Roadmap 01 - Analysis on network traffic (Wireshark)

Author: Enricco Gemha

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Question 01

Both Cisco and Trend Micro offer solutions on IDS, as Trend Micro having the most market share.

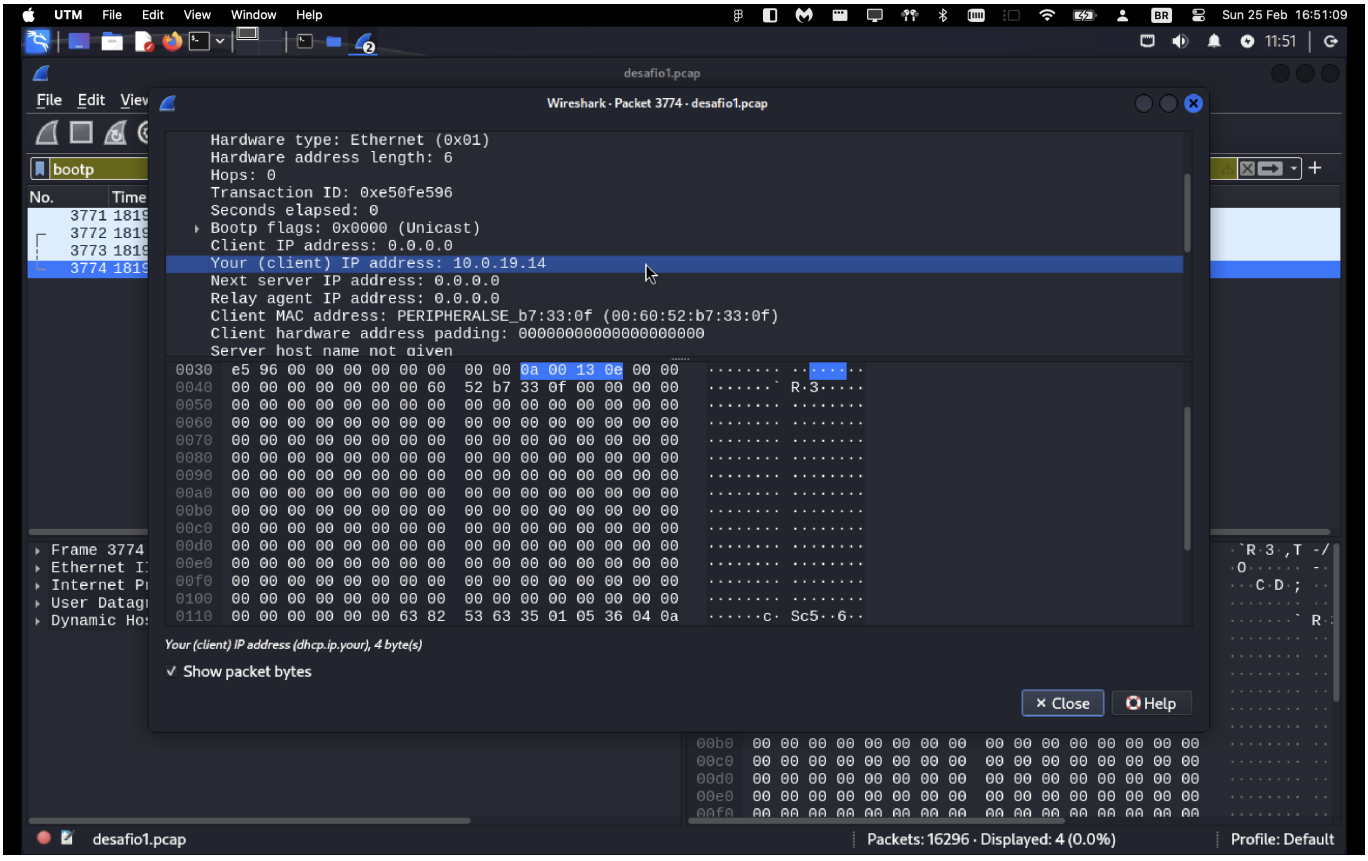
- TrendMicro
- Cisco

Question 02

While the IDS provides only alerts on possible threats and intrusions, therefore, requiring manual intervention, the IPS also blocks connections that may present suspicious behavior, based on **digital vaccine signatures**. Also, it is possible to configure the IPS with custom parameters to quarantine and block connections.

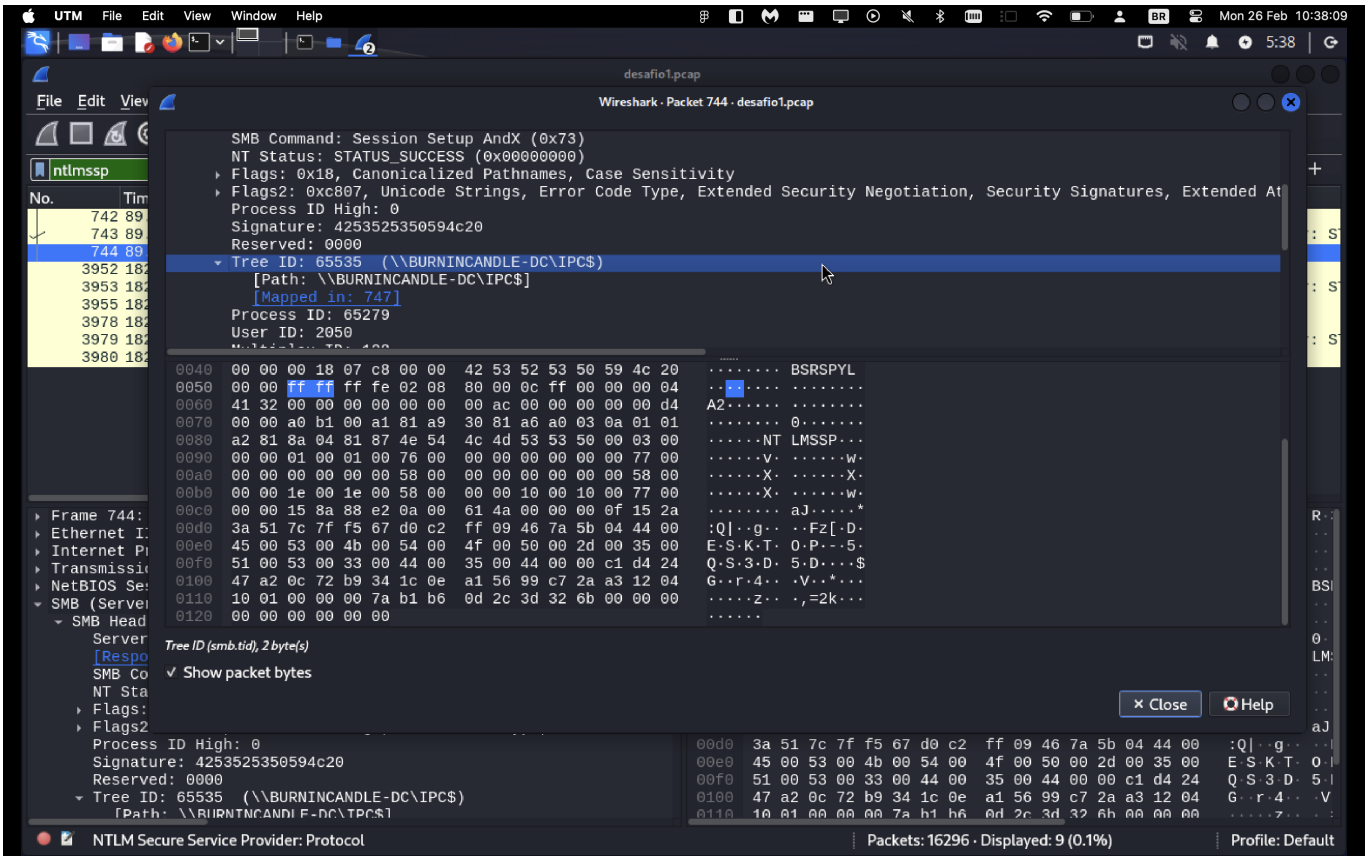
Question 03

The DHCP's IP on this network is **10.0.19.1**, while our PC IP is 10.0.19.14.



Question 04

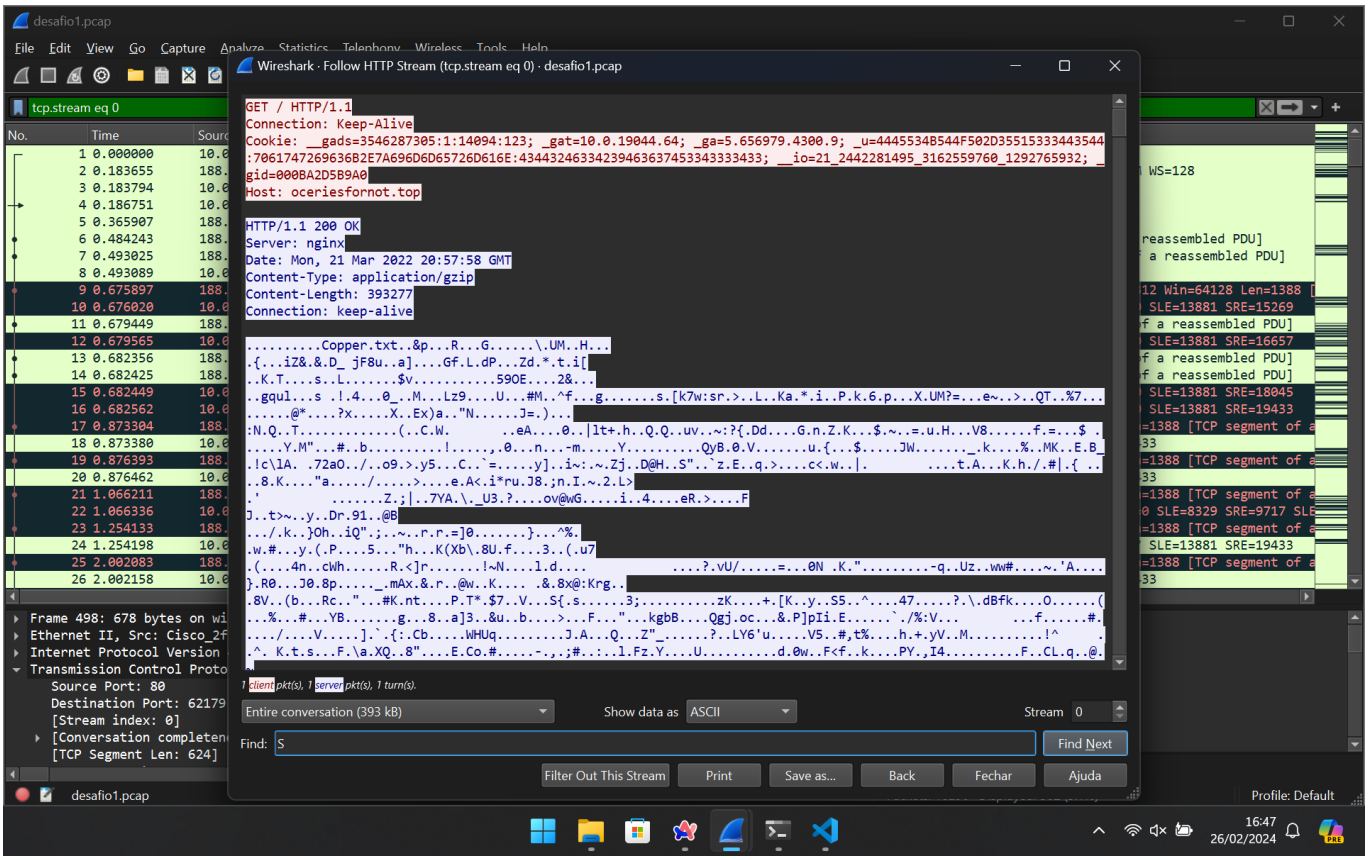
The domain controller (DC) name on this network is **BURNINCANDLE-DC**.



