

Όνοματεπώνυμο: Άγγελος Μητροκώτσας	Ομάδα:6
Όνομα PC/ΛΣ:	Ημερομηνία: 26/ 12/ 2021
Διεύθυνση IP: 192.168.1.14	Διεύθυνση MAC: F8-63-3F-59-24-C8

Εργαστηριακή Άσκηση 10

Σύστημα Ονομασίας Περιοχών DNS

Απαντήστε στα ερωτήματα στον χώρο που σας δίνεται παρακάτω και στην πίσω σελίδα εάν δεν επαρκεί. Το φυλλάδιο αυτό θα παραδοθεί στον επιβλέποντα.

1

1.1 Στην περιοχή ανώτατου επιπέδου

1.2 Εμφανίστηκαν συνολικά 13 υπεύθυνοι εξυηρητητές κορυφής DNS

a.root-servers.net με IPv4: 198.41.0.4 και IPv6: 2001:503:ba3e::2:30

```
Administrator: Windows PowerShell
> .
Server: achilles.noc.ntua.gr
Address: 147.102.222.210

Non-authoritative answer:
(root) nameserver = f.root-servers.net
(root) nameserver = a.root-servers.net
(root) nameserver = c.root-servers.net
(root) nameserver = j.root-servers.net
(root) nameserver = i.root-servers.net
(root) nameserver = h.root-servers.net
(root) nameserver = k.root-servers.net
(root) nameserver = l.root-servers.net
(root) nameserver = g.root-servers.net
(root) nameserver = e.root-servers.net
(root) nameserver = m.root-servers.net
(root) nameserver = b.root-servers.net
(root) nameserver = d.root-servers.net

a.root-servers.net internet address = 198.41.0.4
b.root-servers.net internet address = 199.9.14.201
c.root-servers.net internet address = 192.33.4.12
d.root-servers.net internet address = 199.7.91.13
e.root-servers.net internet address = 192.203.230.10
f.root-servers.net internet address = 192.5.5.241
g.root-servers.net internet address = 192.112.36.4
h.root-servers.net internet address = 198.97.190.53
i.root-servers.net internet address = 192.36.148.17
j.root-servers.net internet address = 192.58.128.30
k.root-servers.net internet address = 193.0.14.129
l.root-servers.net internet address = 199.7.83.42
m.root-servers.net internet address = 202.12.27.33
a.root-servers.net AAAA IPv6 address = 2001:503:ba3e::2:30
b.root-servers.net AAAA IPv6 address = 2001:500:200::b
```

1.3 server 198.41.0.4

1.4 Μια περιοχή “κάτω” από την περιοχή ανωτάτου επιπέδου.

```
> gr.
Server: a.root-servers.net
Address: 198.41.0.4

gr nameserver = gr-d.ics.forth.gr
gr nameserver = gr-at.ics.forth.gr
gr nameserver = grdns.ics.forth.gr
gr nameserver = gr-m.ics.forth.gr
gr nameserver = estia.ics.forth.gr
gr nameserver = gr-c.ics.forth.gr
gr-d.ics.forth.gr internet address = 194.0.11.102
gr-d.ics.forth.gr AAAA IPv6 address = 2001:678:e:102::53
gr-at.ics.forth.gr internet address = 78.104.145.227
grdns.ics.forth.gr internet address = 139.91.1.1
gr-m.ics.forth.gr internet address = 194.0.4.10
gr-m.ics.forth.gr AAAA IPv6 address = 2001:678:7::4:10
estia.ics.forth.gr internet address = 139.91.191.3
estia.ics.forth.gr AAAA IPv6 address = 2001:648:2c30::191:3
gr-c.ics.forth.gr internet address = 194.0.1.25
gr-c.ics.forth.gr AAAA IPv6 address = 2001:678:4::19
```

1.5 Εμφανίστηκαν 6 υπεύθυνοι εξυηρητητές DNS

gr-m.ics.forth.gr με IPv4: 194.0.4.10 και IPv6: 2001:678:7::4:10

1.6 Είναι ακριβώς τα ίδια αποτελέσματα με το 1.4. Ο dns server που έχω επιλέξει μπορεί να μου δώσει

τους server εώς ένα επίπεδο κάτω από αυτόν. Δηλαδή όταν έχω έναν απτους παγκόσμιους servers ως root και ζητήσω πληροφορίες για το ntua.gr ή για το auth.gr που είναι 2 επίπεδα κάτω από αυτόν, θα μου εμφανίσει τους server που εξυπηρετούν την Ελλάδα γενικά (το .gr). Αν είχα πάρει ως root τον εξυπηρετητή της Ελλάδας και ζητούσα πληροφορίες για το ntua.gr θα λάμβανα πολύ πιο συγκεκριμένα ποιοι dns servers εξυπηρετούν το ntua (καθώς τότε θα βρισκόταν 1 επίπεδο «κάτω»)

```
Default Server: a.root-servers.net
Address: 198.41.0.4

> gr.
Server: a.root-servers.net
Address: 198.41.0.4

gr      nameserver = gr-d.ics.forth.gr
gr      nameserver = gr-at.ics.forth.gr
gr      nameserver = grdns.ics.forth.gr
gr      nameserver = gr-m.ics.forth.gr
gr      nameserver = estia.ics.forth.gr
gr      nameserver = gr-c.ics.forth.gr
gr-d.ics.forth.gr      internet address = 194.0.11.102
gr-d.ics.forth.gr      AAAA IPv6 address = 2001:678:e:102::53
gr-at.ics.forth.gr      internet address = 78.104.145.227
grdns.ics.forth.gr      internet address = 139.91.1.1
gr-m.ics.forth.gr      internet address = 194.0.4.10
gr-m.ics.forth.gr      AAAA IPv6 address = 2001:678:7::4:10
estia.ics.forth.gr      internet address = 139.91.191.3
estia.ics.forth.gr      AAAA IPv6 address = 2001:648:2c30::191:3
gr-c.ics.forth.gr      internet address = 194.0.1.25
gr-c.ics.forth.gr      AAAA IPv6 address = 2001:678:4::19

> ntua.gr
Server: a.root-servers.net
Address: 198.41.0.4

gr      nameserver = gr-d.ics.forth.gr
gr      nameserver = gr-at.ics.forth.gr
gr      nameserver = grdns.ics.forth.gr
gr      nameserver = gr-m.ics.forth.gr
gr      nameserver = estia.ics.forth.gr
gr      nameserver = gr-c.ics.forth.gr
gr-d.ics.forth.gr      internet address = 194.0.11.102
gr-d.ics.forth.gr      AAAA IPv6 address = 2001:678:e:102::53
gr-at.ics.forth.gr      internet address = 78.104.145.227
grdns.ics.forth.gr      internet address = 139.91.1.1
gr-m.ics.forth.gr      internet address = 194.0.4.10
gr-m.ics.forth.gr      AAAA IPv6 address = 2001:678:7::4:10
estia.ics.forth.gr      internet address = 139.91.191.3
estia.ics.forth.gr      AAAA IPv6 address = 2001:648:2c30::191:3
gr-c.ics.forth.gr      internet address = 194.0.1.25
gr-c.ics.forth.gr      AAAA IPv6 address = 2001:678:4::19

>
```

1.7 server 194.0.4.10

1.8 Οχι δεν είναι ίδια καθώς έχω μεταφερθεί σε μία περιοχή πιο κάτω (προς τα φύλλα) και πλέον βλέπω τους υπεύθυνους εξυπηρετητές για την περιοχή αυτή.

```
gr-d.ics.forth.gr      AAAA IPv6 address = 2001:678:e:102::53
gr-at.ics.forth.gr      internet address = 78.104.145.227
grdns.ics.forth.gr      internet address = 139.91.1.1
gr-m.ics.forth.gr      internet address = 194.0.4.10
gr-m.ics.forth.gr      AAAA IPv6 address = 2001:678:7::4:10
estia.ics.forth.gr      internet address = 139.91.191.3
estia.ics.forth.gr      AAAA IPv6 address = 2001:648:2c30::191:3
gr-c.ics.forth.gr      internet address = 194.0.1.25
gr-c.ics.forth.gr      AAAA IPv6 address = 2001:678:4::19

> server 194.0.4.10
in-addr.arpa      nameserver = e.in-addr-servers.arpa
in-addr.arpa      nameserver = f.in-addr-servers.arpa
in-addr.arpa      nameserver = d.in-addr-servers.arpa
in-addr.arpa      nameserver = c.in-addr-servers.arpa
in-addr.arpa      nameserver = b.in-addr-servers.arpa
in-addr.arpa      nameserver = a.in-addr-servers.arpa
e.in-addr-servers.arpa      internet address = 203.119.86.101
e.in-addr-servers.arpa      AAAA IPv6 address = 2001:dd8:6::101
f.in-addr-servers.arpa      internet address = 193.0.9.1
f.in-addr-servers.arpa      AAAA IPv6 address = 2001:67c:e0::1
d.in-addr-servers.arpa      internet address = 200.10.60.53
d.in-addr-servers.arpa      AAAA IPv6 address = 2001:13c7:7010::53
c.in-addr-servers.arpa      internet address = 106.216.160.10
c.in-addr-servers.arpa      AAAA IPv6 address = 2001:43f8:110::10
b.in-addr-servers.arpa      internet address = 109.253.183.183
b.in-addr-servers.arpa      AAAA IPv6 address = 2001:500:87::87
a.in-addr-servers.arpa      internet address = 199.180.182.53
a.in-addr-servers.arpa      AAAA IPv6 address = 2620:37:e000::53
Default Server: [194.0.4.10]
Address: 194.0.4.10

> ntua.gr
Server: [194.0.4.10]
Address: 194.0.4.10

ntua.gr nameserver = achilles.noc.ntua.gr
ntua.gr nameserver = ulyssees.noc.ntua.gr
ntua.gr nameserver = sns0.grnet.gr
ntua.gr nameserver = sns1.grnet.gr
ntua.gr nameserver = diomedes.noc.ntua.gr
ulyssees.noc.ntua.gr      internet address = 147.102.222.230
achilles.noc.ntua.gr      internet address = 147.102.222.210
diomedes.noc.ntua.gr      internet address = 147.102.222.220

>
```

1.9 Εμφανίστηκαν 5 εξυπηρετητές DNS

ulysses.noc.ntua.gr με IPv4: 147.102.222.230.

