

Компьютерные сети. Лаба 4

Сети. Лаба 4.

1. а) www.osaka-u.ac.jp Address: 133.1.138.1

б) www.york.ac.uk canonical name =
d3dk7g5oxf9vtv.cloudfront.net nameserver = ns-1019.awsdns-63.net
d3dk7g5oxf9vtv.cloudfront.net nameserver = ns-1346.awsdns-40.org
d3dk7g5oxf9vtv.cloudfront.net nameserver = ns-1734.awsdns-24.co.uk
d3dk7g5oxf9vtv.cloudfront.net nameserver = ns-432.awsdns-54.com

в) www.google.com

Addresses: 2a00:1450:4010:c0b::67

2a00:1450:4010:c0b::63

2a00:1450:4010:c0b::68

2a00:1450:4010:c0b::93

173.194.222.99

173.194.222.103

173.194.222.106

173.194.222.105

173.194.222.104

173.194.222.147

www.spbu.ru имеет один IP адрес: Address: 82.202.190.112.

2. а) UDP

б) Destination Port: 53

в) Адрес локального DNS сервера: 192.168.0.1, совпадает с IP адресом, на который был отправлен DNS запрос.

г) Ответов нет

Queries

www.ietf.org: type A, class IN

Name: www.ietf.org

[Name Length: 12]

[Label Count: 3]

Type: A (Host Address) (1)

Class: IN (0x0001)

д) 3 ответа:

Answers

www.ietf.org: type CNAME, class IN, cname www.ietf.org.cdn.cloudflare.net

Name: www.ietf.org

Type: CNAME (Canonical NAME for an alias) (5)

Class: IN (0x0001)

Time to live: 1799 (29 minutes, 59 seconds)

Data length: 33

CNAME: www.ietf.org.cdn.cloudflare.net

www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.16.44.99

Name: www.ietf.org.cdn.cloudflare.net

Type: A (Host Address) (1)

Class: IN (0x0001)

Time to live: 300 (5 minutes)

Data length: 4

Address: 104.16.44.99

www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.16.45.99

Name: www.ietf.org.cdn.cloudflare.net

Type: A (Host Address) (1)

Class: IN (0x0001)

Time to live: 300 (5 minutes)

Data length: 4

Address: 104.16.45.99

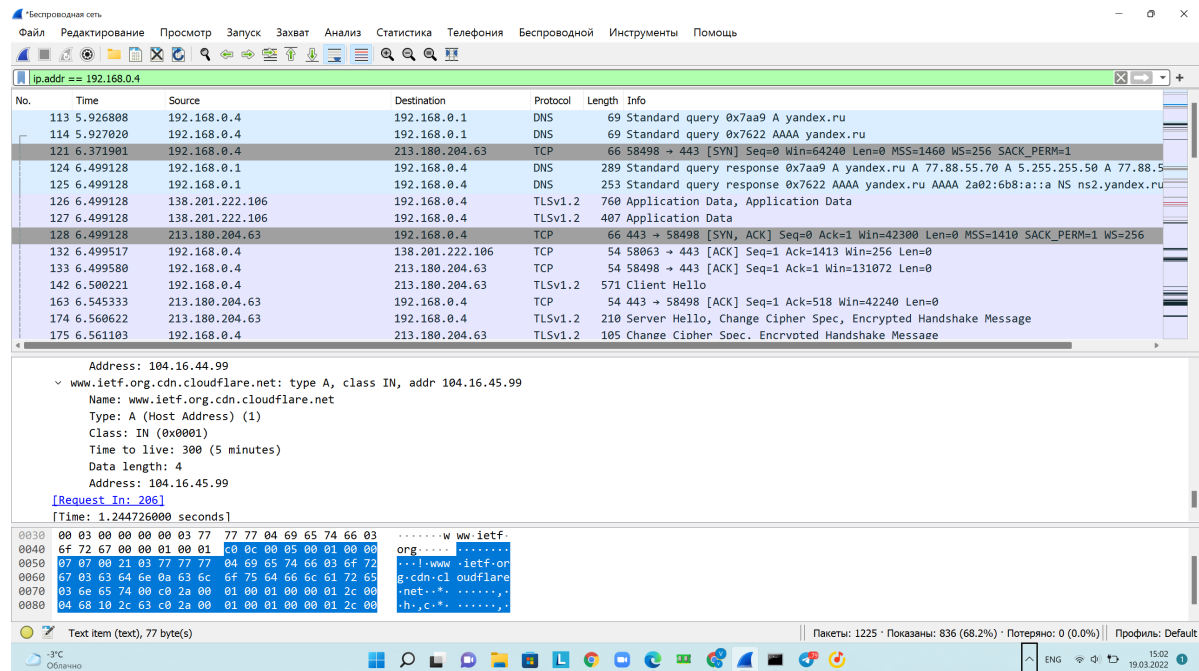
е) IP - адрес 104.16.44.99 содержался в ответе на DNS запрос