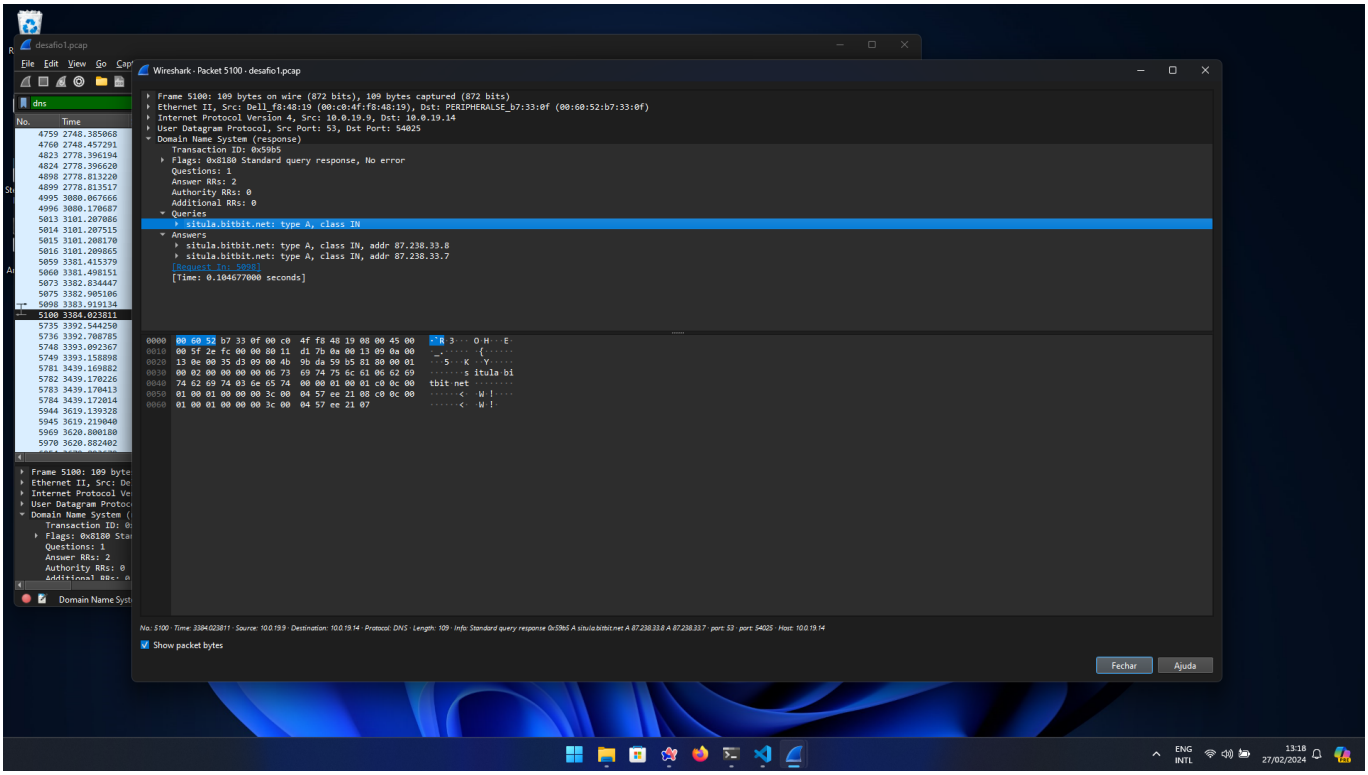
Question 05

I found two connections that can be classified as potential malicious:

- Connection 1: HTTP GET request to suspicious hostname, **oceriesfornot.top**, which was described in Internet searches as a hostname that hosts malware. Besides that, if we follow the HTTP stream we can observe a request resulting in the download of a text file `Cooper.txt`, which appears to be facade. More than that, it can be related to decripting the zip file that was also downloaded in the same connection.

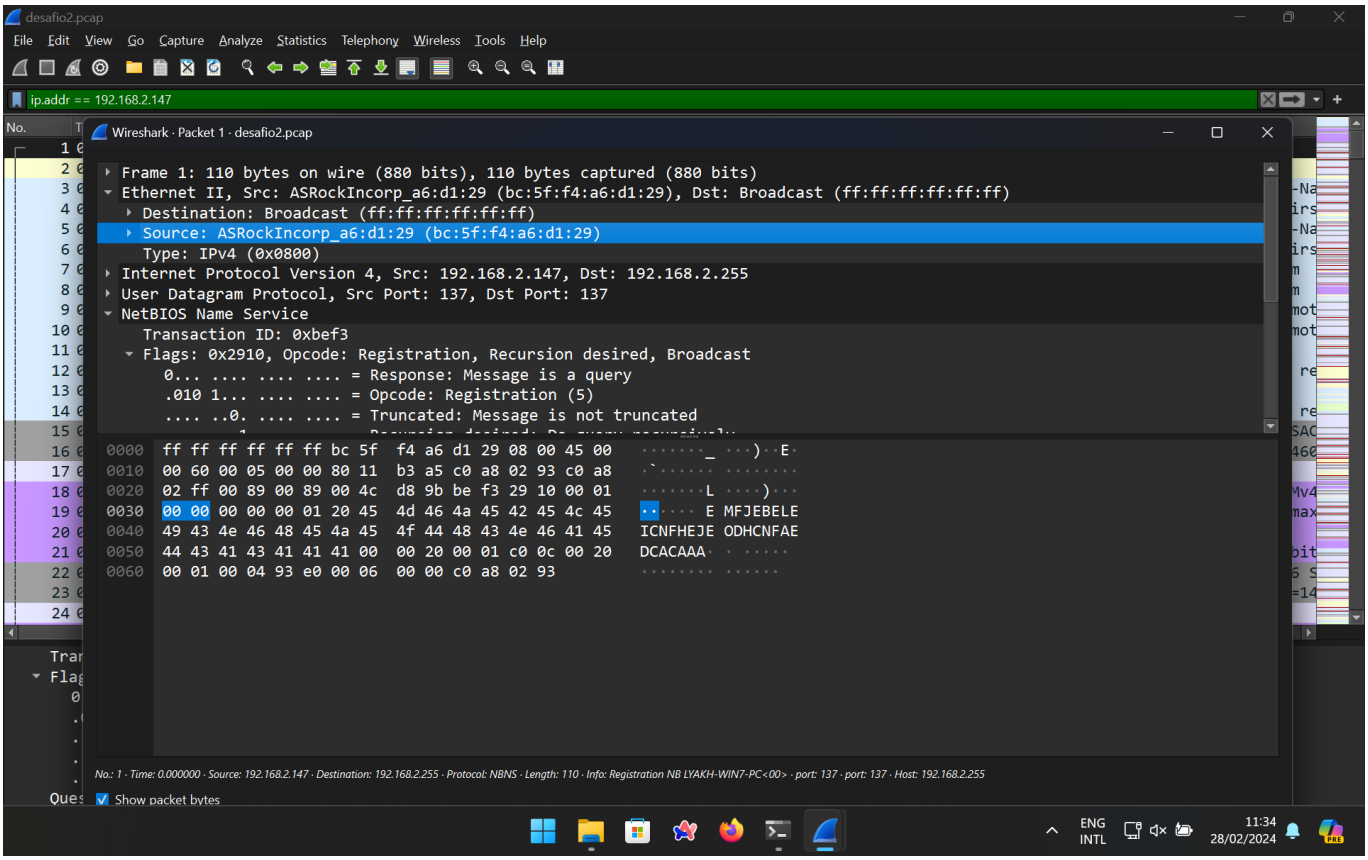


- Connection 2: HTTPS traffic to file sharing website, which might indicate that an infection occured after the download of such compromised file, in the domain **situla.bitbit.net**.