1.10 Ναι είναι τα ίδια

```
b.in-addr-servers.arpa AAAA IPv6 address = 2001:500:87::87
a.in-addr-servers.arpa internet address = 199.180.182.53
a.in-addr-servers.arpa AAAA IPv6 address = 2620:37:e000::53
Default Server: [194.0.4.10]
Address: 194.0.4.10

> ntua.gr
Server: [194.0.4.10]
Address: 194.0.4.10

ntua.gr nameserver = achilles.noc.ntua.gr
ntua.gr nameserver = ulysses.noc.ntua.gr
ntua.gr nameserver = sns0.grnet.gr
ntua.gr nameserver = sns1.grnet.gr
ntua.gr nameserver = diomedes.noc.ntua.gr
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
diomedes.noc.ntua.gr internet address = 147.102.222.220
> server ulysses.noc.ntua.gr
*** Can't find address for server ulysses.noc.ntua.gr: Non-authoritative answer
> server 147.102.222.230
Default Server: [147.102.222.230]
Address: 147.102.222.230

> ntua.gr
Server: [147.102.222.230]
Address: 147.102.222.230

ntua.gr nameserver = ulysses.noc.ntua.gr
ntua.gr nameserver = sns1.grnet.gr
ntua.gr nameserver = diomedes.noc.ntua.gr
ntua.gr nameserver = sns0.grnet.gr
ntua.gr nameserver = achilles.noc.ntua.gr
sns0.grnet.gr internet address = 83.212.5.89
sns1.grnet.gr internet address = 83.212.5.22
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
diomedes.noc.ntua.gr internet address = 147.102.222.220
sns0.grnet.gr AAAA IPv6 address = 2001:648:2ffc:203::89
sns1.grnet.gr AAAA IPv6 address = 2001:648:2ffc:112::2
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
>
```

1.11 Εμφανίστηκαν 3 εξυπηρετητές DNS, psyche.cn.ece.ntua.gr

```
ntua.gr nameserver = sns1.grnet.gr
ntua.gr nameserver = diomedes.noc.ntua.gr
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
diomedes.noc.ntua.gr internet address = 147.102.222.220
> server ulysses.noc.ntua.gr
*** Can't find address for server ulysses.noc.ntua.gr: Non-authoritative answer
> server 147.102.222.230
Default Server: [147.102.222.230]
Address: 147.102.222.230

> ntua.gr
Server: [147.102.222.230]
Address: 147.102.222.230

ntua.gr nameserver = ulysses.noc.ntua.gr
ntua.gr nameserver = sns1.grnet.gr
ntua.gr nameserver = diomedes.noc.ntua.gr
ntua.gr nameserver = sns0.grnet.gr
ntua.gr nameserver = achilles.noc.ntua.gr
sns0.grnet.gr internet address = 83.212.5.89
sns1.grnet.gr internet address = 83.212.5.22
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
diomedes.noc.ntua.gr internet address = 147.102.222.220
sns0.grnet.gr AAAA IPv6 address = 2001:648:2ffc:203::89
sns1.grnet.gr AAAA IPv6 address = 2001:648:2ffc:112::2
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
> cn.ntua.gr
Server: [147.102.222.230]
Address: 147.102.222.230

cn.ntua.gr nameserver = achilles.noc.ntua.gr
cn.ntua.gr nameserver = psyche.cn.ece.ntua.gr
cn.ntua.gr nameserver = ulysses.noc.ntua.gr
psyche.cn.ece.ntua.gr internet address = 147.102.40.1
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
psyche.cn.ece.ntua.gr AAAA IPv6 address = 2001:648:2000:28::1
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
>
```

1.12 Υπάρχουν 3 κοινοί εξυπηρετητές για όλες τις σχολές, οι: diomedes.noc.ntua.gr, ulysses.noc.ntua.gr, achilles.noc.ntua.gr. Βέβαια βρήκα και μη κοινούς όπως για τους Μεταλλιολόγους τον serifos.metal.ntua

1.13 Ο κύριος εξυπηρετητής DNS της περιοχής "cn.ntua.gr." είναι ο psyche.cn.ece.ntua.gr με IPv4: 147.102.40.1 και IPv6: 2001:648:2000:28::1

```

> set querytype
> set q=soa
> cn.ntua.gr
Server: [147.102.222.230]
Address: 147.102.222.230

cn.ntua.gr
      primary name server = psyche.cn.ece.ntua.gr
      responsible mail addr = hostmaster.cn.ntua.gr
      serial = 2021122301
      refresh = 28800 (8 hours)
      retry = 7200 (2 hours)
      expire = 604800 (7 days)
      default TTL = 86400 (1 day)
cn.ntua.gr      nameserver = achilles.noc.ntua.gr
cn.ntua.gr      nameserver = psyche.cn.ece.ntua.gr
cn.ntua.gr      nameserver = ulysses.noc.ntua.gr
psyche.cn.ece.ntua.gr      internet address = 147.102.40.1
ulysses.noc.ntua.gr      internet address = 147.102.222.230
achilles.noc.ntua.gr      internet address = 147.102.222.210
psyche.cn.ece.ntua.gr      AAAA IPv6 address = 2001:648:2000:28::1
ulysses.noc.ntua.gr      AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr      AAAA IPv6 address = 2001:648:2000:de::210
>

```

1.14 Κάθε 8 ώρες

1.15 Για 24 ώρες (1 μερα)

1.16 Κύριος εξυπηρετητής DNS είναι ο achilles.noc.ntua.gr με IPv4: 147.102.222.230 και TTL: 24 ώρες.

```

ece.ntua.gr
      primary name server = achilles.noc.ntua.gr
      responsible mail addr = noc.ntua.gr
      serial = 2021100700
      refresh = 86400 (1 day)
      retry = 86400 (1 day)
      expire = 86400 (1 day)
      default TTL = 86400 (1 day)
ece.ntua.gr      nameserver = achilles.noc.ntua.gr
ece.ntua.gr      nameserver = ulysses.noc.ntua.gr
ece.ntua.gr      nameserver = diomedes.noc.ntua.gr
ulysses.noc.ntua.gr      internet address = 147.102.222.230
achilles.noc.ntua.gr      internet address = 147.102.222.210
diomedes.noc.ntua.gr      internet address = 147.102.222.220
ulysses.noc.ntua.gr      AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr      AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr      AAAA IPv6 address = 2001:648:2000:de::220
>

```

1.17 Οι τιμές των σειριακών αριθμών προκύπτουν από την ημερομηνία στην οποία έγινε τελευταία φορά ενημέρωση των εγγραφών, με μορφή

Year(4 ψηφία)Month(4 ψηφία)Day(2ψηφία)SerialNumber(2 ψηφία)

1.18 ΑΠΘ site: www.auth.gr, server: www.ccf.auth.gr (primary: thalia.ccf.auth.gr) , IPv4:155.207.1.12, IPv6: 2001:648:2800:1:155:207:1:12

Πολυτεχνείο Κρήτης site: www.tuc.gr, server: dedalus.noc.tuc.gr, IPv4: 147.27.15.134

ΕΚΠΑ site: www.uoa.gr server: ns1.uoa.gr, IPv4: 195.134.71.228

```

> set q=a
> tuc.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: tuc.gr
Address: 147.27.15.134

> auth.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: auth.gr
Address: 155.207.1.12

> www.tuc.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: typo3.tuc.gr
Address: 147.27.15.134
Aliases: www.tuc.gr

> www.auth.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: www.ccf.auth.gr
Address: 155.207.1.12
Aliases: www.auth.gr

> www.uoa.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: sites2.uoa.gr
Address: 195.134.71.228
Aliases: www.uoa.gr

> set q=aaaa
> www.tuc.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

```

```

> set q=aaaa
> www.tuc.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: www.tuc.gr

> www.auth.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: www.ccf.auth.gr
Address: 2001:648:2800:1:155:207:1:12
Aliases: www.auth.gr

> www.uoa.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
Name: www.uoa.gr

> set q=ptr
> www.tuc.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
www.tuc.gr canonical name = typo3.tuc.gr

tuc.gr
    primary name server = dedalus.noc.tuc.gr
    responsible mail addr = hostmaster.dedalus.noc.tuc.gr
    serial = 2021122201
    refresh = 43200 (12 hours)
    retry = 7200 (2 hours)
    expire = 604800 (7 days)
    default TTL = 86400 (1 day)
> www.auth.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
www.auth.gr canonical name = www.ccf.auth.gr

ccf.auth.gr

