdomain `/cs408` cannot be resolved, server responded with a 404 Not Found Error.