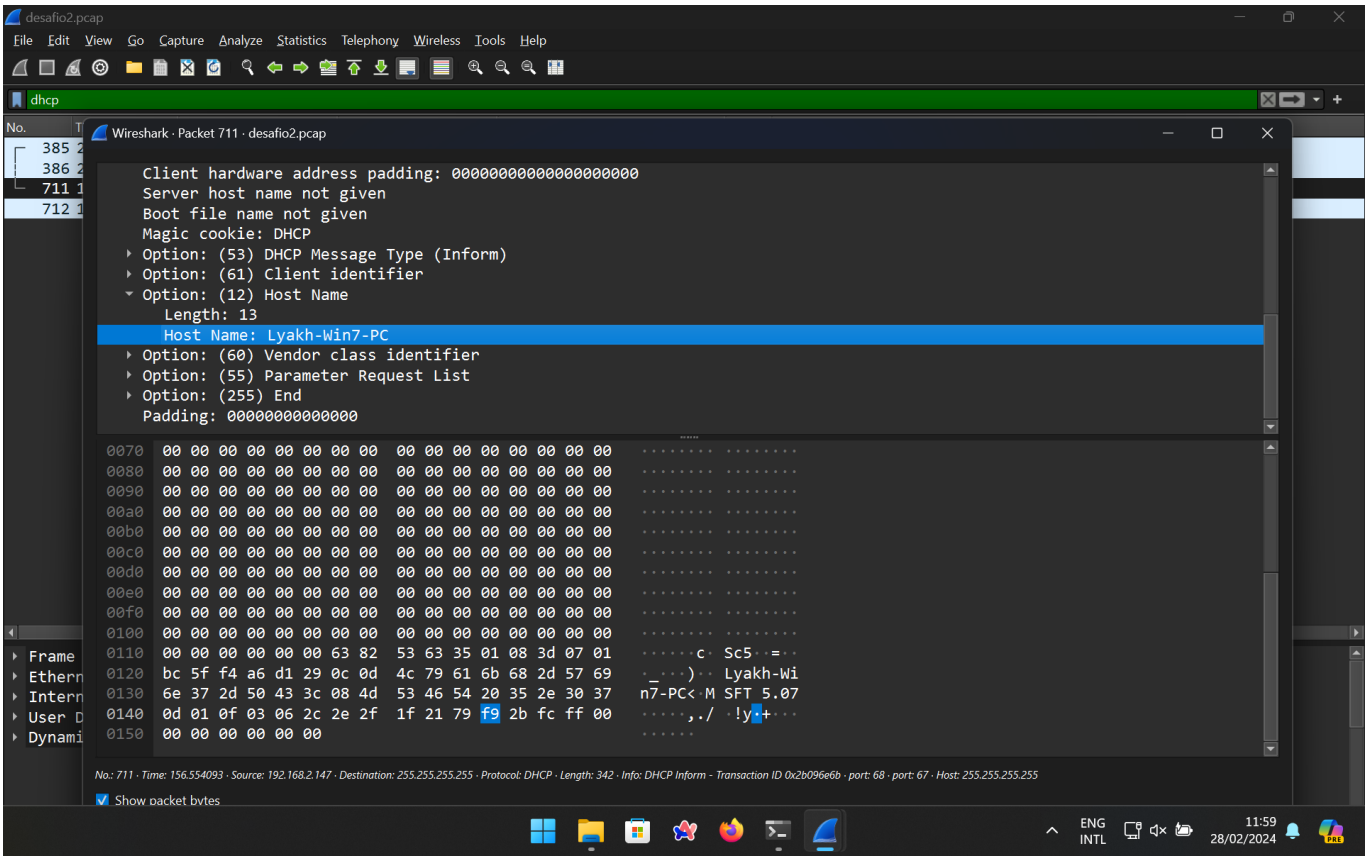
Question 06

The MAC address is **bc:5f:f4:a6:d1:29** for the host 192.168.2.4, achieved through inspecting a packet from host, in section ethernet II.



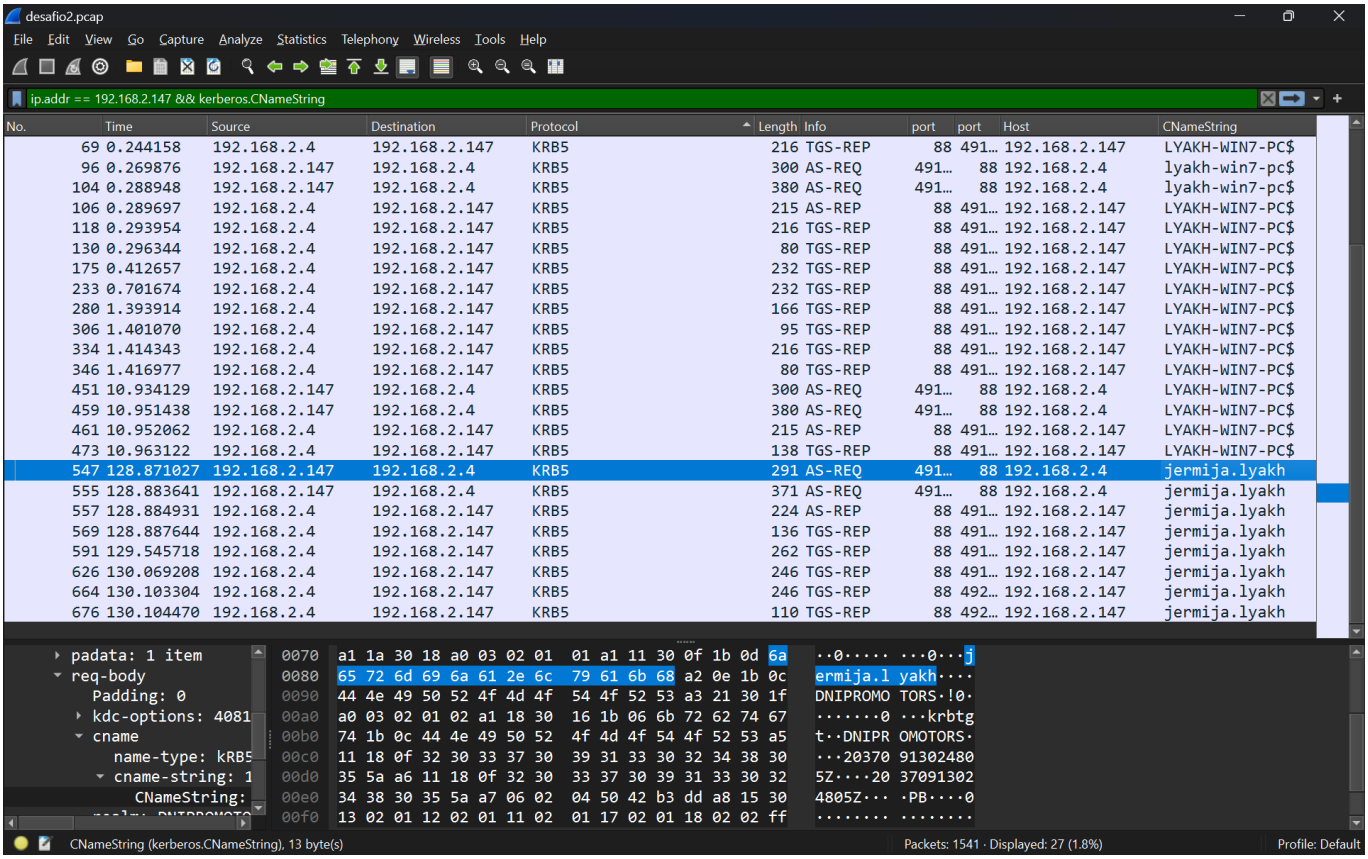
Question 07

The hostname for the Windows client in 192.168.2.147 is **Lyakh-Win7-PC**. I achieved this through inspecting the DHCP logs, which show the hostname information.



Question 08

The Windows username used in 192.168.2.147, based on the inspection of the packets with Kerberos protocol, is **jermija**.

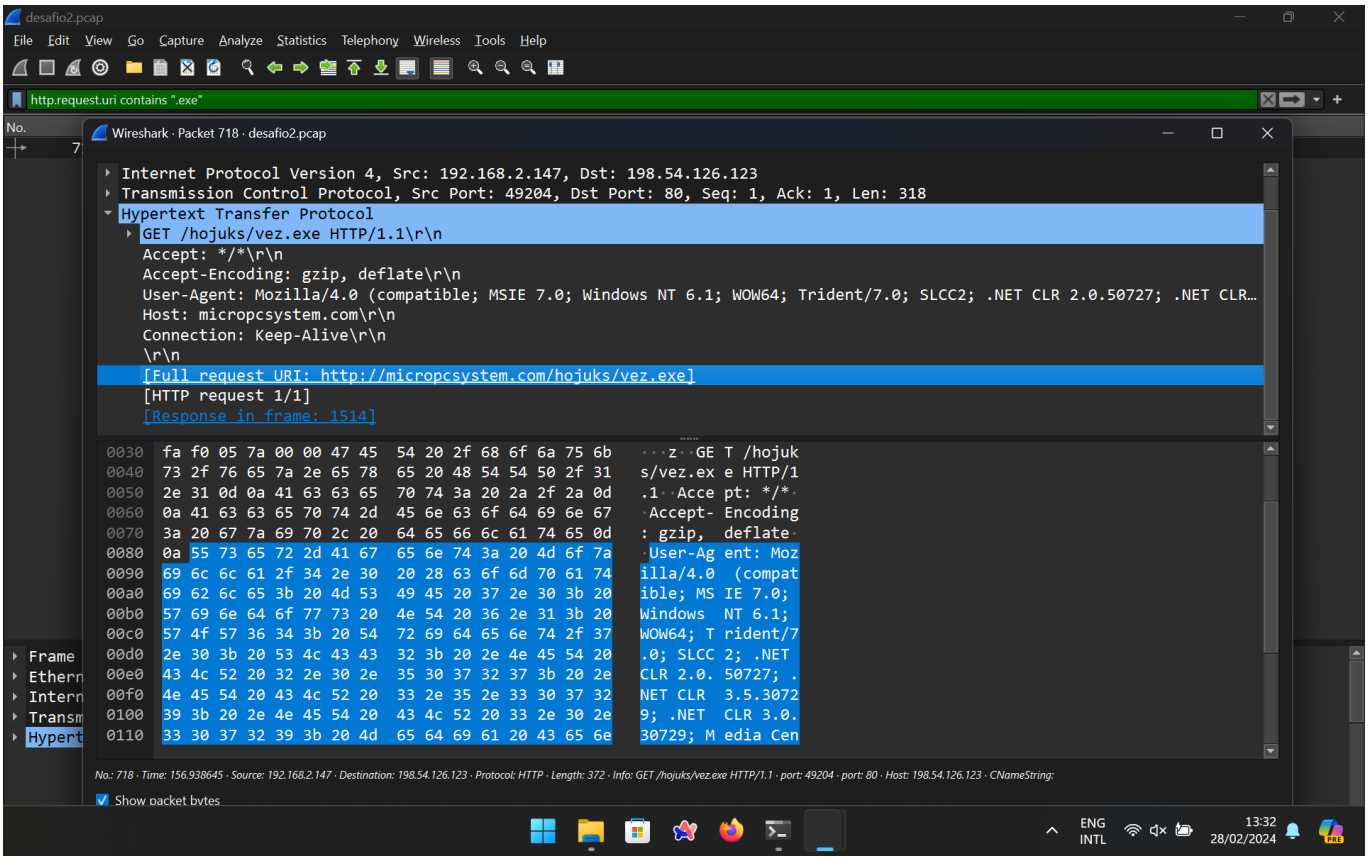


Question 09

Kerberos protocol function is authenticating service requests between two or more trusted hosts across an untrusted network, like the internet. Kerberos employs secret-key cryptography and a trusted third party, the Key Distribution Center (KDC), to authenticate client-server applications and verify user identities. The KDC provides authentication and ticket-granting services, issuing "tickets" for secure identity verification. This process uses shared secret cryptography, protecting against eavesdropping and replay attacks. *Based on SimpliLearn*.