```

```

> set q=ptr
> www.tuc.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
www.tuc.gr canonical name = typo3.tuc.gr

tuc.gr
    primary name server = dedalus.noc.tuc.gr
    responsible mail addr = hostmaster.dedalus.noc.tuc.gr
    serial = 2021122201
    refresh = 43200 (12 hours)
    retry = 7200 (2 hours)
    expire = 604800 (7 days)
    default TTL = 86400 (1 day)
> www.auth.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
www.auth.gr canonical name = www.ccf.auth.gr

ccf.auth.gr
    primary name server = thalia.ccf.auth.gr
    responsible mail addr = hostmaster.auth.gr
    serial = 2021121602
    refresh = 1800 (30 mins)
    retry = 900 (15 mins)
    expire = 3600000 (41 days 16 hours)
    default TTL = 300 (5 mins)
> www.uoa.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Non-authoritative answer:
www.uoa.gr canonical name = sites2.uoa.gr

uoa.gr
    primary name server = ns1.uoa.gr
    responsible mail addr = postmaster.uoa.gr
    serial = 2021122301
    refresh = 7200 (2 hours)
    retry = 3600 (1 hour)
    expire = 604800 (7 days)
    default TTL = 3600 (1 hour)
>

```

1.19

147.102.40.16 → name = trillium.cn.ece.ntua.gr

147.102.40.18 → name = bbb.cn.ece.ntua.gr

```

Address: 147.102.222.230

Non-authoritative answer:
www.uoa.gr canonical name = sites2.uoa.gr

uoa.gr
    primary name server = ns1.uoa.gr
    responsible mail addr = postmaster.uoa.gr
    serial = 2021122301
    refresh = 7200 (2 hours)
    retry = 3600 (1 hour)
    expire = 604800 (7 days)
    default TTL = 3600 (1 hour)
> 147.102.40.16
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

16.40.102.147.in-addr.arpa name = trillium.cn.ece.ntua.gr
40.102.147.in-addr.arpa nameserver = psyche.cn.ece.ntua.gr
40.102.147.in-addr.arpa nameserver = ulysses.noc.ntua.gr
40.102.147.in-addr.arpa nameserver = achilles.noc.ntua.gr
psyche.cn.ece.ntua.gr internet address = 147.102.40.1
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
psyche.cn.ece.ntua.gr AAAA IPv6 address = 2001:648:2000:28::1
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
> 147.102.40.18
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

18.40.102.147.in-addr.arpa name = bbb.cn.ece.ntua.gr
40.102.147.in-addr.arpa nameserver = achilles.noc.ntua.gr
40.102.147.in-addr.arpa nameserver = ulysses.noc.ntua.gr
40.102.147.in-addr.arpa nameserver = psyche.cn.ece.ntua.gr
psyche.cn.ece.ntua.gr internet address = 147.102.40.1
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
psyche.cn.ece.ntua.gr AAAA IPv6 address = 2001:648:2000:28::1
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
>

```

1.20 Είναι 16.40.102.147.in-addr.arpa, η οποία είναι αντεστραμμένη

1.21 canonical name = gyali.metal.ntua.gr, internet address = 147.102.121.5

```

> set qcname
> www.metal.ntua.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

www.metal.ntua.gr canonical name = gyali.metal.ntua.gr
metal.ntua.gr nameserver = achilles.noc.ntua.gr
metal.ntua.gr nameserver = serifos.metal.ntua.gr
metal.ntua.gr nameserver = diomedes.noc.ntua.gr
metal.ntua.gr nameserver = ulysses.noc.ntua.gr
serifos.metal.ntua.gr internet address = 147.102.121.1
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
diomedes.noc.ntua.gr internet address = 147.102.222.220
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
> gyali.metal.ntua.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

metal.ntua.gr
    primary name server = serifos.metal.ntua.gr
    responsible mail addr = root.serifos.metal.ntua.gr
    serial = 2021110101
    refresh = 10800 (3 hours)
    retry = 3600 (1 hour)
    expire = 604800 (7 days)
    default TTL = 86400 (1 day)
> set q=a
> gyali.metal.ntua.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Name: gyali.metal.ntua.gr
Address: 147.102.121.5
>

```

1.22 mail exchanger = fl.mail.ntua.gr, IPv4: 147.102.222.196

mail exchanger = f0.mail.ntua.gr, IPv4: 147.102.222.187

```

> set q=mx
> arch.ntua.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

arch.ntua.gr MX preference = 10, mail exchanger = f1.mail.ntua.gr
arch.ntua.gr MX preference = 10, mail exchanger = f0.mail.ntua.gr
arch.ntua.gr MX preference = 100, mail exchanger = diomedes.noc.ntua.gr
arch.ntua.gr MX preference = 100, mail exchanger = achilles.noc.ntua.gr
arch.ntua.gr MX preference = 100, mail exchanger = ulysses.noc.ntua.gr
arch.ntua.gr nameserver = ulysses.noc.ntua.gr
arch.ntua.gr nameserver = printsvx64.arch.ntua.gr
arch.ntua.gr nameserver = kallikratisv.arch.ntua.gr
arch.ntua.gr nameserver = diomedes.noc.ntua.gr
arch.ntua.gr nameserver = achilles.noc.ntua.gr
arch.ntua.gr nameserver = feidias.arch.ntua.gr
f0.mail.ntua.gr internet address = 147.102.222.195
f1.mail.ntua.gr internet address = 147.102.222.196
ulysses.noc.ntua.gr internet address = 147.102.222.230
achilles.noc.ntua.gr internet address = 147.102.222.210
diomedes.noc.ntua.gr internet address = 147.102.222.220
feidias.arch.ntua.gr internet address = 147.102.170.100
printsvx64.arch.ntua.gr internet address = 147.102.219.202
kallikratisv.arch.ntua.gr internet address = 147.102.177.1
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
feidias.arch.ntua.gr AAAA IPv6 address = 2002:9366:b264::9366:b264
> set q=a
> f1.mail.ntua.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Name: f1.mail.ntua.gr
Address: 147.102.222.196

> f2.mail.ntua.gr
Server: ulysses.noc.ntua.gr
Address: 147.102.222.230

Name: f2.mail.ntua.gr
Address: 147.102.222.187
>

```

1.23 Κάποιος από αυτούς της απάντησης 1.21, αφού έχουν τον ίδιο αριθμό προτίμησης (10) που είναι μικρότερος από τους υπόλοιπους.

1.24 α) Ουσιαστικά η ls παραθέτει τη λίστα με όλα τα στοιχεία που έχουν καταγραφεί. Το -d σημειώνει όλες τις καταγραφές

1.25 Για SOA : netsrv0.central.ntua.gr dnsmaster.central.ntua.gr. (176 21600 1800 604800 900)

Για TXT: "v=spf1 ip4:147.102.222.0/24 ip6:2001:648:2000:de::/64 a -all"

Για CNAME: webhoster.central.ntua.gr

Για A : central.ntua.gr, 147.102.222.46,

Για NS : netsrv0.central.ntua.gr, 147.102.243.124

Για MX : ulysses.noc.ntua.gr, 2001:648:2000:de::230, 147.102.222.230

```

Address: 147.102.222.187
> ls -d central.ntua.gr
[ulysses.noc.ntua.gr]
central.ntua.gr. SOA netsrv0.central.ntua.gr dnsmaster.central.ntua.gr. (176 21600 1800 604800 900)
central.ntua.gr. TXT "v=spf1 ip4:147.102.222.0/24 ip6:2001:648:2000:de::/64 a -all"

central.ntua.gr. MX 10 ulysses.noc.ntua.gr
central.ntua.gr. MX 10 achilles.noc.ntua.gr
central.ntua.gr. MX 10 diomedes.noc.ntua.gr
central.ntua.gr. NS netsrv0.central.ntua.gr
central.ntua.gr. NS ulysses.noc.ntua.gr
central.ntua.gr. NS achilles.noc.ntua.gr
central.ntua.gr. NS diomedes.noc.ntua.gr
central.ntua.gr. A 147.102.222.46
243gateway A 147.102.243.200
246gateway A 147.102.246.200
acadinfo CNAME beta.central.ntua.gr
acoustics2010 CNAME oldwebhoster.central.ntua.gr
adminasa A 147.102.243.222
agents A 147.102.243.137
aps A 147.102.243.101
arcgislicenses CNAME licenses0.central.ntua.gr
aspenlicenses CNAME licenses2.central.ntua.gr
backend A 147.102.243.119
bastion0 A 147.102.243.58
beta A 147.102.243.133
career CNAME career.ntua.gr
catalicenses CNAME licenses2.central.ntua.gr
cloudfront CNAME webhoster.central.ntua.gr
cloudfront0 A 147.102.243.84
cloudproxy A 147.102.243.90
cloudstorage A 147.102.246.113
csilicenses CNAME licenses0.central.ntua.gr
dianafealicenses CNAME licenses0.central.ntua.gr
elcarning CNAME webhost6.noc.ntua.gr
embryosense CNAME isaar.central.ntua.gr
euclid A 147.102.246.8
fast2009 CNAME oldwebhoster.central.ntua.gr
fl CNAME webhoster.central.ntua.gr
ftp A 147.102.243.129
github A 147.102.243.123
grid A 147.102.243.99
hermes A 147.102.243.243
hermes-new A 147.102.243.242
hippaspus A 147.102.246.106
imap CNAME central.ntua.gr
isafer A 147.102.243.127
isaar A 147.102.243.127

