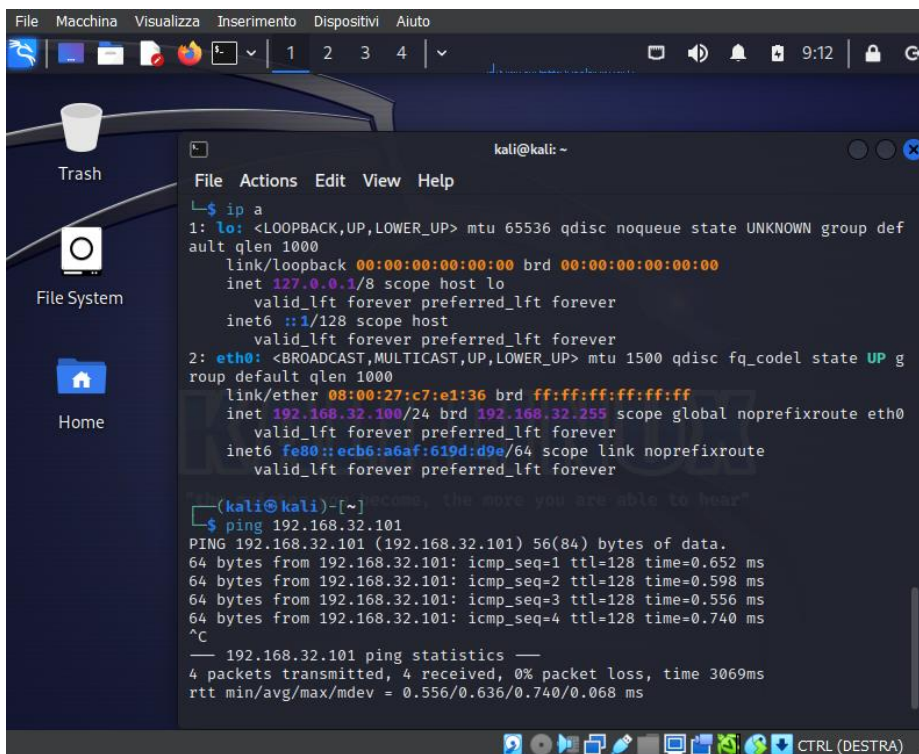


## Indirizzi ip e ping



The screenshot shows a Kali Linux desktop environment. A terminal window is open, displaying the output of the `ip a` command and a subsequent ping test. The terminal output shows the configuration for the loopback interface `lo` and the ethernet interface `eth0`. The `eth0` interface is configured with the IP address `192.168.32.100`. The ping test is performed from `192.168.32.101` to `192.168.32.100`, showing successful results with 0% packet loss.

```
kali@kali: ~  
File Actions Edit View Help  
└─$ ip a  
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group def  
ault qlen 1000  
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00  
    inet 127.0.0.1/8 scope host lo  
        valid_lft forever preferred_lft forever  
    inet6 ::1/128 scope host  
        valid_lft forever preferred_lft forever  
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP g  
roup default qlen 1000  
    link/ether 08:00:27:c7:e1:36 brd ff:ff:ff:ff:ff:ff  
    inet 192.168.32.100/24 brd 192.168.32.255 scope global noprefixroute eth0  
        valid_lft forever preferred_lft forever  
    inet6 fe80::ecb6:a6af:619d:d9e/64 scope link noprefixroute  
        valid_lft forever preferred_lft forever  
  
└─(kali@kali)~-[~] ~come: the more you are able to hear"  
└─$ ping 192.168.32.101  
PING 192.168.32.101 (192.168.32.101) 56(84) bytes of data.  
64 bytes from 192.168.32.101: icmp_seq=1 ttl=128 time=0.652 ms  
64 bytes from 192.168.32.101: icmp_seq=2 ttl=128 time=0.598 ms  
64 bytes from 192.168.32.101: icmp_seq=3 ttl=128 time=0.556 ms  
64 bytes from 192.168.32.101: icmp_seq=4 ttl=128 time=0.740 ms  
^C  
— 192.168.32.101 ping statistics —  
4 packets transmitted, 4 received, 0% packet loss, time 3069ms  
rtt min/avg/max/mdev = 0.556/0.636/0.740/0.068 ms
```

FIGURA 1

Nella figura 1 si evidenzia il nuovo indirizzo ip di Kali linux ed il ping con Windows 7