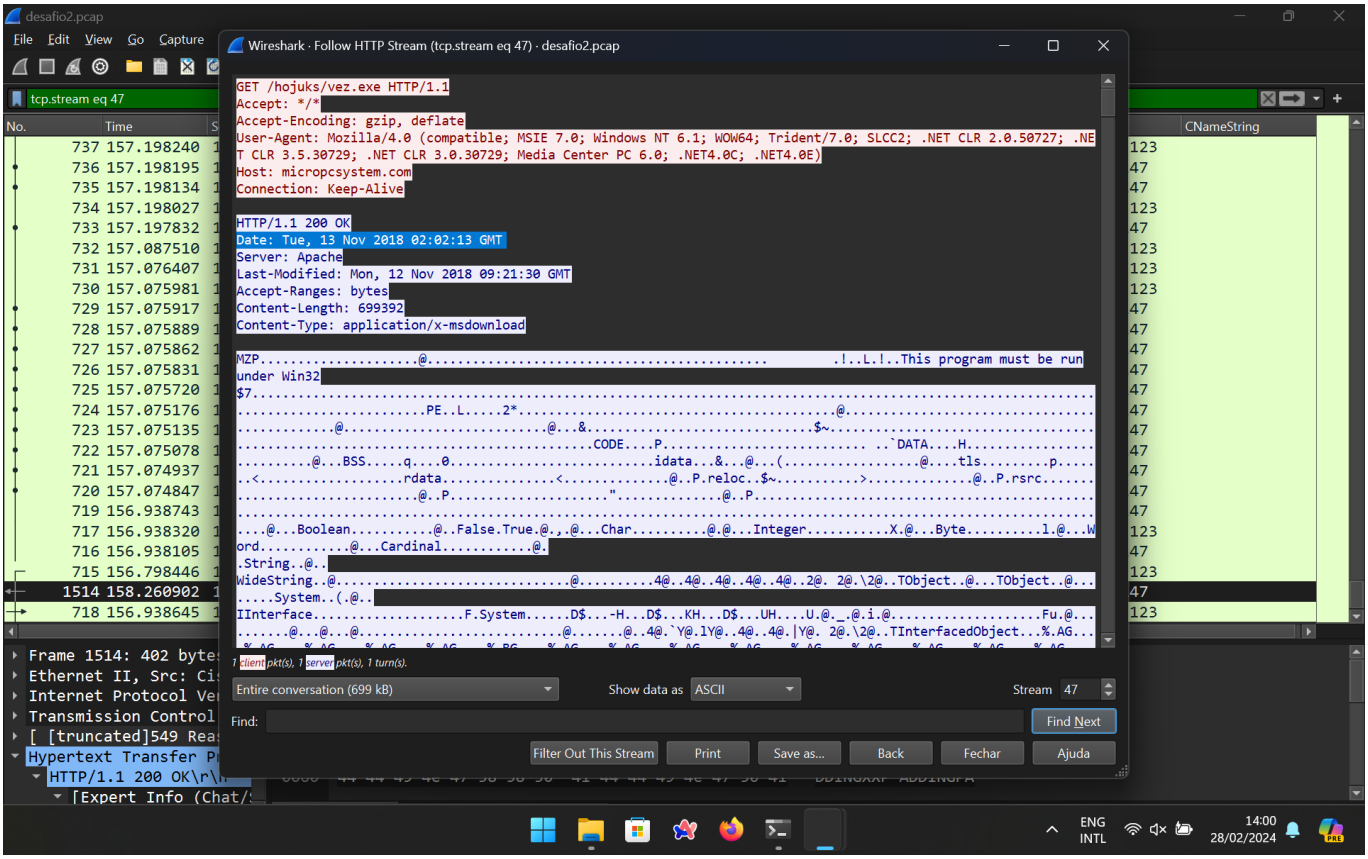
Question 10

The URL that returned an executable file is **http://micropcsystem.com/hojuks/vez.exe**.



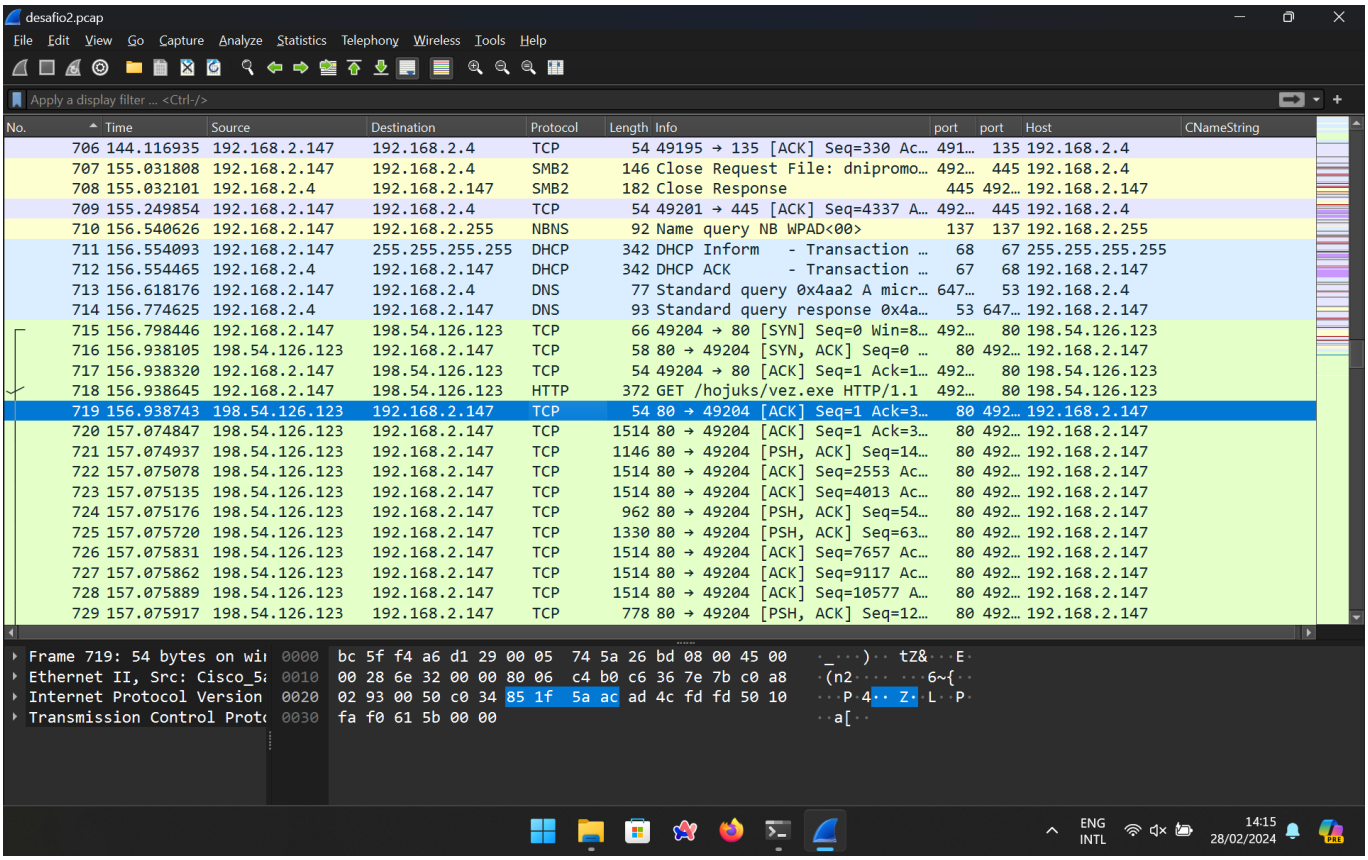
Question 11

The URL was accessed in **11/13/2018 02:02:13 GMT**, as shown in this picture with the HTTP stream.