```

2

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Windows\system32> ipconfig /flushdns

Windows IP Configuration

Successfully flushed the DNS Resolver Cache.
PS C:\Windows\system32> nslookup - 147.102.1.1
Default Server: theseas.softlab.ece.ntua.gr
Address: 147.102.1.1

> set domain=.
> 147.102.40.10
Server: theseas.softlab.ece.ntua.gr
Address: 147.102.1.1

Name: titan.cn.ece.ntua.gr
Address: 147.102.40.10

> server 147.102.7.1
Default Server: priamos.telecom.ece.ntua.gr
Address: 147.102.7.1

> 147.102.40.10
Server: priamos.telecom.ece.ntua.gr
Address: 147.102.7.1

Name: titan.cn.ece.ntua.gr
Address: 147.102.40.10

> set q=a
> www.youtube.com
Server: priamos.telecom.ece.ntua.gr
Address: 147.102.7.1

Non-authoritative answer:
Name: youtube-ui.l.google.com
Addresses: 216.58.205.78
           216.58.206.46
           216.58.206.78
           216.58.208.142
           216.58.208.174
           216.58.209.46
           142.250.180.78
           142.250.180.110
           142.250.180.142
Server: priamos.telecom.ece.ntua.gr
Address: 147.102.7.1

Name: titan.cn.ece.ntua.gr
Address: 147.102.40.10

> set q=a
> www.youtube.com
Server: priamos.telecom.ece.ntua.gr
Address: 147.102.7.1

Non-authoritative answer:
Name: youtube-ui.l.google.com
Addresses: 216.58.205.78
           216.58.206.46
           216.58.206.78
           216.58.208.142
           216.58.208.174
           216.58.209.46
           142.250.180.78
           142.250.180.110
           142.250.180.142
           142.250.180.174
           142.250.184.46
           142.250.184.78
           142.250.184.110
           172.217.21.78
           216.58.198.14
           216.58.198.46
Aliases: www.youtube.com

> set q=aaa
unknown query type: aaa
> set q=aaaa
> www.cnn.com
Server: priamos.telecom.ece.ntua.gr
Address: 147.102.7.1

Non-authoritative answer:
Name: turner-tls.map.fastly.net
Address: 2a04:4e42:39::323
Aliases: www.cnn.com

>
```



```

> set q-any
> www.ntua.gr
Server: theseas.softlab.ece.ntua.gr
Address: 147.102.1.1

Non-authoritative answer:
www.ntua.gr internet address = 147.102.224.101
www.ntua.gr AAAA IPv6 address = 2001:648:2000:329::101

ntua.gr nameserver = achilles.noc.ntua.gr
ntua.gr nameserver = ulyssees.noc.ntua.gr
ntua.gr nameserver = sns1.grnet.gr
ntua.gr nameserver = sns0.grnet.gr
ntua.gr nameserver = diomedes.noc.ntua.gr
sns0.grnet.gr internet address = 83.212.5.89
sns0.grnet.gr AAAA IPv6 address = 2001:648:2fffc:203::89
sns1.grnet.gr internet address = 83.212.5.22
sns1.grnet.gr AAAA IPv6 address = 2001:648:2fffc:112::2
ulysses.noc.ntua.gr internet address = 147.102.222.230
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr internet address = 147.102.222.210
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr internet address = 147.102.222.220
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
> set q-soa
> cslab.ntua.gr
Server: theseas.softlab.ece.ntua.gr
Address: 147.102.1.1

Non-authoritative answer:
cslab.ntua.gr
primary name server = danaos.cslab.ece.ntua.gr
responsible mail addr = root.danaos.cslab.ece.ntua.gr
serial = 2020110700
refresh = 21600 (6 hours)
retry = 7200 (2 hours)
expire = 720000 (8 days 8 hours)
default TTL = 86400 (1 day)

cslab.ntua.gr nameserver = danaos.cslab.ece.ntua.gr
cslab.ntua.gr nameserver = diomedes.noc.ntua.gr
cslab.ntua.gr nameserver = achilles.noc.ntua.gr
cslab.ntua.gr nameserver = ulyssees.noc.ntua.gr
danaos.cslab.ece.ntua.gr internet address = 147.102.3.1
ulysses.noc.ntua.gr internet address = 147.102.222.230
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr internet address = 147.102.222.210
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr internet address = 147.102.222.220

cslab.ntua.gr nameserver = danaos.cslab.ece.ntua.gr
cslab.ntua.gr nameserver = diomedes.noc.ntua.gr
cslab.ntua.gr nameserver = achilles.noc.ntua.gr
cslab.ntua.gr nameserver = ulyssees.noc.ntua.gr
danaos.cslab.ece.ntua.gr internet address = 147.102.3.1
ulysses.noc.ntua.gr internet address = 147.102.222.230
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr internet address = 147.102.222.210
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr internet address = 147.102.222.220
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
> set q-cname
> www.cn.ntua.gr
Server: theseas.softlab.ece.ntua.gr
Address: 147.102.1.1

Non-authoritative answer:
www.cn.ntua.gr canonical name = www.cn.ece.ntua.gr

cn.ntua.gr nameserver = psyche.cn.ece.ntua.gr
cn.ntua.gr nameserver = achilles.noc.ntua.gr
cn.ntua.gr nameserver = ulyssees.noc.ntua.gr
psyche.cn.ece.ntua.gr internet address = 147.102.40.1
psyche.cn.ece.ntua.gr AAAA IPv6 address = 2001:648:2000:28::1
ulysses.noc.ntua.gr internet address = 147.102.222.230
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr internet address = 147.102.222.210
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr internet address = 147.102.222.220
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
>
> set q-mx
> elab.ntua.gr
Server: theseas.softlab.ece.ntua.gr
Address: 147.102.1.1

Non-authoritative answer:
elab.ntua.gr MX preference = 20, mail exchanger = ulyssees.noc.ntua.gr
elab.ntua.gr MX preference = 20, mail exchanger = achilles.noc.ntua.gr
elab.ntua.gr MX preference = 20, mail exchanger = diomedes.noc.ntua.gr

elab.ntua.gr nameserver = ulyssees.noc.ntua.gr
elab.ntua.gr nameserver = achilles.noc.ntua.gr
elab.ntua.gr nameserver = diomedes.noc.ntua.gr
ulysses.noc.ntua.gr internet address = 147.102.222.230
ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230
achilles.noc.ntua.gr internet address = 147.102.222.210
achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210
diomedes.noc.ntua.gr internet address = 147.102.222.220
diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220
>
> server 147.102.222.210
Default Server: achilles.noc.ntua.gr
Address: 147.102.222.210