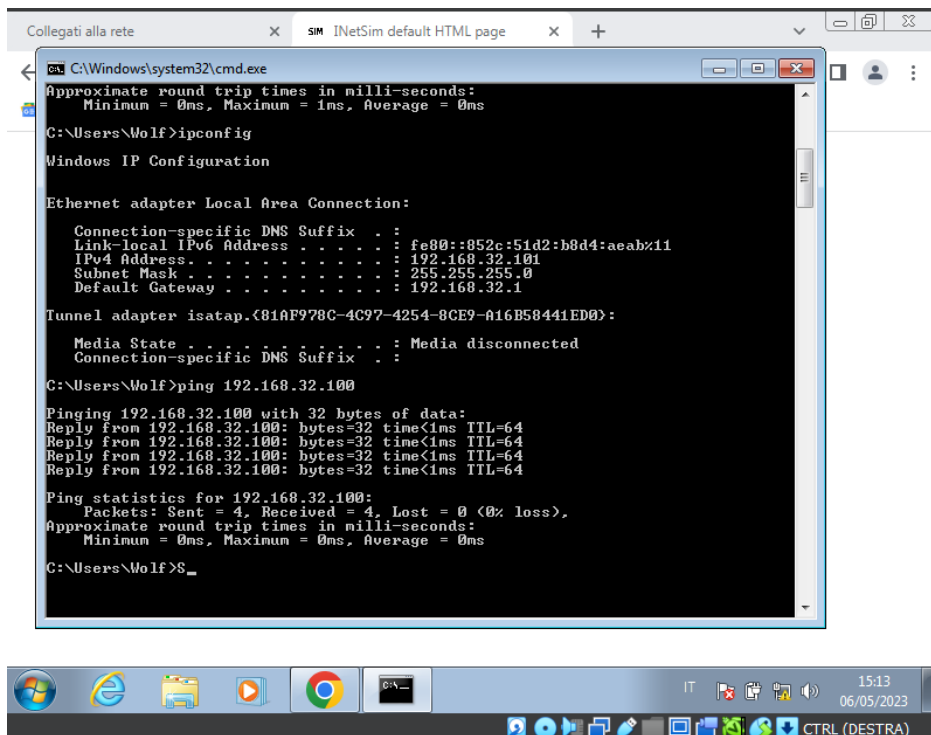


FIGURA 2

Nella figura 2 si evidenzia il nuovo indirizzo ip di Windows 7 ed il ping con Kali Linux

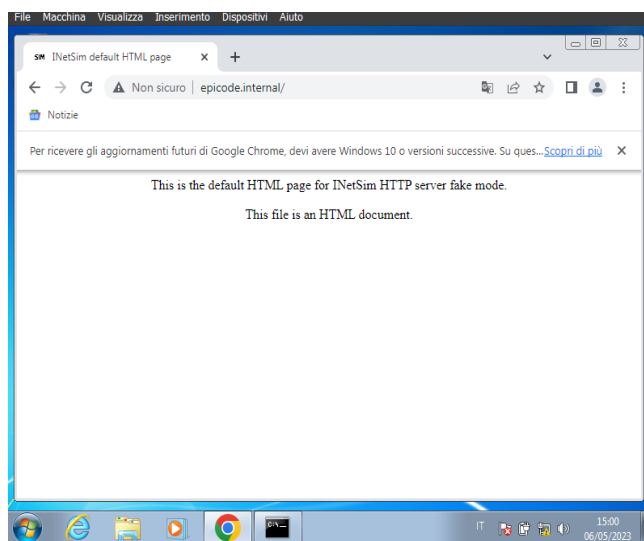
## inetsim

Tramite il comando “Sudo nano /etc/inetsim/inetsim.conf” ho cambiato le seguenti impostazioni rendendo il DNS statico e che rispondesse ad “epicode.internal” sia in http e in https come riportato nelle seguenti figure.

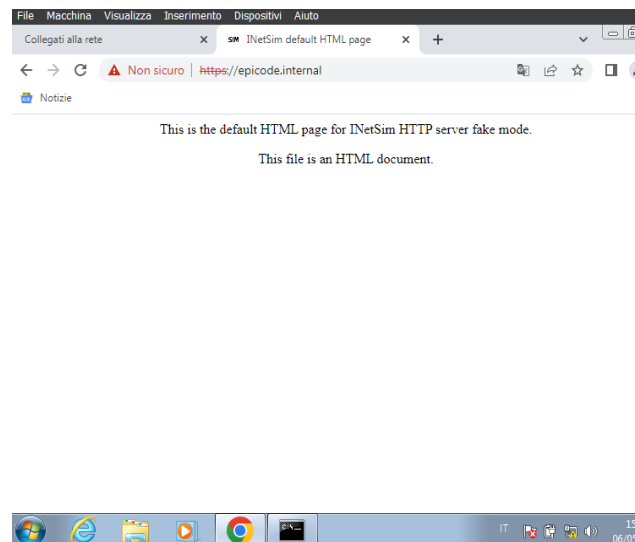
```
# service_bind_address
#
# IP address to bind services to
#
# Syntax: service_bind_address <IP address>
#
# Default: 127.0.0.1
#
service_bind_address 192.168.32.100
```

```
# dns_default_ip
#
# Default IP address to return with DNS repli
#
# Syntax: dns_default_ip <IP address>
#
# Default: 127.0.0.1
#
dns_default_ip 192.168.32.100
```

```
# dns_static
#
# Static mappings for DNS
#
# Syntax: dns_static <fqdn hostname> <IP address>
#
# Default: none
#
dns_static epicode.internal 192.168.32.100
```



