

**ПРЕЗЕНТАЦИЯ ПО ЛАБОРАТОРНОЙ РАБОТЕ  
№ 3  
ДИСЦИПЛИНА: СЕТЕВЫЕ ТЕХНОЛОГИИ**

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# ВВЕДЕНИЕ :

**Изучение посредством Wireshark кадров Ethernet,  
анализ PDU протоколов транспортного и прикладного  
уровней стека TCP/IP**

# MAC-АДРЕСАЦИЯ:

## IPCONFIG

## IPV4-АДРЕС

## ШЛЮЗ

Wireless LAN adapter Local Area Connection\* 1:

Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . :  
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter  
Physical Address. . . . . : 76-40-BB-91-D6-FF  
DHCP Enabled. . . . . : Yes  
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection\* 2:

Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . :  
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter #2  
Physical Address. . . . . : F6-40-BB-91-D6-FF  
DHCP Enabled. . . . . : No  
Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

Connection-specific DNS Suffix . :  
Description . . . . . : Realtek RTL8822BE 802.11ac PCIe Adapter  
Physical Address. . . . . : 74-40-BB-91-D6-FF  
DHCP Enabled. . . . . : Yes  
Autoconfiguration Enabled . . . . : Yes  
Link-local IPv6 Address . . . . . : fe80::501b:d1c7:c59f:b26d%11(Preferred)  
IPv4 Address. . . . . : 192.168.5.166(Preferred)  
Subnet Mask . . . . . : 255.255.255.0  
Lease Obtained. . . . . : Wednesday, September 21, 2022 11:49:37 PM  
Lease Expires . . . . . : Friday, September 23, 2022 4:07:13 AM  
Default Gateway . . . . . : 192.168.5.1  
DHCP Server . . . . . : 192.168.5.1  
DHCPv6 IAID . . . . . : 108282043  
DHCPv6 Client DUID. . . . . : 00-01-00-01-29-AA-1D-16-10-62-E5-DF-DE-22  
DNS Servers . . . . . : 192.168.5.1  
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter Bluetooth Network Connection:

Media State . . . . . : Media disconnected  
Connection-specific DNS Suffix . :  
Description . . . . . : Bluetooth Device (Personal Area Network)  
Physical Address. . . . . : 74-40-BB-91-D7-00  
DHCP Enabled. . . . . : Yes  
Autoconfiguration Enabled . . . . : Yes

PS C:\Users\Administrator> ipconfig /flushdns

# АНАЛИЗ КАДРОВ КАНАЛЬНОГО УРОВНЯ WIRESHARK.

**Ping:172.16.44.1 –**  
Проверяет подключение  
на уровне IP к другому  
компьютеру TCP/IP

```
Connection specific DNS suffix : .
PS C:\Users\Administrator> ping 172.16.44.1

Pinging 172.16.44.1 with 32 bytes of data:
Reply from 172.16.44.1: bytes=32 time=3ms TTL=254
Reply from 172.16.44.1: bytes=32 time=2ms TTL=254
Reply from 172.16.44.1: bytes=32 time=12ms TTL=254
Reply from 172.16.44.1: bytes=32 time=2ms TTL=254

Ping statistics for 172.16.44.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 12ms, Average = 4ms
```





	Source	Destination	Protocol	Length	Info
21	172.16.44.57	91.105.192.100	HTTP	254	POST /api HTTP/1.1 (application/x-www-form-urlencoded)
87	172.16.44.57	188.184.21.108	HTTP	488	GET / HTTP/1.1
84	188.184.21.108	172.16.44.57	HTTP	932	HTTP/1.1 200 OK (text/html)
91	172.16.44.57	188.184.21.108	HTTP	429	GET /favicon.ico HTTP/1.1
28	188.184.21.108	172.16.44.57	HTTP	248	HTTP/1.1 200 OK (image/vnd.microsoft.icon)
11	172.16.44.57	188.43.78.74	HTTP	330	GET /appinfo/65800/sha/d4f350d3f196d097afb6199066b4b9cba9edffb8.txt.gz HTTP/1.1
57	188.43.78.74	172.16.44.57	HTTP	1461	HTTP/1.1 200 OK (application/gzip)
75	172.16.44.57	188.184.21.108	HTTP	548	GET /hypertext/WWW/TheProject.html HTTP/1.1
62	188.184.21.108	172.16.44.57	HTTP	1044	HTTP/1.1 200 OK (text/html)
891	172.16.44.57	188.184.21.108	HTTP	574	GET /hypertext/WWW/History.html HTTP/1.1
866	188.184.21.108	172.16.44.57	HTTP	871	HTTP/1.1 200 OK (text/html)
952	172.16.44.57	188.184.21.108	HTTP	570	GET /hypertext/WWW/People.html HTTP/1.1
522	188.184.21.108	172.16.44.57	HTTP	376	HTTP/1.1 200 OK (text/html)
904	172.16.44.57	91.105.192.100	HTTP	214	POST /api HTTP/1.1 (application/x-www-form-urlencoded)
26	172.16.44.57	149.154.167.41	HTTP	306	POST /api HTTP/1.1 (application/x-www-form-urlencoded)
211	172.16.44.57	91.105.192.100	HTTP	106	POST /api HTTP/1.1 (application/x-www-form-urlencoded)
488	172.16.44.57	91.105.192.100	HTTP	266	POST /api HTTP/1.1 (application/x-www-form-urlencoded)

# АНАЛИЗ ПРОТОКОЛОВ ТРАНСПОРТНОГО УРОВНЯ В WIRESHARK HTTP – ПРОТОКОЛ ПЕРЕДАЧИ ДАННЫХ,

8 bytes on wire (3904 bits), 488 bytes captured (3904 bits) on interface \Device\NPF\_{8E8DD1BA-9DA1-4876-8D27-74ECBC58835C}, id 0

Src: MonHaiPr\_91:d6:ff (74:40:bb:91:d6:ff), Dst: Cisco\_60:9c:cb (70:18:a7:60:9c:cb)

: Cisco\_60:9c:cb (70:18:a7:60:9c:cb)

Cisco\_60:9c:cb (70:18:a7:60:9c:cb)

. .... = LG bit: Globally unique address (factory default)

0 .... = IG bit: Individual address (unicast)

HaiPr\_91:d6:ff (74:40:bb:91:d6:ff)

MonHaiPr\_91:d6:ff (74:40:bb:91:d6:ff)

. .... = LG bit: Globally unique address (factory default)

0 .... = IG bit: Individual address (unicast)

(0x0800)

Protocol Version 4, Src: 172.16.44.57, Dst: 188.184.21.108

Control Protocol, Src Port: 56649, Dst Port: 80, Seq: 1, Ack: 1, Len: 434

Transfer Protocol

# ВЫВОД

Посредством Wireshark  
кадров Ethernet,  
анализировала PDU  
протоколы транспортного и  
прикладного уровней стека  
TCP/IP