> ls -d planetlab.ntua.gr
[achilles.noc.ntua.gr]
planetlab.ntua.gr. SOA achilles.noc.ntua.gr noc.ntua.gr. (2007072300 43200 3600 604800 86400)
planetlab.ntua.gr. NS ulyssees.noc.ntua.gr
planetlab.ntua.gr. NS achilles.noc.ntua.gr
planetlab.ntua.gr. NS diomedes.noc.ntua.gr
stella A 147.102.224.228
stella-man A 147.102.224.230
vicky A 147.102.224.227
vicky-man A 147.102.224.229
planetlab.ntua.gr. SOA achilles.noc.ntua.gr noc.ntua.gr. (2007072300 43200 3600 604800 86400)
> exit
PS C:\Windows\system32>

```

2.1 ipconfig /flushdns

2.2 host 147.102.131.45

2.3 nslookup – 147.102.1.1, set domain=. , 147.102.40.10 , server 147.102.7.1, 147.102.40.10

2.4 titan.cn.ece.ntua.gr

2.5 dns

2.6 UDP

2.7 4 αιτήματα

2.8 Βγάζει 2 επιπλέον αιτήματα, 1 επιπλέον κάθε φορά που τρέχω την εντολή προς τον εξυπηρετητή που έχω επιλέξει κάθε φορά (θα απαντάω με βάση τα 2 αιτήματα προς τη διεύθυνση 147.102.40.10)

2.9 Για το αίτημα2: Source: 53452, Destination: 53

Για την απάντηση2: Source: 53, Destination: 53452

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
0.000000	147.102.131.45	DNS	80	147.102.222.210	Standard query 0x7eef A activity.windows.com
0.017214	147.102.222.210	DNS	299	147.102.131.45	Standard query response 0x7eef A activity.windows.com CNAME a...
12.539061	147.102.131.45	DNS	84	147.102.1.1	Standard query 0x0001 PTR 1.1.102.147.in-addr.arpa
0.013448	147.102.1.1	DNS	299	147.102.131.45	Standard query response 0x0001 PTR 1.1.102.147.in-addr.arpa P...
44.600554	147.102.131.45	DNS	86	147.102.1.1	Standard query 0x0002 PTR 10.40.102.147.in-addr.arpa
0.014387	147.102.1.1	DNS	190	147.102.131.45	Standard query response 0x0002 PTR 10.40.102.147.in-addr.arpa...
9.207992	147.102.131.45	DNS	89	147.102.222.210	Standard query 0x1aee A v10.events.data.microsoft.com
0.044172	147.102.222.210	DNS	523	147.102.131.45	Standard query response 0x1aee A v10.events.data.microsoft.co...

> Frame 69: 86 bytes on wire (688 bits), 86 bytes captured (688 bits) on interface \Device\NPF_{50A5BB09-D0AB-46DB-AD4F-BB793E23887D}

> Ethernet II, Src: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09), Dst: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09)

> Internet Protocol Version 4, Src: 147.102.131.45, Dst: 147.102.1.1

> User Datagram Protocol, Src Port: 53452, Dst Port: 53

> Domain Name System (query)

> TRANSMISSION Data

0000 00 ff 51 a5 bb 09 00 ff 50 a5 bb 09 08 00 45 00 ..Q....P.....E..

0010 00 48 c6 fd 00 00 80 11 c8 ac 93 66 83 2d 93 66 .H.....f..f

0020 01 01 d0 cc 00 35 00 34 9e 0b 00 02 01 00 00 015.4.....

0030 00 00 00 00 00 02 31 30 02 34 30 03 31 30 3210.40.102

0040 03 31 34 37 07 69 6e 2d 61 64 64 72 04 61 72 70 .147.in-addr.arpa

0050 61 00 00 0c 00 01 a.....

Number of additional records in packet (dns.count.add_rr), 2 byte(s)

Packets: 124 · Displayed: 12 (9.7%) · Dropped: 0 (0.0%) Profile: Default

Για το αίτημα4: Source: 49923, Destination: 53

Για την απάντηση4: Source: 53, Destination: 49923

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
44.600554	147.102.131.45	DNS	86	147.102.1.1	Standard query 0x0002 PTR 10.40.102.147.in-addr.arpa
0.014387	147.102.1.1	DNS	190	147.102.131.45	Standard query response 0x0002 PTR 10.40.102.147.in-addr.arpa...
9.207992	147.102.131.45	DNS	89	147.102.222.210	Standard query 0x1aee A v10.events.data.microsoft.com
0.044172	147.102.222.210	DNS	523	147.102.131.45	Standard query response 0x1aee A v10.events.data.microsoft.co...
13.524115	147.102.131.45	DNS	84	147.102.1.1	Standard query 0x0003 PTR 1.7.102.147.in-addr.arpa
0.012664	147.102.1.1	DNS	194	147.102.131.45	Standard query response 0x0003 PTR 1.7.102.147.in-addr.arpa P...
2.730979	147.102.131.45	DNS	86	147.102.7.1	Standard query 0x0004 PTR 10.40.102.147.in-addr.arpa
0.011367	147.102.7.1	DNS	306	147.102.131.45	Standard query response 0x0004 PTR 10.40.102.147.in-addr.arpa...

> Frame 120: 86 bytes on wire (688 bits), 86 bytes captured (688 bits) on interface \Device\NPF_{50A5BB09-D0AB-46DB-AD4F-BB793E23887D}

> Ethernet II, Src: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09), Dst: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09)

> Internet Protocol Version 4, Src: 147.102.131.45, Dst: 147.102.7.1

> User Datagram Protocol, Src Port: 49923, Dst Port: 53

> Domain Name System (query)

> TRANSMISSION Data

2.10 Η θύρα 53

2.11 12 bytes

2.12 Τόσο το αίτημα όσο και το response έχουν ίδιο Transaction ID, 0x0002

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
0.000000	147.102.131.45	DNS	80	147.102.222.210	Standard query 0x7eef A activity.windows.com
0.017214	147.102.222.210	DNS	299	147.102.131.45	Standard query response 0x7eef A activity.windows.com CNAME a...
12.539061	147.102.131.45	DNS	84	147.102.1.1	Standard query 0x0001 PTR 1.1.102.147.in-addr.arpa
0.013448	147.102.1.1	DNS	299	147.102.131.45	Standard query response 0x0001 PTR 1.1.102.147.in-addr.arpa P...
44.600554	147.102.131.45	DNS	86	147.102.1.1	Standard query 0x0002 PTR 10.40.102.147.in-addr.arpa
0.014387	147.102.1.1	DNS	190	147.102.131.45	Standard query response 0x0002 PTR 10.40.102.147.in-addr.arpa...
9.207992	147.102.131.45	DNS	89	147.102.222.210	Standard query 0x1aee A v10.events.data.microsoft.com
0.044172	147.102.222.210	DNS	523	147.102.131.45	Standard query response 0x1aee A v10.events.data.microsoft.co...

> Frame 69: 86 bytes on wire (688 bits), 86 bytes captured (688 bits) on interface \Device\NPF_{50A5BB09-D0AB-46DB-AD4F-BB793E23887}

> Ethernet II, Src: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09), Dst: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09)

> Internet Protocol Version 4, Src: 147.102.131.45, Dst: 147.102.1.1

> User Datagram Protocol, Src Port: 53452, Dst Port: 53

> Domain Name System (query)

Transaction ID: 0x0002

> Flags: 0x0100 Standard query

```

0000  00 ff 51 a5 bb 09 00 ff 50 a5 bb 09 08 00 45 00  ..Q.....P.....E.
0010  00 48 c6 fd 00 00 80 11 c8 ac 93 66 83 2d 93 66  .H.....f...f
0020  01 01 d0 cc 00 35 00 34 9e 0b 00 02 01 00 00 01  ....5.4...
0030  00 00 00 00 00 00 02 31 30 02 34 30 03 31 30 32  ....10.40.102
0040  03 31 34 37 07 69 6e 2d 61 64 64 72 04 61 72 70  -147.in-addr.arpa
0050  61 00 00 0c 00 01  a.....

```

Identification of transaction (dns.id), 2 byte(s) | Packets: 124 · Displayed: 12 (9.7%) · Dropped: 0 (0.0%) | Profile: Default

2.13 2 bytes

2.14 To 1^o bit2.15 To 2^o bit

2.16 1 ερώτηση, 0 εγγραφές RR απαντήσεων, 0 εγγραφές RR επίσημων εξυπηρετητών, 0 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
0.000000	147.102.131.45	DNS	80	147.102.222.210	Standard query 0x7eef A activity.windows.com
0.017214	147.102.222.210	DNS	299	147.102.131.45	Standard query response 0x7eef A activity.windows.com CNAME a...
12.539061	147.102.131.45	DNS	84	147.102.1.1	Standard query 0x0001 PTR 1.1.102.147.in-addr.arpa
0.013448	147.102.1.1	DNS	299	147.102.131.45	Standard query response 0x0001 PTR 1.1.102.147.in-addr.arpa P...
44.600554	147.102.131.45	DNS	86	147.102.1.1	Standard query 0x0002 PTR 10.40.102.147.in-addr.arpa
0.014387	147.102.1.1	DNS	190	147.102.131.45	Standard query response 0x0002 PTR 10.40.102.147.in-addr.arpa...
9.207992	147.102.131.45	DNS	89	147.102.222.210	Standard query 0x1aee A v10.events.data.microsoft.com
0.044172	147.102.222.210	DNS	523	147.102.131.45	Standard query response 0x1aee A v10.events.data.microsoft.co...

> Domain Name System (query)

Transaction ID: 0x0002

> Flags: 0x0100 Standard query

Questions: 1

Answer RRs: 0

Authority RRs: 0

Additional RRs: 0

> Queries

> 10.40.102.147.in-addr.arpa: type PTR, class IN

[Response In: 70]

> TRANSUM RTE Data