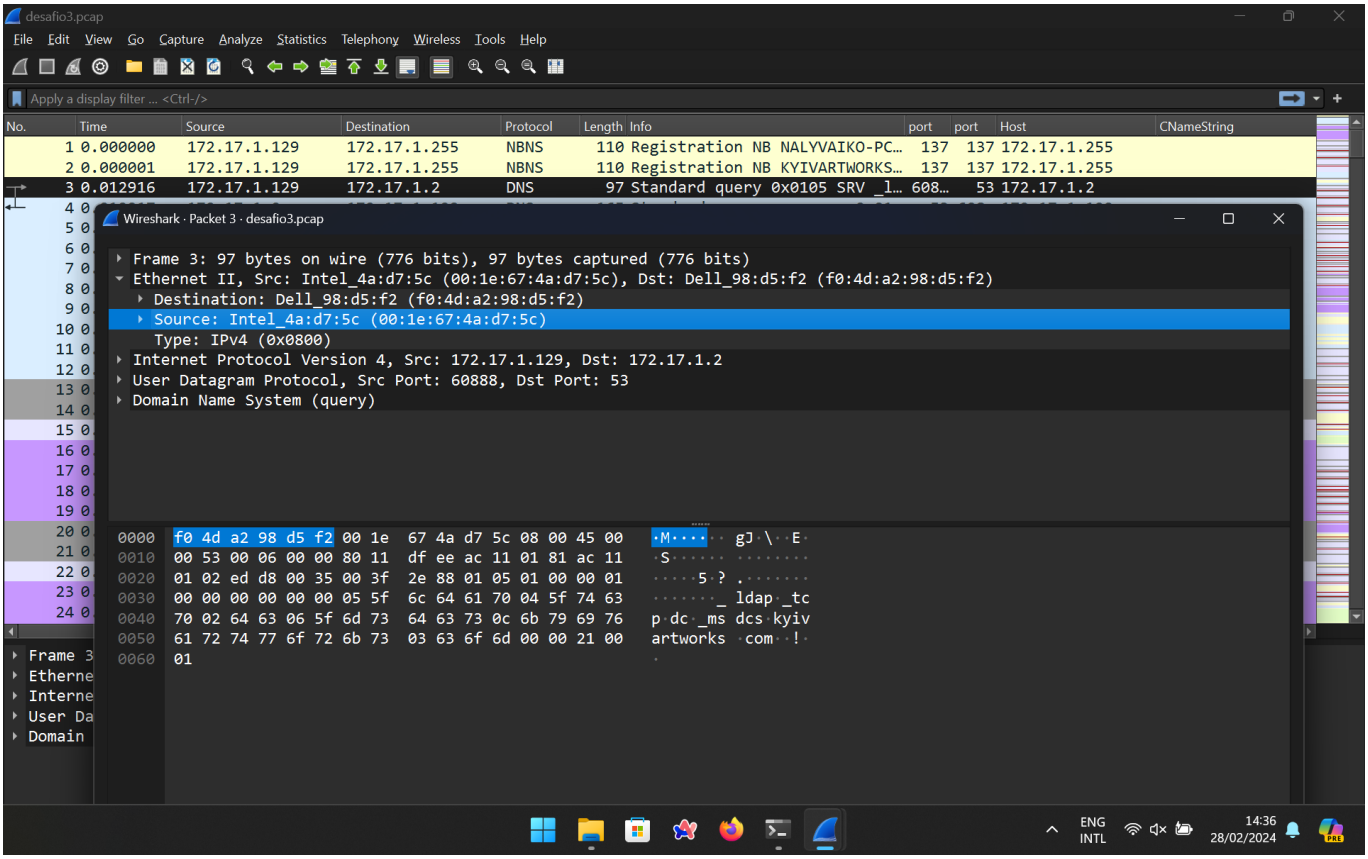
Question 12

After infection, the host tried to establish a TCP connection with IP **198.54.126.123**.



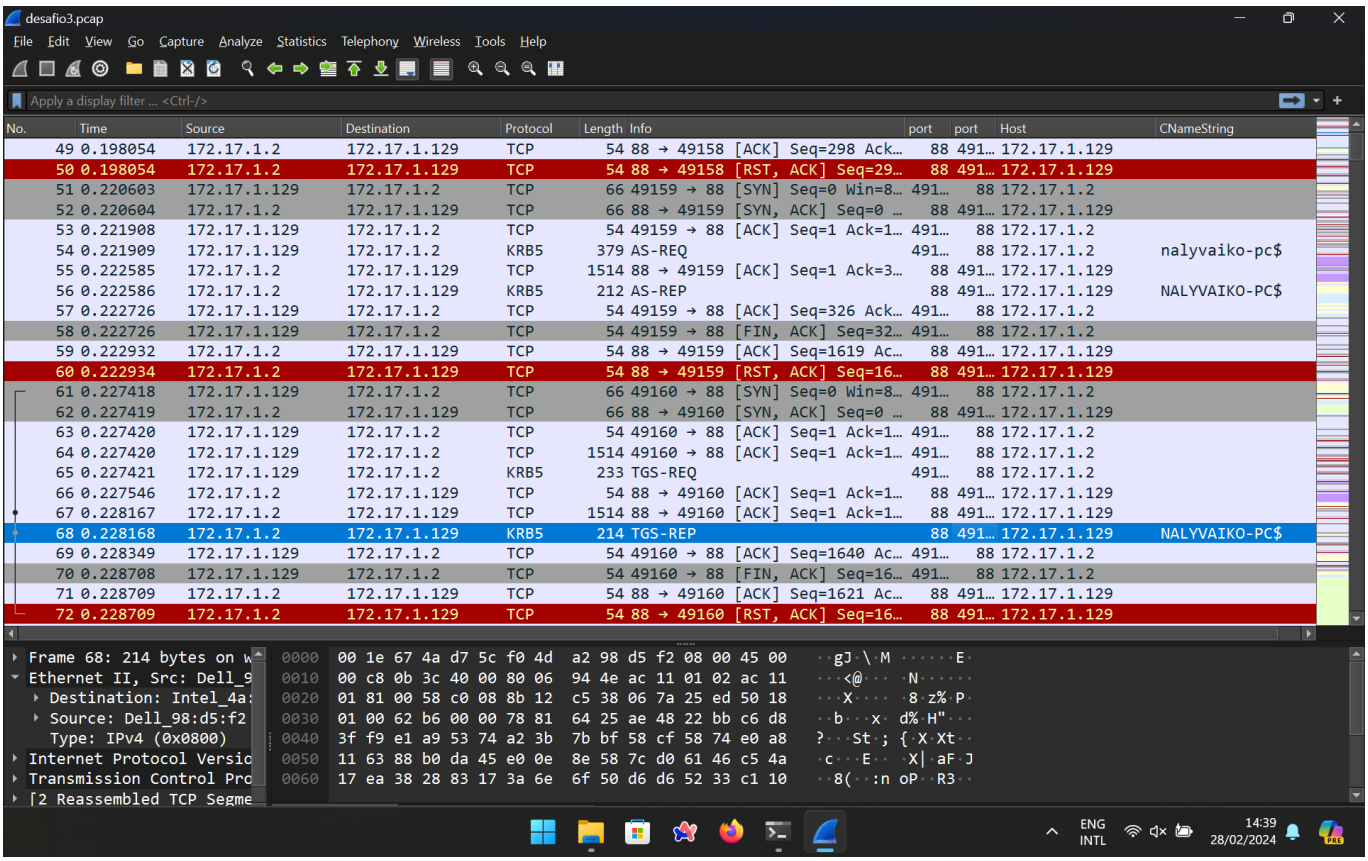
Question 13

The MAC address for the Windows client at 172.17.1.129 is **00:1e:67:4a:d7:5c**.



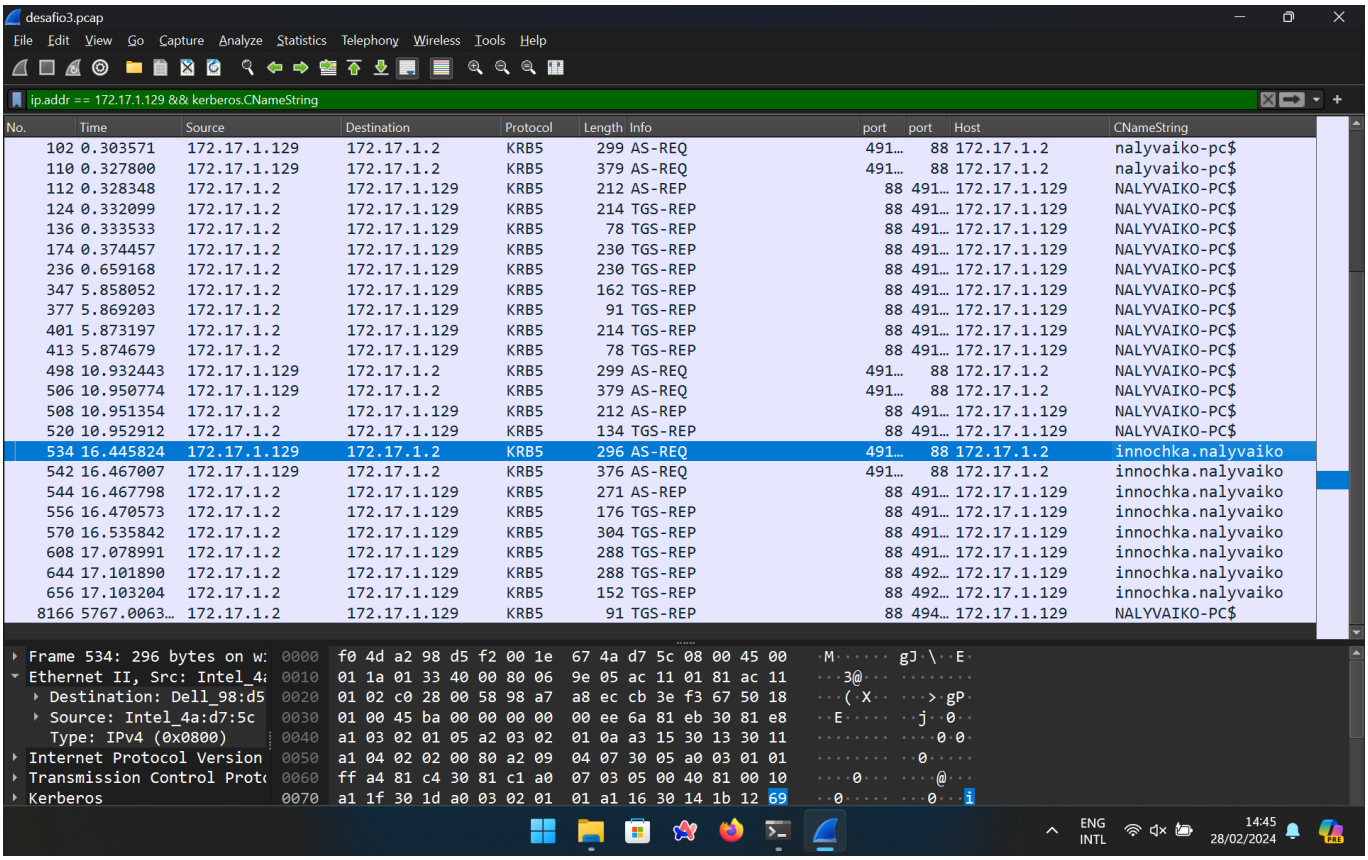
Question 14

The hostname for the Windows client at 172.17.1.129 is **NALYVAIKO-PC**, as it can be osberved in the CNameString in the TCP request.