http



https

# Wireshark

10	0.044889755	192.168.32.100	192.168.32.101	TCP	54	443 → 49513 [FIN, ACK] Seq=1422 Ack=549 Win=64128 Len=0
11	0.045207621	192.168.32.101	192.168.32.100	TCP	60	49513 → 443 [ACK] Seq=549 Ack=1423 Win=64256 Len=0
12	0.763851942	PcsCompu_e7:b5:96	Broadcast	ARP	60	Who has 192.168.32.17 Tell 192.168.32.101
13	1.763482127	PcsCompu_e7:b5:96	Broadcast	ARP	60	Who has 192.168.32.17 Tell 192.168.32.101
14	2.935482941	192.168.32.101	192.168.32.100	TCP	66	49514 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
15	2.935563983	192.168.32.100	192.168.32.101	TCP	66	443 → 49514 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
16	2.936468474	192.168.32.101	192.168.32.100	TCP	60	49514 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
17	2.936935870	192.168.32.101	192.168.32.100	TCP	66	49515 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
18	2.937017115	192.168.32.100	192.168.32.101	TCP	60	49515 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
19	2.948532148	192.168.32.101	192.168.32.100	TCP	60	49515 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
20	2.956285657	192.168.32.101	192.168.32.100	TLShv1.3	639	Client Hello
21	2.956383684	192.168.32.100	192.168.32.101	TCP	54	443 → 49514 [ACK] Seq=1 Ack=586 Win=64128 Len=0
22	2.956641513	192.168.32.101	192.168.32.100	TLShv1.3	639	Client Hello
23	2.956648397	192.168.32.100	192.168.32.101	TCP	54	443 → 49515 [ACK] Seq=1 Ack=586 Win=64128 Len=0
24	2.973879877	192.168.32.100	192.168.32.101	TLShv1.3	1475	Server Hello, Change Cipher Spec, Application Data, Application Data, Application Data, Application Data
25	2.975950726	192.168.32.100	192.168.32.101	TLShv1.3	1475	Server Hello, Change Cipher Spec, Application Data, Application Data, Application Data, Application Data
26	2.982684460	192.168.32.101	192.168.32.100	TLShv1.3	84	Change Cipher Spec, Application Data
27	2.982684708	192.168.32.101	192.168.32.100	TCP	60	49514 → 443 [FIN, ACK] Seq=616 Ack=1422 Win=64256 Len=0
28	2.983982328	192.168.32.101	192.168.32.100	TLShv1.3	84	Change Cipher Spec, Application Data
29	2.984289638	192.168.32.101	192.168.32.100	TCP	60	49515 → 443 [FIN, ACK] Seq=616 Ack=1422 Win=64256 Len=0
30	2.985708112	192.168.32.101	192.168.32.100	TCP	60	49516 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
31	2.985722784	192.168.32.100	192.168.32.101	TCP	66	443 → 49516 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
32	2.986456810	192.168.32.101	192.168.32.100	TCP	60	49516 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
33	2.987067794	192.168.32.101	192.168.32.100	TLShv1.3	571	Client Hello
34	2.987016726	192.168.32.100	192.168.32.101	TCP	54	443 → 49516 [ACK] Seq=1 Ack=518 Win=64128 Len=0
35	2.989954732	192.168.32.100	192.168.32.101	TCP	54	443 → 49514 [FIN, ACK] Seq=1422 Ack=617 Win=64128 Len=0
36	2.990463062	192.168.32.100	192.168.32.101	TCP	54	443 → 49515 [FIN, ACK] Seq=1422 Ack=617 Win=64128 Len=0
37	2.990611840	192.168.32.101	192.168.32.100	TCP	60	49514 → 443 [ACK] Seq=617 Ack=1423 Win=64256 Len=0
38	2.990971662	192.168.32.101	192.168.32.100	TCP	60	49515 → 443 [ACK] Seq=617 Ack=1423 Win=64256 Len=0
39	3.028167862	192.168.32.100	192.168.32.101	TLShv1.3	1475	Server Hello, Change Cipher Spec, Application Data, Application Data, Application Data, Application Data
40	3.041051192	192.168.32.101	192.168.32.100	TLShv1.3	134	Change Cipher Spec, Application Data
41	3.041154061	192.168.32.100	192.168.32.101	TCP	54	443 → 49516 [ACK] Seq=1422 Ack=598 Win=64128 Len=0
42	3.041544172	192.168.32.100	192.168.32.101	TLShv1.3	309	Application Data
43	3.043697771	192.168.32.101	192.168.32.100	TLShv1.3	783	Application Data
44	3.043713464	192.168.32.100	192.168.32.101	TLShv1.3	293	Application Data
45	3.063884616	192.168.32.100	192.168.32.101	TLShv1.3	531	Application Data, Application Data, Application Data
46	3.064734918	192.168.32.101	192.168.32.100	TCP	60	49516 → 443 [ACK] Seq=1327 Ack=2394 Win=64768 Len=0
47	3.073220174	192.168.32.101	192.168.32.100	TCP	60	49516 → 443 [FIN, ACK] Seq=1327 Ack=2394 Win=64768 Len=0
48	3.073238523	192.168.32.100	192.168.32.101	TCP	54	443 → 49516 [ACK] Seq=2394 Ack=1328 Win=64128 Len=0
49	3.131950744	192.168.32.101	192.168.32.100	TCP	66	49517 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
50	3.131971719	192.168.32.100	192.168.32.101	TCP	66	443 → 49517 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128

