

## Telecommunications Networks

Lab 1 07/05/2025

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"nslookup www.ece.auth.gr":

Name and IP address of the DNS server that provides the answer:

Server: 155.207.0.32

Address: 155.207.0.32#53

The answer itself:

Non-authoritative answer:

www.ece.auth.gr canonical name = hosted8.it.auth.gr.

Name: hosted8.it.auth.gr

Address: 155.207.1.221

"nslookup in.gr":

Name and IP address of the DNS server that provides the answer:

Server: 155.207.0.32

Address: 155.207.0.32#53

The answer itself:

Non-authoritative answer:

Name: in.gr

Address: 213.133.127.247

Name: in.gr

Address: 213.133.127.245

"nslookup -type=NS":

Server: 155.207.0.32

Address: 155.207.0.32#53

\*\* server can't find \226\128\147type=NS: NXDOMAIN

"nslookup -type=ns ece.auth.gr":

Server: 155.207.0.32

Address: 155.207.0.32#53

Non-authoritative answer:

ece.auth.gr nameserver = evia.ccf.auth.gr.

ece.auth.gr nameserver = thalia.ccf.auth.gr.

ece.auth.gr nameserver = philippos.ccf.auth.gr.

"Nslookup www.cnn.gr philippos.ccf.auth.gr":

Server: philippos.ccf.auth.gr

Address: 155.207.1.25#53

\*\* server can't find www.cnn.gr: REFUSED

"nslookup www.google.com":

Server: 155.207.0.32

Address: 155.207.0.32#53

Non-authoritative answer:

Name: google.com

Address: 216.58.209.46

"nslookup -type=ns ethz.ch":

Server: 155.207.0.32

Address: 155.207.0.32#53

Non-authoritative answer:

ethz.ch nameserver = ns2.switch.ch.

ethz.ch nameserver = ns2.ethz.ch.

ethz.ch    nameserver = ns1.ethz.ch.

"nslookup"

> set type=mx

>

> server ns1.ethz.ch

Default server: ns1.ethz.ch

Address: 2001:67c:10ec::a#53

Default server: ns1.ethz.ch

Address: 129.132.98.8#53

> yahoo.com

Server:            ns1.ethz.ch

Address: 2001:67c:10ec::a#53

\*\* server can't find yahoo.com: REFUSED

"nslookup ethz.ch":

Server:            155.207.0.32

Address: 155.207.0.32#53

Non-authoritative answer:

Name:    ethz.ch

Address: 129.132.19.216

"nslookup -type=a ethz.ch":

Server:            155.207.0.32

Address: 155.207.0.32#53

Non-authoritative answer:

Name:    ethz.ch

Address: 129.132.19.216

"nslookup -type=ns ethz.ch":

Server:            155.207.0.32

Address: 155.207.0.32#53

Non-authoritative answer:

ethz.ch nameserver = ns2.switch.ch.  
ethz.ch nameserver = ns2.ethz.ch.  
ethz.ch nameserver = ns1.ethz.ch.

===== 2 =====

"ifconfig":

flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500

options=6460<TSO4,TSO6,CHANNEL\_IO,PARTIAL\_CSUM,ZEROINVERT\_CSUM>

ether 4e:50:07:8d:a4:c9

inet6 fe80::4fc:f5fc:2a05:eb29%en0 prefixlen 64 secured scopeid 0xb

inet 10.91.108.78 netmask 0xffffe000 broadcast 10.91.127.255

inet6 2001:648:2800:1913:8bb:9cf7:d3e1:ea61 prefixlen 64 autoconf secured

inet6 2001:648:2800:1913:b434:db82:790f:35f4 prefixlen 64 autoconf

temporary

nd6 options=201<PERFORMNUD,DAD>

media: autoselect

status: active

"scutil --get ComputerName":

Παναγιώτης's MacBook Air

"scutil --dns":

resolver #1

nameserver[0] : 155.207.0.32

nameserver[1] : 155.207.0.31

nameserver[2] : 155.207.0.33

if\_index : 11 (en0)

flags : Scoped, Request A records, Request AAAA records

reach : 0x00000002 (Reachable)