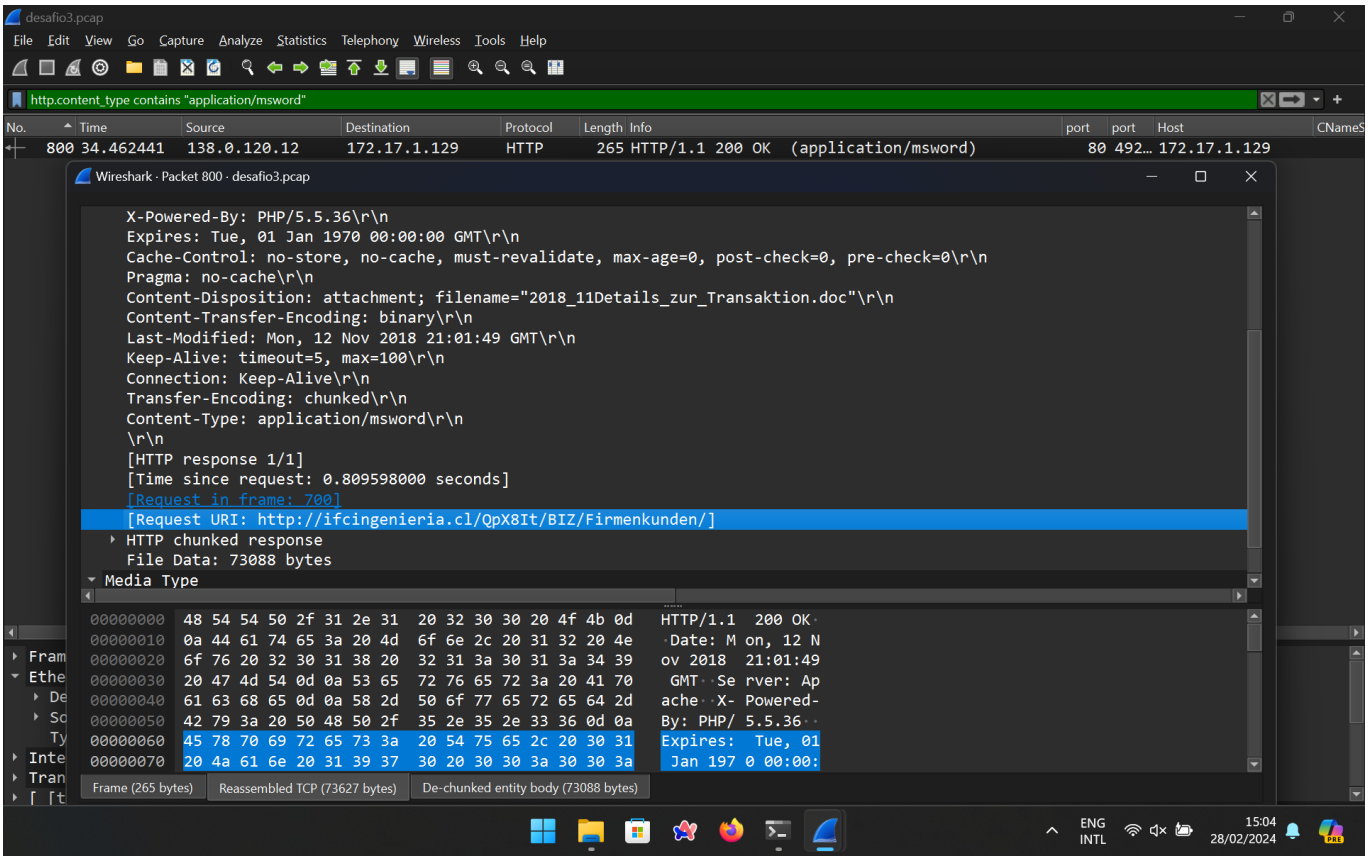
Question 15

The Windows username used in 172.17.1.129, based on the inspection of the packets with Kerberos protocol, is **innochka**.



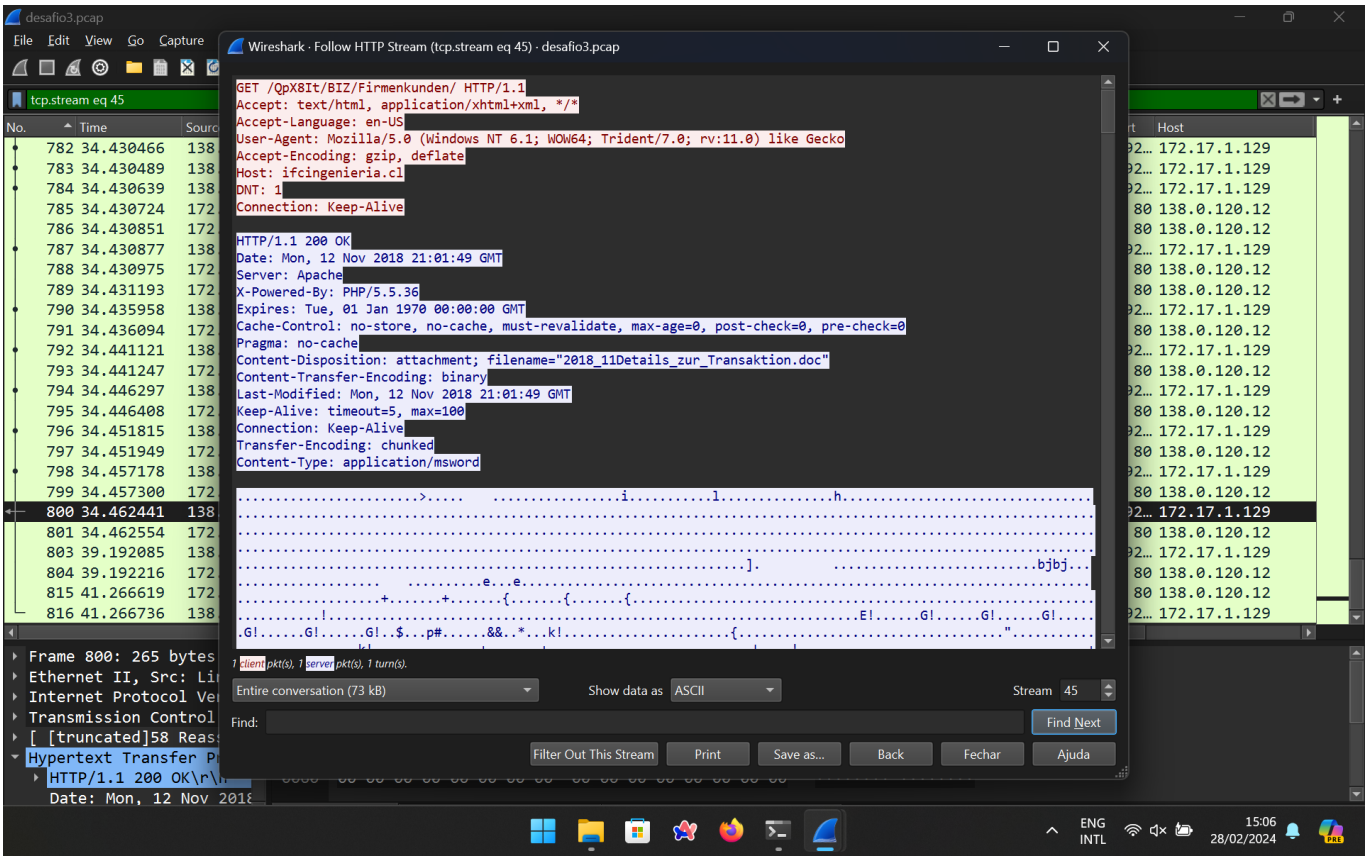
Question 16

The URL that returned a Microsoft Word document was **http://ifcingenieria.cl/QpX8It/BIZ/Firmenkunden/**.



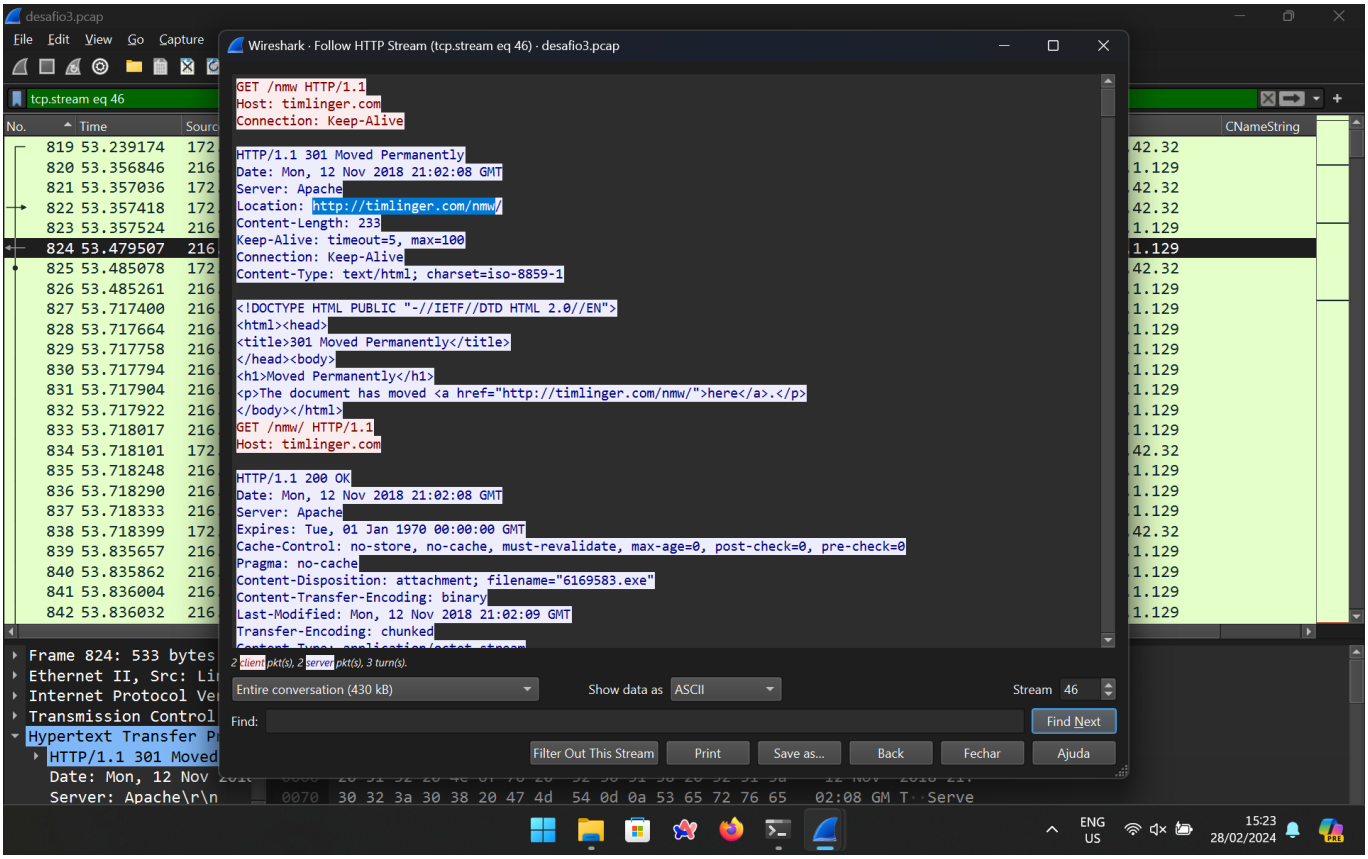
Question 17

The URL was created in **Mon, 12 Nov 2018 21:01:49 GMT**.