[Coloring Rule String: tcp.flags.fin == 1]

- Ethernet II, Src: PcsCompu\_c7:e1:36 (08:00:27:c7:e1:36), Dst: PcsCompu\_e7:b5:96 (08:00:27:e7:b5:96)
  - Destination: PcsCompu\_e7:b5:96 (08:00:27:e7:b5:96)
  - Source: PcsCompu\_c7:e1:36 (08:00:27:c7:e1:36)
  - Type: IPv4 (0x0800)
- Internet Protocol Version 4, Src: 192.168.32.100, Dst: 192.168.32.101
  - Source Port: 443
  - Destination Port: 49515
  - [Stream index: 2]
  - [Conversation completeness: Complete, WITH\_DATA (31)]
  - [TCP Segment Len: 0]
  - Sequence Number: 0 (relative sequence number)
  - Sequence Number (raw): 3669904299
  - [Next Sequence Number: 1 (relative sequence number)]
  - Acknowledgment Number: 1 (relative ack number)
  - S is neither a field nor a protocol name.

Packets: 72 - Displayed: 72 (100.0%) - Dropped: 0 (0.0%) | Profile: Default

In questa figura si evidenzia la cattura con wireshark di Https

1	0.000000000	192.168.32.101	192.168.32.100	TCP	66 49386 → 80 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
2	0.000000001	192.168.32.100	192.168.32.101	TCP	66 80 → 49386 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
3	0.000049041	192.168.32.101	192.168.32.100	TCP	66 49386 → 80 [ACK] Seq=1 Ack=1 Win=65536 Len=0
4	0.001022996	192.168.32.101	192.168.32.100	TCP	66 49387 → 80 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
5	0.001030426	192.168.32.100	192.168.32.101	TCP	66 80 → 49387 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
6	0.002099032	192.168.32.101	192.168.32.100	TCP	66 49387 → 80 [ACK] Seq=1 Ack=1 Win=65536 Len=0
7	0.010077645	PcsCompu_e7:b5:96	Broadcast	ARP	68 Who has 192.168.32.1? Tell 192.168.32.101
8	0.010064734	192.168.32.101	192.168.32.100	HTTP	532 GET / HTTP/1.1
9	0.010089905	192.168.32.100	192.168.32.101	TCP	54 80 → 49386 [ACK] Seq=1 Ack=479 Win=64128 Len=0
10	0.029152969	192.168.32.100	192.168.32.101	TCP	204 80 → 49386 [PSH, ACK] Seq=1 Ack=479 Win=64128 Len=150 [TCP segment of a reassembled PDU]
11	0.031030556	192.168.32.100	192.168.32.101	HTTP	312 HTTP/1.1 200 OK (text/html)
12	0.031900612	192.168.32.101	192.168.32.100	TCP	66 49386 → 80 [ACK] Seq=479 Ack=410 Win=65280 Len=0
13	0.070339464	192.168.32.101	192.168.32.100	TCP	66 49386 → 80 [FIN, ACK] Seq=479 Ack=410 Win=65280 Len=0
14	0.070350181	192.168.32.100	192.168.32.101	TCP	54 80 → 49386 [ACK] Seq=410 Ack=480 Win=64128 Len=0
15	0.072231224	192.168.32.101	192.168.32.100	TCP	66 49388 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
16	0.072244592	192.168.32.100	192.168.32.101	TCP	66 443 → 49388 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
17	0.073006848	192.168.32.101	192.168.32.100	TCP	66 49388 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
18	0.073071755	192.168.32.101	192.168.32.100	TCP	66 49389 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
19	0.073079914	192.168.32.100	192.168.32.101	TCP	66 443 → 49389 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