```

0020  01 01 d0 cc 00 35 00 34 9e 0b 00 02 01 00 00 01  ....5.4...

```

Identification of transaction (dns.id), 2 byte(s) | Packets: 124 · Displayed: 12 (9.7%) · Dropped: 0 (0.0%) | Profile: Default

2.17 Ναι

2.18 1 ερώτηση, 1 εγγραφή RR απαντήσεων, 3 εγγραφές RR επίσημων εξυπηρετητών, 0 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
0.000000	147.102.131.45	DNS	80	147.102.222.210	Standard query 0x7eef A activity.windows.com
0.017214	147.102.222.210	DNS	299	147.102.131.45	Standard query response 0x7eef A activity.windows.com CNAME a...
12.539061	147.102.131.45	DNS	84	147.102.1.1	Standard query 0x0001 PTR 1.1.102.147.in-addr.arpa
0.013448	147.102.1.1	DNS	299	147.102.131.45	Standard query response 0x0001 PTR 1.1.102.147.in-addr.arpa P...
44.600554	147.102.131.45	DNS	86	147.102.1.1	Standard query 0x0002 PTR 10.40.102.147.in-addr.arpa
0.014387	147.102.1.1	DNS	190	147.102.131.45	Standard query response 0x0002 PTR 10.40.102.147.in-addr.arpa...
9.207992	147.102.131.45	DNS	89	147.102.222.210	Standard query 0x1aee A v10.events.data.microsoft.com
0.044172	147.102.222.210	DNS	523	147.102.131.45	Standard query response 0x1aee A v10.events.data.microsoft.co...

Domain Name System (response)

Transaction ID: 0x0002

Flags: 0x8180 Standard query response, No error

Questions: 1

Answer RRs: 1

Authority RRs: 3

Additional RRs: 0

Queries

10.40.102.147.in-addr.arpa: type PTR, class IN

Answers

Authoritative nameservers

[Request In: 69]

0020 83 2d 00 35 d0 cc 00 9c ee b9 00 02 81 80 00 01 ...5...

Flags (dns.flags), 2 byte(s) | Packets: 124 · Displayed: 12 (9.7%) · Dropped: 0 (0.0%) | Profile: Default

2.19 Οχι

2.20 dns.flags.response == 1

2.21 16 διευθύνσεις

2.22 1 ερώτηση

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Protocol	Length	Destination	Info
8	0.000000	147.102.131.45	DNS	75	147.102.7.1	Standard query 0x0005 A www.youtube.com
9	0.018637	147.102.7.1	DNS	541	147.102.131.45	Standard query response 0x0005 A www.youtube.com CNAME yout
24	27.769822	147.102.131.45	DNS	71	147.102.7.1	Standard query 0x0006 AAAA www.cnn.com
25	0.074051	147.102.7.1	DNS	274	147.102.131.45	Standard query response 0x0006 AAAA www.cnn.com CNAME turne

Frame 8: 75 bytes on wire (600 bits), 75 bytes captured (600 bits) on interface \Device\NPF_{50A5BB09-D0AB-46DB-AD4F-BB793E23887D},

Ethernet II, Src: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09), Dst: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09)

Internet Protocol Version 4, Src: 147.102.131.45, Dst: 147.102.7.1

User Datagram Protocol, Src Port: 52255, Dst Port: 53

Domain Name System (query)

Transaction ID: 0x0005

Flags: 0x0100 Standard query

Questions: 1

Answer RRs: 0

Authority RRs: 0

Additional RRs: 0

Queries

[Response In: 9]

TRANSMISSION Data

0000 00 ff 51 a5 bb 09 00 ff 50 a5 bb 09 08 00 45 00 ..Q.....P.....E..

Domain Name System: Protocol | Packets: 32 · Displayed: 4 (12.5%) · Dropped: 0 (0.0%) | Profile: Default

2.23 17 εγγραφές RR απαντήσεων, 4 εγγραφές RR επίσημων εξυπηρετητών, 5 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns.flags.response == 1

No.	Time	Source	Protocol	Length	Destination	Info
9	0.000000	147.102.7.1	DNS	541	147.102.131.45	Standard query response 0x0005 A www.youtube.com CNAME yout
25	27.843873	147.102.7.1	DNS	274	147.102.131.45	Standard query response 0x0006 AAAA www.cnn.com CNAME turne

> Frame 9: 541 bytes on wire (4328 bits), 541 bytes captured (4328 bits) on interface \Device\NPF_{50A5BB09-D0AB-46DB-AD4F-BB793E2388}

> Ethernet II, Src: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09), Dst: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09)

> Internet Protocol Version 4, Src: 147.102.7.1, Dst: 147.102.131.45

> User Datagram Protocol, Src Port: 53, Dst Port: 52255

> Domain Name System (response)

Transaction ID: 0x0005

> Flags: 0x8180 Standard query response, No error

Questions: 1

Answer RRs: 17

Authority RRs: 4

Additional RRs: 5

> Queries

> Answers

> Authoritative nameservers

> Additional records

[Request In: 8]

[Time: 0.018637000 seconds]

0000 00 ff 50 a5 bb 09 00 ff 51 a5 bb 09 08 00 45 00 ..P.....Q.....E..

wireshark_EthernetBLPOE1.pcapng

Packets: 32 · Displayed: 2 (6.3%) · Dropped: 0 (0.0%) Profile: Default

2.24 Οι 16 από αυτές είναι απαντήσεις για τις διευθύνσεις IPv4 του youtube.com και η 17η είναι μεταφέρει το canonical name = youtube-ui.l.google.com (όνομα του εξυπηρετητή ιστού).

2.25 Υπάρχει επειδή μαζί με τις διευθύνσεις IPv4 του youtube.com, η εντολή επιστρέφει και το canonical name του ιστοτόπου

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns.flags.response == 1

No.	Time	Source	Protocol	Length	Destination	Info
9	0.000000	147.102.7.1	DNS	541	147.102.131.45	Standard query response 0x0005 A www.youtube.com CNAME yout
25	27.843873	147.102.7.1	DNS	274	147.102.131.45	Standard query response 0x0006 AAAA www.cnn.com CNAME turne

Questions: 1

Answer RRs: 17

Authority RRs: 4

Additional RRs: 5

> Queries

> Answers

> www.youtube.com: type CNAME, class IN, cname youtube-ui.l.google.com

> youtube-ui.l.google.com: type A, class IN, addr 216.58.205.78

> youtube-ui.l.google.com: type A, class IN, addr 216.58.206.46

> youtube-ui.l.google.com: type A, class IN, addr 216.58.206.78

0000 00 ff 50 a5 bb 09 00 ff 51 a5 bb 09 08 00 45 00 ..P.....Q.....E..

0010 02 0f 0c 40 00 00 3e 11 bd a3 93 66 07 01 93 66 ...@...>...f...f

0020 83 2d 00 35 cc 1f 01 fb c5 fc 00 05 81 80 00 01 ...5.....

0030 00 11 00 04 00 05 03 77 77 77 07 79 6f 75 74 75w ww.youtu

10.2.2.pcapng

Packets: 32 · Displayed: 2 (6.3%) Profile: Default

2.26 Φιλοξενείται από πολλούς υπολογιστές αφού και οι 2 αναζητήσεις που έκανα, κατέληξαν σε πολλές διαφορετικές IPv4.

2.27 2 εγγραφές

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns.flags.response == 1

No.	Time	Source	Protocol	Length	Destination	Info
9	0.000000	147.102.7.1	DNS	541	147.102.131.45	Standard query response 0x0005 A www.youtube.com CNAME yout
25	27.843873	147.102.7.1	DNS	274	147.102.131.45	Standard query response 0x0006 AAAA www.cnn.com CNAME turne

< >

- Flags: 0x8180 Standard query response, No error
- Questions: 1
- Answer RRs: 2
- Authority RRs: 4
- Additional RRs: 4
- Queries
 - www.cnn.com: type AAAA, class IN
- Answers
 - www.cnn.com: type CNAME, class IN, cname turner-tls.map.fastly.net
 - turner-tls.map.fastly.net: type AAAA, class IN, addr 2a04:4e42:39::323
- Authoritative nameservers
 - fastly.net: type NS, class IN, ns ns2.fastly.net
 - fastly.net: type NS, class IN, ns ns3.fastly.net
 - fastly.net: type NS, class IN, ns ns4.fastly.net
 - fastly.net: type NS, class IN, ns ns1.fastly.net
- Additional records
 - ns1.fastly.net: type A, class IN, addr 23.235.32.32
 - ns2.fastly.net: type A, class IN, addr 104.156.80.32

Number of queries in packet (dns.count.queries), 2 byte(s) | Packets: 32 · Displayed: 2 (6.3%) · Dropped: 0 (0.0%) | Profile: Default

2.28 Περιλαμβάνει 4 εγγραφές.

2.29 4 και είναι τύπου A

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns.flags.response == 1

No.	Time	Source	Protocol	Length	Destination	Info
9	0.000000	147.102.7.1	DNS	541	147.102.131.45	Standard query response 0x0005 A www.youtube.com CNAME yout
25	27.843873	147.102.7.1	DNS	274	147.102.131.45	Standard query response 0x0006 AAAA www.cnn.com CNAME turne

< >

- Additional RRs: 4
- Queries
 - www.cnn.com: type AAAA, class IN
- Answers
 - www.cnn.com: type CNAME, class IN, cname turner-tls.map.fastly.net
 - turner-tls.map.fastly.net: type AAAA, class IN, addr 2a04:4e42:39::323
- Authoritative nameservers
 - fastly.net: type NS, class IN, ns ns2.fastly.net
 - fastly.net: type NS, class IN, ns ns3.fastly.net
 - fastly.net: type NS, class IN, ns ns4.fastly.net
 - fastly.net: type NS, class IN, ns ns1.fastly.net
- Additional records
 - ns1.fastly.net: type A, class IN, addr 23.235.32.32
 - ns2.fastly.net: type A, class IN, addr 104.156.80.32
 - ns3.fastly.net: type A, class IN, addr 23.235.36.32
 - ns4.fastly.net: type A, class IN, addr 104.156.84.32

[Request In: 24]
[Time: 0.074051000 seconds]

Number of additional records in packet (dns.count.add_rr), 2 byte(s) | Packets: 32 · Displayed: 2 (6.3%) · Dropped: 0 (0.0%) | Profile: Default

2.30 Είναι ο ns2.fastly.net με IPv4: 104.156.80.32

2.31 1 ερώτηση, 2 εγγραφές RR απαντήσεων, 5 εγγραφές RR επίσημων εξυπηρετητών, 10 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Protocol	Length	Destination	Info
1	0.000000	147.102.131.45	DNS	71	147.102.1.1	Standard query 0x0002 ANY www.ntua.gr
2	0.012094	147.102.1.1	DNS	451	147.102.131.45	Standard query response 0x0002 ANY www.ntua.gr A 147.102.224.101
6	7.239435	147.102.131.45	DNS	73	147.102.1.1	Standard query 0x0003 SOA cs1ab.ntua.gr
7	0.020422	147.102.1.1	DNS	365	147.102.131.45	Standard query response 0x0003 SOA cs1ab.ntua.gr SOA danaos
32	7.896547	147.102.131.45	DNS	74	147.102.1.1	Standard query 0x0004 CNAME www.cn.ntua.gr
33	0.016735	147.102.1.1	DNS	301	147.102.131.45	Standard query response 0x0004 CNAME www.cn.ntua.gr CNAME w
35	6.670134	147.102.131.45	DNS	72	147.102.1.1	Standard query 0x0005 MX elab.ntua.gr
36	0.035933	147.102.1.1	DNS	324	147.102.131.45	Standard query response 0x0005 MX elab.ntua.gr MX 20 ulysses

Domain Name System (response)

Transaction ID: 0x0002

Flags: 0x8180 Standard query response, No error

Questions: 1

Answer RRs: 2

Authority RRs: 5

Additional RRs: 10

Queries

- www.ntua.gr: type ANY, class IN

Answers

- www.ntua.gr: type A, class IN, addr 147.102.224.101
- www.ntua.gr: type AAAA, class IN, addr 2001:648:2000:329::101

Domain Name System (dns), 409 byte(s) | Packets: 40 · Displayed: 8 (20.0%) · Dropped: 0 (0.0%) | Profile: Default

Οι πληροφορίες που περιέχουν

Wireshark · Packet 2 · Ethernet (host 147.102.131.45)

Answers

- www.ntua.gr: type A, class IN, addr 147.102.224.101
- www.ntua.gr: type AAAA, class IN, addr 2001:648:2000:329::101

Authoritative nameservers

- ntua.gr: type NS, class IN, ns achilles.noc.ntua.gr
- ntua.gr: type NS, class IN, ns ulysses.noc.ntua.gr
- ntua.gr: type NS, class IN, ns sns1.grnet.gr
- ntua.gr: type NS, class IN, ns sns0.grnet.gr
- ntua.gr: type NS, class IN, ns diomedes.noc.ntua.gr

Additional records

- sns0.grnet.gr: type A, class IN, addr 83.212.5.89
- sns0.grnet.gr: type AAAA, class IN, addr 2001:648:2ffc:203::89
- sns1.grnet.gr: type A, class IN, addr 83.212.5.22
- sns1.grnet.gr: type AAAA, class IN, addr 2001:648:2ffc:112::2
- ulysses.noc.ntua.gr: type A, class IN, addr 147.102.222.230