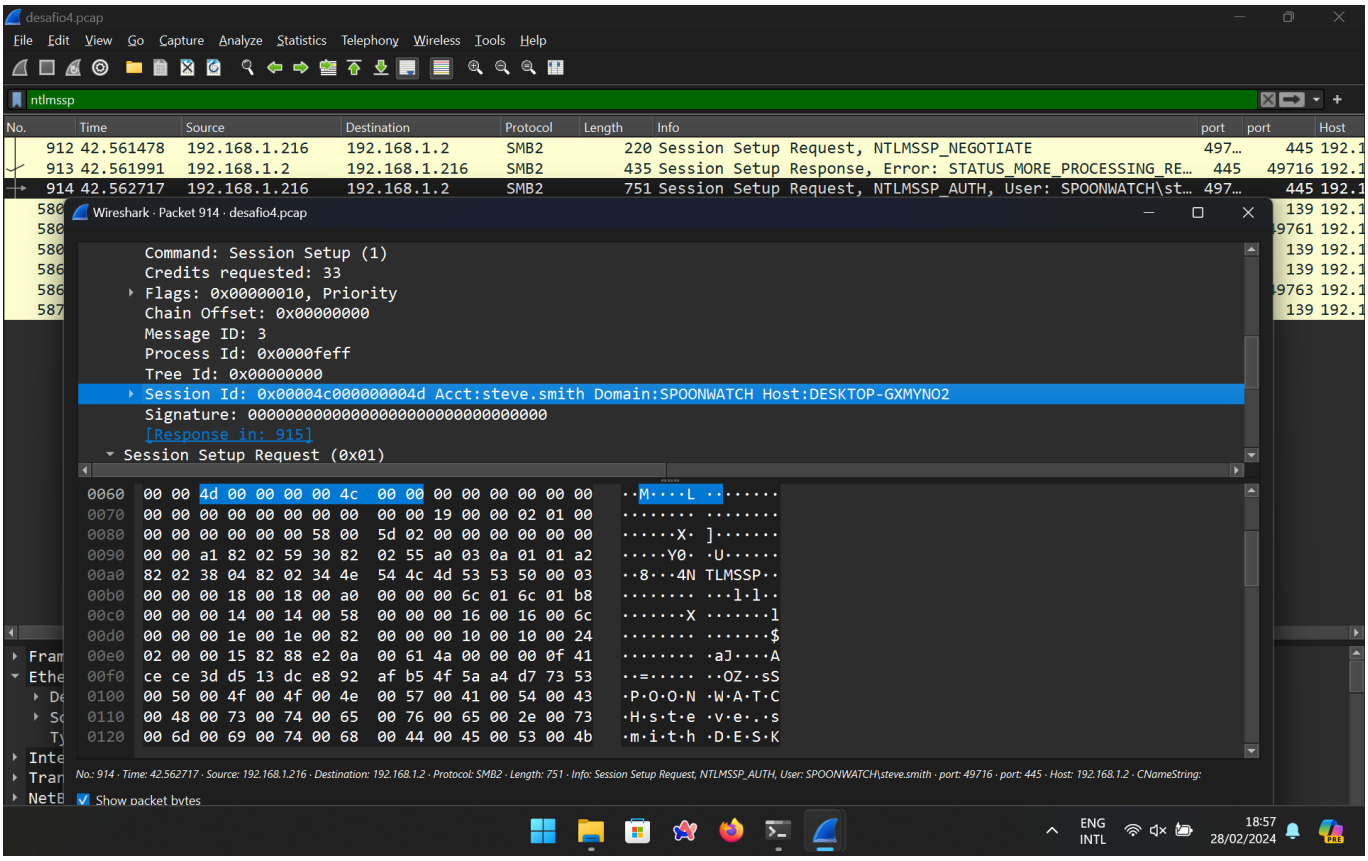
Question 18

The URL that returned an executable *6169583.exe* file is **http://timlinger.com/nmw/**.



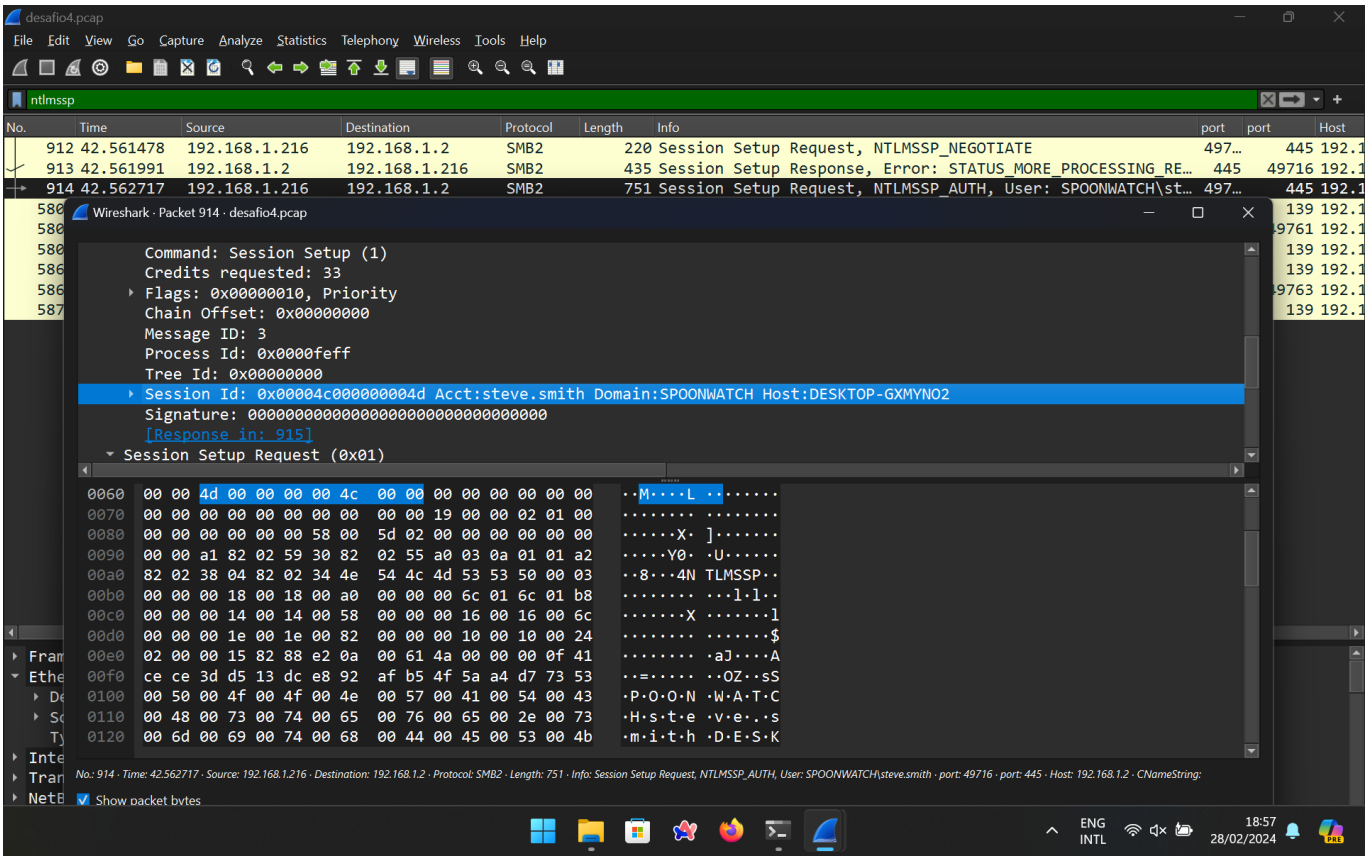
Question 19

Given that the domain controller name is SPOONWATCH-DC, we can assume that there is traffic in NetLogon, which leads to filtering traffic in ntlmssp. Inspecting that we can see that the IP for the domain controller is **192.168.1.2**.