20	0.074193169	192.168.32.101	192.168.32.100	TCP	66 49389 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
21	0.075290814	192.168.32.101	192.168.32.100	TCP	66 49390 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
22	0.075317957	192.168.32.100	192.168.32.101	TCP	66 443 → 49390 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
23	0.080281535	192.168.32.101	192.168.32.100	TCP	66 49390 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
24	0.080505353	192.168.32.101	192.168.32.100	TCP	66 49391 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
25	0.080575579	192.168.32.100	192.168.32.101	TCP	66 443 → 49391 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
26	0.081192043	192.168.32.101	192.168.32.100	TCP	66 49391 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
27	0.115957603	192.168.32.101	192.168.32.100	TCP	66 49392 → 443 [SYN] Seq=0 Win=8192 Len=0 MSS=1460 WS=256 SACK_PERM
28	0.115970212	192.168.32.100	192.168.32.101	TCP	66 443 → 49392 [SYN, ACK] Seq=0 Ack=1 Win=64240 Len=0 MSS=1460 SACK_PERM WS=128
29	0.117000426	192.168.32.101	192.168.32.100	TCP	66 49392 → 443 [ACK] Seq=1 Ack=1 Win=65536 Len=0
30	0.139063828	192.168.32.101	192.168.32.100	HTTP	451 GET /favicon.ico HTTP/1.1
31	0.139118261	192.168.32.100	192.168.32.101	TCP	54 80 → 49387 [ACK] Seq=1 Ack=398 Win=64128 Len=0
32	0.139597658	192.168.32.101	192.168.32.100	TLSv1.3	571 Client Hello
33	0.139597760	192.168.32.101	192.168.32.100	TLSv1.3	571 Client Hello
34	0.139607095	192.168.32.100	192.168.32.101	TCP	54 443 → 49388 [ACK] Seq=1 Ack=518 Win=64128 Len=0
35	0.139806677	192.168.32.100	192.168.32.101	TCP	54 443 → 49389 [ACK] Seq=1 Ack=518 Win=64128 Len=0
36	0.140363785	192.168.32.101	192.168.32.100	TLSv1.3	571 Client Hello
37	0.140371706	192.168.32.100	192.168.32.101	TCP	54 443 → 49390 [ACK] Seq=1 Ack=518 Win=64128 Len=0
38	0.143003058	192.168.32.100	192.168.32.101	TLSv1.3	1475 Server Hello, Change Cipher Spec, Application Data, Application Data, Application Data
39	0.144630783	192.168.32.101	192.168.32.100	TLSv1.3	571 Client Hello
40	0.144688805	192.168.32.100	192.168.32.101	TCP	54 443 → 49391 [ACK] Seq=1 Ack=518 Win=64128 Len=0
41	0.148493723	192.168.32.101	192.168.32.100	TLSv1.3	571 Client Hello

Destination: PcsCompu_e7:b5:96 (08:00:27:e7:b5:96)	
Source: PcsCompu_c7:e1:36 (08:00:27:c7:e1:36)	
Type: IPv4 (0x0800)	
Internet Protocol Version 4, Src: 192.168.32.100, Dst: 192.168.32.101	
Transmission Control Protocol, Src Port: 80, Dst Port: 49386, Seq: 1, Ack: 479, Len: 0	
Source Port: 80	
Destination Port: 49386	
[Stream index: 0]	
[Conversation completeness: Complete, WITH_DATA (31)]	
[TCP Segment Len: 0]	
Sequence Number: 1 (relative sequence number)	
Sequence Number (raw): 43060505	
[Next Sequence Number: 1 (relative sequence number)]	
Acknowledgment Number: 479 (relative ack number)	
Acknowledgment number (raw): 1497798224	
0101 ... = Header Length: 20 bytes (5)	
Transmission Control Protocol (tcp), 20 bytes	

In questa figura si evidenzia la cattura con Wireshark di Http