- ulysses.noc.ntua.gr: type AAAA, class IN, addr 2001:648:2000:de::230
- achilles.noc.ntua.gr: type A, class IN, addr 147.102.222.210
- achilles.noc.ntua.gr: type AAAA, class IN, addr 2001:648:2000:de::210
- diomedes.noc.ntua.gr: type A, class IN, addr 147.102.222.220
- diomedes.noc.ntua.gr: type AAAA, class IN, addr 2001:648:2000:de::220

[Request In: 1]

[Time: 0.012094000 seconds]

2.32 1 εγγραφή RR απαντήσεων, 4 εγγραφές RR επίσημων εξυπηρετητών, 7 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Protocol	Length	Destination	Info
1	0.000000	147.102.131.45	DNS	71	147.102.1.1	Standard query 0x0002 ANY www.ntua.gr
2	0.012094	147.102.1.1	DNS	451	147.102.131.45	Standard query response 0x0002 ANY www.ntua.gr A 147.102.22
6	7.239435	147.102.131.45	DNS	73	147.102.1.1	Standard query 0x0003 SOA cslab.ntua.gr
7	0.020422	147.102.1.1	DNS	365	147.102.131.45	Standard query response 0x0003 SOA cslab.ntua.gr SOA danaos
32	7.896547	147.102.131.45	DNS	74	147.102.1.1	Standard query 0x0004 CNAME www.cn.ntua.gr
33	0.016735	147.102.1.1	DNS	301	147.102.131.45	Standard query response 0x0004 CNAME www.cn.ntua.gr CNAME w
35	6.670134	147.102.131.45	DNS	72	147.102.1.1	Standard query 0x0005 MX elab.ntua.gr
36	0.035933	147.102.1.1	DNS	324	147.102.131.45	Standard query response 0x0005 MX elab.ntua.gr MX 20 ulyse

> Ethernet II, Src: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09), Dst: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09)
 > Internet Protocol Version 4, Src: 147.102.1.1, Dst: 147.102.131.45
 > User Datagram Protocol, Src Port: 53, Dst Port: 60660
 > Domain Name System (response)
 Transaction ID: 0x0003
 > Flags: 0x8180 Standard query response, No error
 Questions: 1
 Answer RRs: 1
 Authority RRs: 4
 Additional RRs: 7
 > Queries
 > cslab.ntua.gr: type SOA, class IN

Frame (frame), 365 byte(s) Packets: 40 · Displayed: 8 (20.0%) · Dropped: 0 (0.0%) Profile: Default

2.33 Όνομα επίσημου εξυπηρετητή DNS: primary name server = danaos.cslab.ece.ntua.gr,
 responsible mail addr = root.danaos.cslab.ece.ntua.gr

2.34 Οι :

cslab.ntua.gr nameserver = danaos.cslab.ece.ntua.gr (primary)

cslab.ntua.gr nameserver = diomedes.noc.ntua.gr

cslab.ntua.gr nameserver = achilles.noc.ntua.gr

cslab.ntua.gr nameserver = ulysses.noc.ntua.gr

danaos.cslab.ece.ntua.gr internet address = 147.102.3.1

ulysses.noc.ntua.gr internet address = 147.102.222.230

ulysses.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::230

achilles.noc.ntua.gr internet address = 147.102.222.210

achilles.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::210

diomedes.noc.ntua.gr internet address = 147.102.222.220

diomedes.noc.ntua.gr AAAA IPv6 address = 2001:648:2000:de::220

2.35 1 ερώτηση, 1 εγγραφή RR απαντήσεων, 3 εγγραφές RR επίσημων εξυπηρετητών, 6 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Protocol	Length	Destination	Info
1	0.000000	147.102.131.45	DNS	71	147.102.1.1	Standard query 0x0002 ANY www.ntua.gr
2	0.012094	147.102.1.1	DNS	451	147.102.131.45	Standard query response 0x0002 ANY www.ntua.gr A 147.102.22
6	7.239435	147.102.131.45	DNS	73	147.102.1.1	Standard query 0x0003 SOA cs1ab.ntua.gr
7	0.020422	147.102.1.1	DNS	365	147.102.131.45	Standard query response 0x0003 SOA cs1ab.ntua.gr SOA danaos
32	7.896547	147.102.131.45	DNS	74	147.102.1.1	Standard query 0x0004 CNAME www.cn.ntua.gr
33	0.016735	147.102.1.1	DNS	301	147.102.131.45	Standard query response 0x0004 CNAME www.cn.ntua.gr CNAME w
35	6.670134	147.102.131.45	DNS	72	147.102.1.1	Standard query 0x0005 MX elab.ntua.gr
36	0.035933	147.102.1.1	DNS	324	147.102.131.45	Standard query response 0x0005 MX elab.ntua.gr MX 20 ulysses

> Ethernet II, Src: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09), Dst: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09)
 > Internet Protocol Version 4, Src: 147.102.1.1, Dst: 147.102.131.45
 > User Datagram Protocol, Src Port: 53, Dst Port: 60661
 > Domain Name System (response)
 Transaction ID: 0x0004
 > Flags: 0x8180 Standard query response, No error
 Questions: 1
 Answer RRs: 1
 Authority RRs: 3
 Additional RRs: 6
 > Queries
 > www.cn.ntua.gr: type CNAME, class IN

Number of queries in packet (dns.count.queries), 2 byte(s) | Packets: 40 · Displayed: 8 (20.0%) · Dropped: 0 (0.0%) | Profile: Default

canonical name = www.cn.ece.ntua.gr

2.36 1 ερώτηση, 3 εγγραφές RR απαντήσεων, 3 εγγραφές RR επίσημων εξυπηρετητών, 6 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

No.	Time	Source	Protocol	Length	Destination	Info
1	0.000000	147.102.131.45	DNS	71	147.102.1.1	Standard query 0x0002 ANY www.ntua.gr
2	0.012094	147.102.1.1	DNS	451	147.102.131.45	Standard query response 0x0002 ANY www.ntua.gr A 147.102.22
6	7.239435	147.102.131.45	DNS	73	147.102.1.1	Standard query 0x0003 SOA cs1ab.ntua.gr
7	0.020422	147.102.1.1	DNS	365	147.102.131.45	Standard query response 0x0003 SOA cs1ab.ntua.gr SOA danaos
32	7.896547	147.102.131.45	DNS	74	147.102.1.1	Standard query 0x0004 CNAME www.cn.ntua.gr
33	0.016735	147.102.1.1	DNS	301	147.102.131.45	Standard query response 0x0004 CNAME www.cn.ntua.gr CNAME w
35	6.670134	147.102.131.45	DNS	72	147.102.1.1	Standard query 0x0005 MX elab.ntua.gr
36	0.035933	147.102.1.1	DNS	324	147.102.131.45	Standard query response 0x0005 MX elab.ntua.gr MX 20 ulysses

> Domain Name System (response)
 Transaction ID: 0x0005
 > Flags: 0x8180 Standard query response, No error
 Questions: 1
 Answer RRs: 3
 Authority RRs: 3
 Additional RRs: 6
 > Queries
 > elab.ntua.gr: type MX, class IN
 > Answers
 > elab.ntua.gr: type MX, class IN, preference 20, mx ulysses.noc.ntua.gr
 > elab.ntua.gr: type MX, class IN, preference 20, mx achilles.noc.ntua.gr
 > elab.ntua.gr: type MX, class IN, preference 20, mx diomedes.noc.ntua.gr

Number of queries in packet (dns.count.queries), 2 byte(s) | Packets: 40 · Displayed: 8 (20.0%) · Dropped: 0 (0.0%) | Profile: Default

Έχει 3 ισότιμους εξυπηρετητές ηλεκτρονικού ταχυδρομείου:

elab.ntua.gr MX preference = 20, mail exchanger = ulysses.noc.ntua.gr

elab.ntua.gr MX preference = 20, mail exchanger = achilles.noc.ntua.gr

elab.ntua.gr MX preference = 20, mail exchanger = diomedes.noc.ntua.gr

2.37 Έγινε 1 ερώτηση DNS και ελήφθησαν 2 απαντήσεις, όλα με πρωτόκολλο TCP

(Κάπου κολλάει το wireshark και δεν μου εμφανίζει την ερώτηση...)

2.38 Για την ερώτηση: Source: Port 61004, Destination: Port 53

Απόκριση 1,2: Source: Port 53, Destination: Port 61004

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
1 0.000000	147.102.131.45	DNS	74	147.102.222.210	Standard query 0xac8d A x1.c.lencr.org
2 0.016483	147.102.222.210	DNS	503	147.102.131.45	Standard query response 0xac8d A x1.c.lencr.org CNAME crl.roo...
10 6.119841	147.102.222.210	DNS	140	147.102.131.45	Standard query response 0x0003 AXFR planetlab.ntua.gr SOA ach...
11 0.009537	147.102.222.210	DNS	529	147.102.131.45	Standard query response 0x0003 SOA achilles.noc.ntua.gr

> Frame 10: 140 bytes on wire (1120 bits), 140 bytes captured (1120 bits) on interface \Device\NPF_{50A5BB09-D0AB-46DB-AD4F-BB793E2} ^

> Ethernet II, Src: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09), Dst: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09)

> Internet Protocol Version 4, Src: 147.102.222.210, Dst: 147.102.131.45

> Transmission Control Protocol, Src Port: 53, Dst Port: 61004, Seq: 1, Ack: 40, Len: 86

> Domain Name System (response)

Length: 84

Transaction ID: 0x0003

> Flags: 0x8480 Standard query response, No error

Questions: 1

0000 00 ff 50 a5 bb 09 00 ff 51 a5 bb 09 08 00 45 00 ..P.... Q....E-

0010 00 7e 00 00 40 00 3e 06 b3 ad 93 66 de d2 93 66 ...@.>...f...f

0020 83 2d 00 35 ee 4c e1 be 44 c0 d3 69 35 0e 50 18 --.5.L.. D..i5.P-

0030 04 0d 06 5b 00 00 00 54 00 03 84 80 00 01 00 01 ...[...T

wireshark_EthernetI3QAF1.pcapng

Packets: 16 · Displayed: 4 (25.0%) · Dropped: 0 (0.0%) Profile: Default

2.39 48 bytes

2.40 Είναι τύπου AXFR και σημαίνει να μεταφέρει όλο το αρχείο περιοχής από τον πρωτεύων εξυπηρετητή στον δευτερεύων

2.41 1^η Απόκριση: Μήκος 140 bytes και μεταφέρει ένα μήνυμα DNS.

2^η Απόκριση: Μήκος 529 bytes και μεταφέρει 8 μηνύματα DNS

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
2 0.016483	147.102.222.210	DNS	503	147.102.131.45	Standard query response 0xac8d A x1.c.lencr.org CNAME crl...
10 6.119841	147.102.222.210	DNS	140	147.102.131.45	Standard query response 0x0003 AXFR planetlab.ntua.gr SOA
11 0.009537	147.102.222.210	DNS	529	147.102.131.45	Standard query response 0x0003 SOA achilles.noc.ntua.gr

> Frame 11: 529 bytes on wire (4232 bits), 529 bytes captured (4232 bits) on interface \Device\NPF_{50A5BB09-D0AB-46DB-AD4F-BB793E238}

> Ethernet II, Src: 00:ff:51:a5:bb:09 (00:ff:51:a5:bb:09), Dst: 00:ff:50:a5:bb:09 (00:ff:50:a5:bb:09)

> Internet Protocol Version 4, Src: 147.102.222.210, Dst: 147.102.131.45

> Transmission Control Protocol, Src Port: 53, Dst Port: 61004, Seq: 87, Ack: 40, Len: 475

> Domain Name System (response)

> Domain Name System (response)

> Domain Name System (response)

> Domain Name System (response)

> Domain Name System (response)

> Domain Name System (response)

> Domain Name System (response)

> Domain Name System (response)

> Domain Name System (response)

0000 00 ff 50 a5 bb 09 00 ff 51 a5 bb 09 08 00 45 00 ..P.... Q....E-

0010 02 03 00 00 40 00 3e 06 b2 28 93 66 de d2 93 66 ...@.>...f...f

0020 83 2d 00 35 ee 4c e1 be 45 16 d3 69 35 0e 50 18 --.5.L.. E..i5.P-

0030 04 0d 08 a7 00 00 00 37 00 03 84 80 00 00 00 017

wireshark_EthernetI3QAF1.pcapng

Packets: 16 · Displayed: 4 (25.0%) · Dropped: 0 (0.0%) Profile: Default

2.42 Υποθέτω πως θα έχουν το ίδιο Transaction ID με την ερώτηση (την οποία για κάποιο λόγο ενώ προσπαθησα 10 φορές δεν καταγράφει το wireshark)

2.43 1^ο μήνυμα DNS response: 1 εγγραφή RR απαντήσεων, 0 εγγραφές RR επίσημων εξυπηρετητών, 0 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
2 0.016483	147.102.222.210	DNS	503	147.102.131.45	Standard query response 0xac8d A x1.c.lencr.org CNAME crl
10 6.119841	147.102.222.210	DNS	140	147.102.131.45	Standard query response 0x0003 AXFR planetlab.ntua.gr SOA
11 0.009537	147.102.222.210	DNS	529	147.102.131.45	Standard query response 0x0003 SOA achilles.noc.ntua.gr

> Transmission Control Protocol, Src Port: 53, Dst Port: 61004, Seq: 1, Ack: 40, Len: 86

▼ Domain Name System (response)

Length: 84
Transaction ID: 0x0003

> Flags: 0x8480 Standard query response, No error
Questions: 1
Answer RRs: 1
Authority RRs: 0
Additional RRs: 0

▼ Queries

> planetlab.ntua.gr: type AXFR, class IN

> Answers
[Unsolicited: True]