"traceroute www.google.com":

```
traceroute to www.google.com (216.58.205.36), 64 hops max, 40 byte packets
 1 wless1-vlan454.ccf.auth.gr (10.91.96.2) 6.556 ms 4.317 ms 4.666 ms
 2 atlas.ccf.auth.gr (155.207.100.9) 4.009 ms 4.964 ms 5.884 ms
 3 10.54.70.2 (10.54.70.2) 5.572 ms 5.060 ms 5.533 ms
 4 10.54.70.6 (10.54.70.6) 14.474 ms 13.153 ms 13.374 ms
 5 10.54.70.7 (10.54.70.7) 13.262 ms 13.177 ms 13.076 ms
 6 62.217.101.132 (62.217.101.132) 14.475 ms 14.329 ms 14.695 ms
 7 kolettir-eier-ae.backbone.grnet.gr (62.217.100.62) 16.546 ms 14.976 ms 15.487
ms
 8 * * *
 9 ae7-0.rt1.mil2.it.geant.net (62.40.98.79) 48.908 ms 49.575 ms 47.555 ms
10 72.14.209.138 (72.14.209.138) 47.571 ms
   google-gw.rt1.mil.it.geant.net (83.97.89.25) 47.281 ms
   72.14.209.138 (72.14.209.138) 47.018 ms
11 108.170.255.203 (108.170.255.203) 48.106 ms
   192.178.99.215 (192.178.99.215) 48.099 ms 48.516 ms
12 192.178.44.135 (192.178.44.135) 48.288 ms
   172.253.73.61 (172.253.73.61) 47.727 ms
   192.178.44.135 (192.178.44.135) 48.459 ms
13 mil07s19-in-f4.1e100.net (216.58.205.36) 48.109 ms 90.016 ms 49.008 ms
```

"ping -c 4 www.google.com":

```
PING www.google.com (216.58.205.36): 56 data bytes
64 bytes from 216.58.205.36: icmp_seq=0 ttl=109 time=70.410 ms
Request timeout for icmp_seq 1
64 bytes from 216.58.205.36: icmp_seq=2 ttl=109 time=104.059 ms
64 bytes from 216.58.205.36: icmp_seq=3 ttl=109 time=58.282 ms
```

--- www.google.com ping statistics ---

```
4 packets transmitted, 3 packets received, 25.0% packet loss
round-trip min/avg/max/stddev = 58.282/77.584/104.059/19.365 ms
```

===== 3 =====

4. UDP

5. Src Port: 58566, Dst Port: 53

6. Src: 10.91.108.78, Dst: 155.207.0.32

7. Type: A (1) (Host Address)  
[Response In: 10]

8. Answers

star.c10r.facebook.com: type A, class IN, addr 31.13.84.8

Name: star.c10r.facebook.com

Type: A (1) (Host Address)

Class: IN (0x0001)

Time to live: 57 (57 seconds)

Data length: 4

Address: 31.13.84.8

[Request In: 8]

[Time: 0.011425000 seconds]

9.

==== TRACE 2 ====

11. User Datagram Protocol, Src Port: 3742, Dst Port: 53

12. Destination: All-HSRP-routers\_00 (00:00:0c:07:ac:00)

13. Type: A (1) (Host Address)  
[Response In: 20]

14. Answers

www.mit.edu: type A, class IN, addr 18.7.22.83

Name: www.mit.edu

Type: A (1) (Host Address)

Class: IN (0x0001)

Time to live: 60 (1 minute)

Data length: 4

Address: 18.7.22.83

Authoritative nameservers

mit.edu: type NS, class IN, ns BITSY.mit.edu

Name: mit.edu

Type: NS (2) (authoritative Name Server)

Class: IN (0x0001)

Time to live: 21600 (6 hours)

Data length: 8

Name Server: BITSY.mit.edu

mit.edu: type NS, class IN, ns STRAWB.mit.edu

Name: mit.edu

Type: NS (2) (authoritative Name Server)

Class: IN (0x0001)

Time to live: 21600 (6 hours)  
Data length: 9  
Name Server: STRAWB.mit.edu  
mit.edu: type NS, class IN, ns W20NS.mit.edu  
Name: mit.edu  
Type: NS (2) (authoritative Name Server)  
Class: IN (0x0001)  
Time to live: 21600 (6 hours)  
Data length: 8  
Name Server: W20NS.mit.edu  
Additional records  
BITSY.mit.edu: type A, class IN, addr 18.72.0.3  
Name: BITSY.mit.edu  
Type: A (1) (Host Address)  
Class: IN (0x0001)  
Time to live: 21600 (6 hours)  
Data length: 4  
Address: 18.72.0.3  
STRAWB.mit.edu: type A, class IN, addr 18.71.0.151  
Name: STRAWB.mit.edu  
Type: A (1) (Host Address)  
Class: IN (0x0001)  
Time to live: 21600 (6 hours)  
Data length: 4  
Address: 18.71.0.151  
W20NS.mit.edu: type A, class IN, addr 18.70.0.160  
Name: W20NS.mit.edu  
Type: A (1) (Host Address)  
Class: IN (0x0001)  
Time to live: 21600 (6 hours)  
Data length: 4  
Address: 18.70.0.160  
[Request In: 19]  
[Time: 0.016757000 seconds]