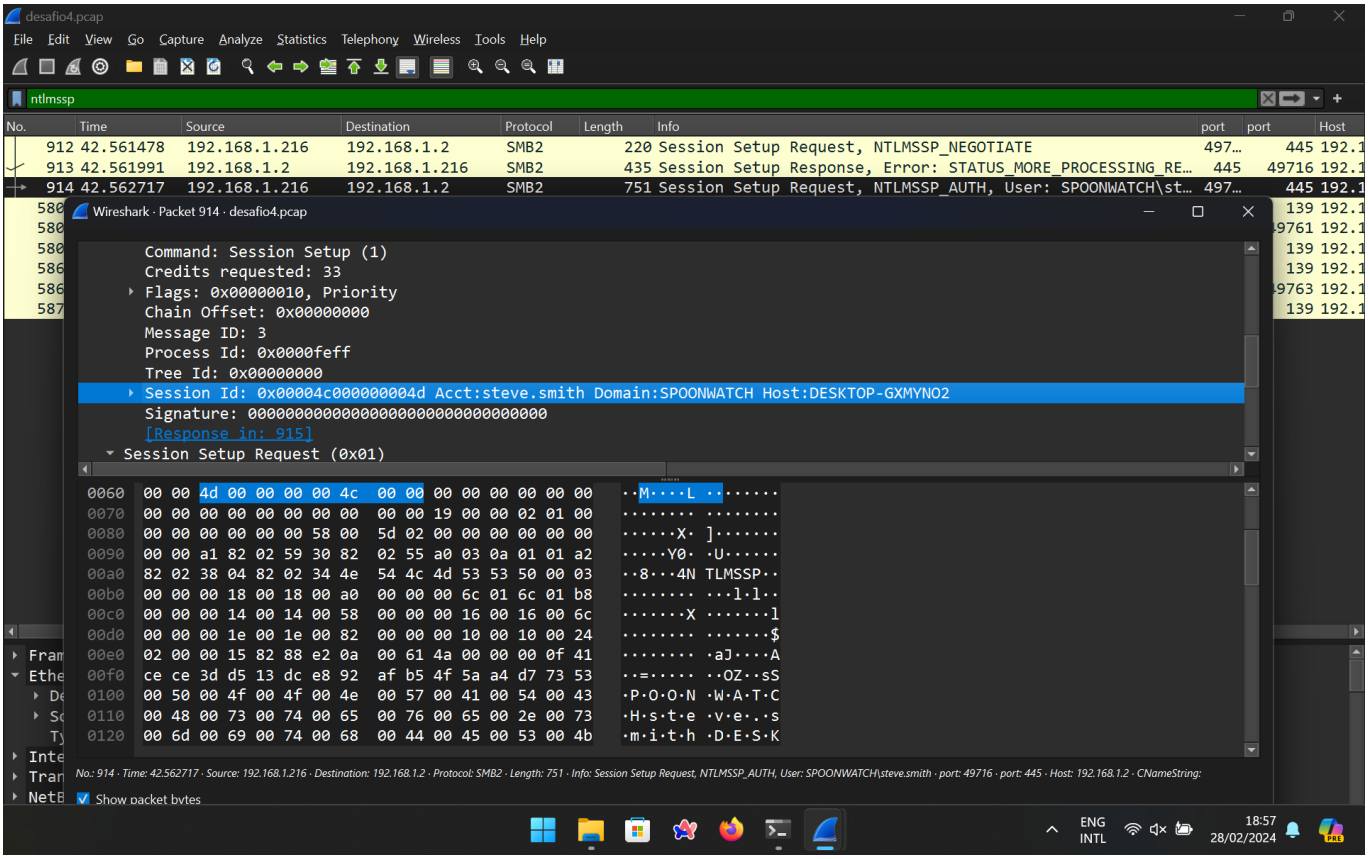
Question 20

The user account for the 192.168.1.216 IP is **steve.smith**.



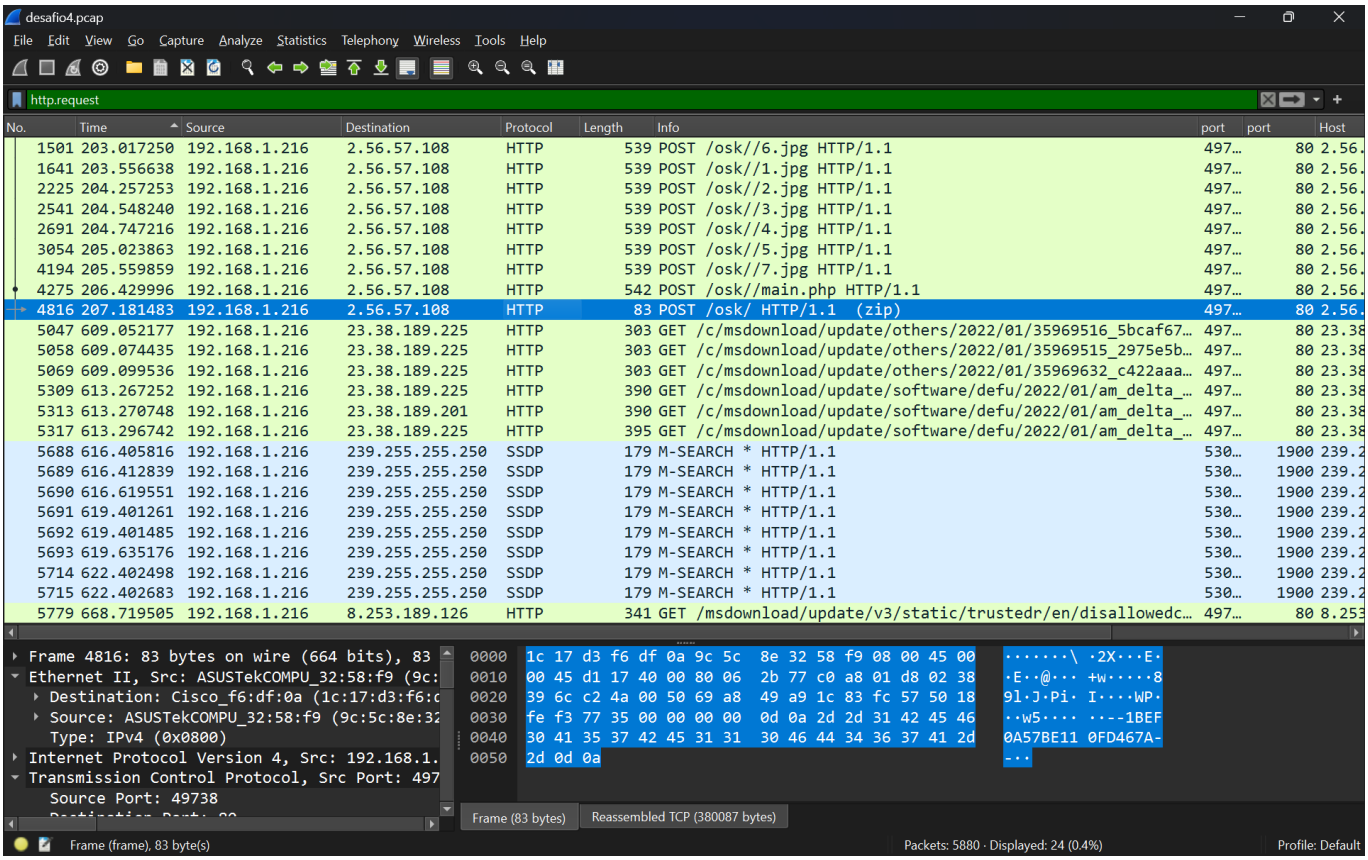
Question 21

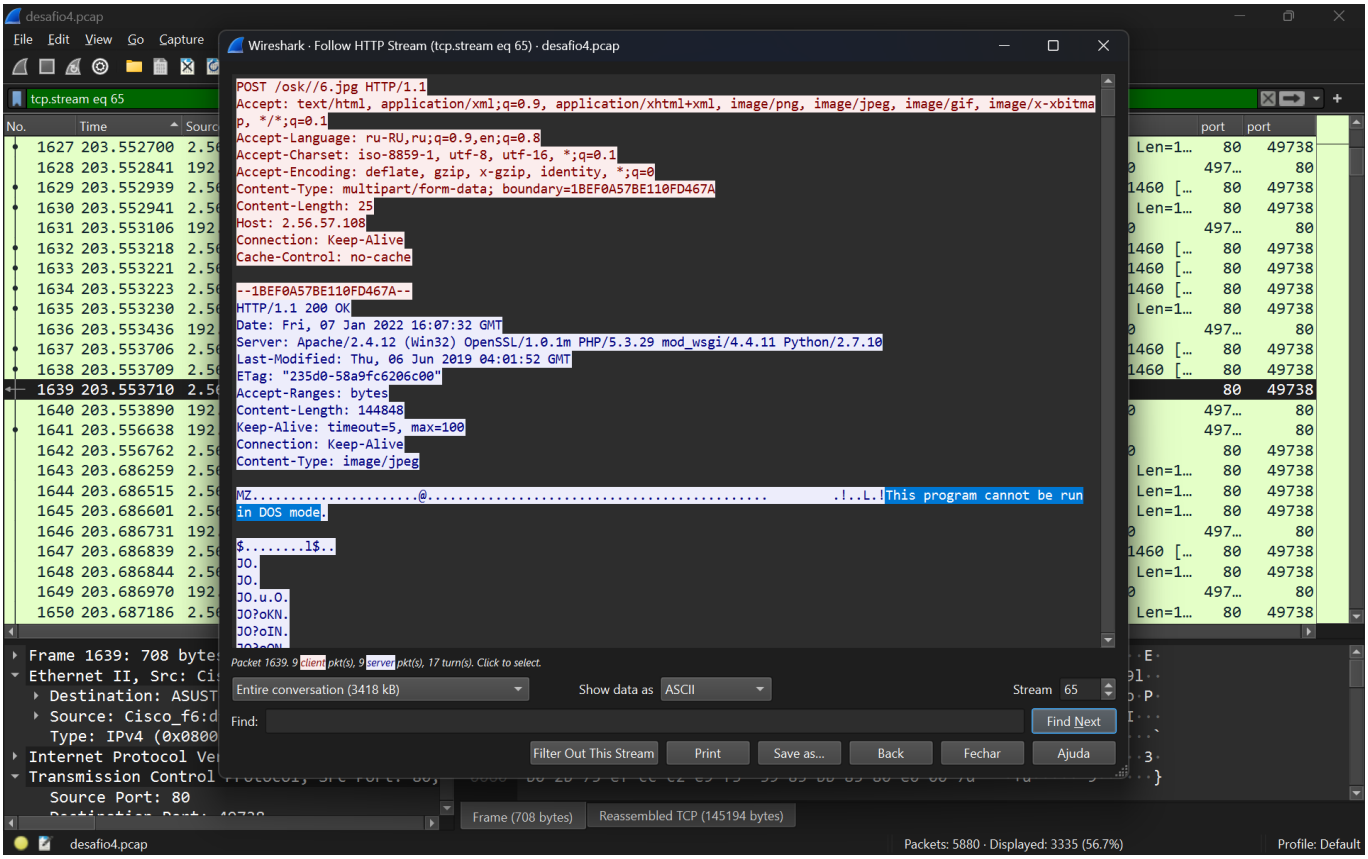
The hostname for the 192.168.1.216 IP is **DESKTOP-GXMYNO2**.



Question 22

The **2.56.57.108** IP returned a ZIP file via POST request. It's interesting to notice that there's some suspicious information on that file, like the languages supported, like just English and Russian, and the information "This program cannot be run in DOS mode".





Question 23

Following the HTTP stream for the suspicious download we can check that all the traffic to the destination went via port **49738**.