```

0030  04 0d 06 5b 00 00 00 54 00 03 84 80 00 01 00 01  ...[...T .....
0040  00 00 00 00 09 70 6c 61 6e 65 74 6c 61 62 04 6e  ....pla netlab.n
0050  74 75 61 02 67 72 00 00 fc 00 01 c0 0c 00 06 00  tua.gr... .....
0060  01 00 01 51 80 00 25 08 61 63 68 69 6c 6c 65 73  ...Q...% achilles

```

Domain Name System (dns), 86 byte(s) | Packets: 16 · Displayed: 4 (25.0%) · Dropped: 0 (0.0%) | Profile: Default

2^ο μήνυμα DNS response: Καθένα από τα 8 περιέχει 1 εγγραφή RR απαντήσεων, 0 εγγραφές RR επίσημων εξυπηρετητών, 0 επιπρόσθετες εγγραφές RR

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dns

Time	Source	Protocol	Length	Destination	Info
2 0.016483	147.102.222.210	DNS	503	147.102.131.45	Standard query response 0xac8d A x1.c.lencr.org CNAME crl
10 6.119841	147.102.222.210	DNS	140	147.102.131.45	Standard query response 0x0003 AXFR planetlab.ntua.gr SOA
11 0.009537	147.102.222.210	DNS	529	147.102.131.45	Standard query response 0x0003 SOA achilles.noc.ntua.gr

> Flags: 0x8480 Standard query response, No error
Questions: 0
Answer RRs: 1
Authority RRs: 0
Additional RRs: 0

> Answers
[Unsolicited: True]

▼ Domain Name System (response)

Length: 78
Transaction ID: 0x0003

> Flags: 0x8480 Standard query response, No error
Questions: 0
Answer RRs: 1
Authority RRs: 0

```

0030  04 0d 08 a7 00 00 00 37 00 03 84 80 00 00 00 01  ....7 .....
0040  00 00 00 00 09 70 6c 61 6e 65 74 6c 61 62 04 6e  ....pla netlab.n
0050  74 75 61 02 67 72 00 00 02 00 01 00 01 51 80 00  tua.gr... .....Q...
0060  0e 07 75 6c 79 73 73 65 73 03 6e 6f 63 c0 16 00  ..ulyse s.noc...

```

Domain Name System (dns), 57 byte(s) | Packets: 16 · Displayed: 4 (25.0%) · Dropped: 0 (0.0%) | Profile: Default

2.44 Επειδή τα πακέτα που στέλνονται ξεπερνούν τα 512 bytes τότε χρησιμοποιείται το πρωτόκολλο TCP

2.45 To port 53