ж) 327 9.395119 192.168.0.4 192.168.0.1 DNS 78 Standard query

0x930b A analytics.ietf.org

328 9.395233 192.168.0.4 192.168.0.1 DNS 78 Standard query 0x77db
AAAA analytics.ietf.org

Перед загрузкой картинок хост делает эти два dns запроса.



3. а. Запрос DNS: Destination Port: 53, ответ на запрос DNS: Source Port: 53.

б. Destination Address: fe80::1, да, совпадает с адресом локального DNS сервера.

в. Questions: 1

Answer RRs: 0

Queries:

www.spbu.ru: type AAAA, class IN

Name: www.spbu.ru

[Name Length: 11]

[Label Count: 3]

Type: AAAA (IPv6 Address) (28)

Class: IN (0x0001)

г. Answer RRs: 1

Answers

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www.spbu.ru: type CNAME, class IN, cname spbu.ru
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Name: www.spbu.ru

Type: CNAME (Canonical NAME for an alias) (5)

Class: IN (0x0001)

Time to live: 3600 (1 hour)

Data length: 2

CNAME: spbu.ru

The screenshot displays the Wireshark interface with a packet capture of DNS traffic. The top menu bar includes File, Editing, View, Packets, Filters, Statistics, Tools, Help, and a search bar. The top toolbar contains icons for file operations, packet list, packet details, packet bytes, and network analysis tools.

The packet list pane shows a series of DNS packets. The selected packet is a DNS query response (packet 27) from fe80::1 to fe80::5954:cb09:c269:c516, containing a standard query response for the domain www.spbu.ru. The packet details pane shows the structure of the DNS message, including the header, question, answer, and authority sections. The answer section is expanded, showing the canonical name (www.spbu.ru) and the authoritative nameservers.

The packet bytes pane shows the raw data of the selected packet, including the DNS header, question, answer, and authority sections. The answer section is expanded, showing the canonical name (www.spbu.ru) and the authoritative nameservers.

The bottom status bar shows the current packet count (64), the percentage of packets shown (9.4%), the percentage of packets lost (0.0%), and the current profile (Default).

4. a. Destination Address: fe80::1, да, совпадает с адресом локального DNS сервера.

6. Ответов в запросе нет.

Queries

spbu.ru: type NS, class IN

Name: spbu.ru

[Name Length: 7]

[Label Count: 2]

Type: NS (authoritative Name Server) (2)

Class: IN (0x0001)

- B.**

Answers:

spbu.ru: type NS, class IN, ns ns.pu.ru

Name: spbu.ru

Type: NS (authoritative Name Server) (2)

Class: IN (0x0001)

Time to live: 3600 (1 hour)

Data length: 8

Name Server: ns.pu.ru

spbu.ru: type NS, class IN, ns ns2.pu.ru

Name: spbu.ru

Type: NS (authoritative Name Server) (2)

Class: IN (0x0001)

Time to live: 3600 (1 hour)

Data length: 6

Name Server: ns2.pu.ru

spbu.ru: type NS, class IN, ns ns7.spbu.ru

Name: spbu.ru

Type: NS (authoritative Name Server) (2)

Class: IN (0x0001)

Time to live: 3600 (1 hour)

Data length: 6

Name Server: ns7.spbu.ru

В поле Additional records есть адрес сервера ns7.spbu.ru:

Additional records

ns7.spbu.ru: type A, class IN, addr 185.44.15.195

Name: ns7.spbu.ru

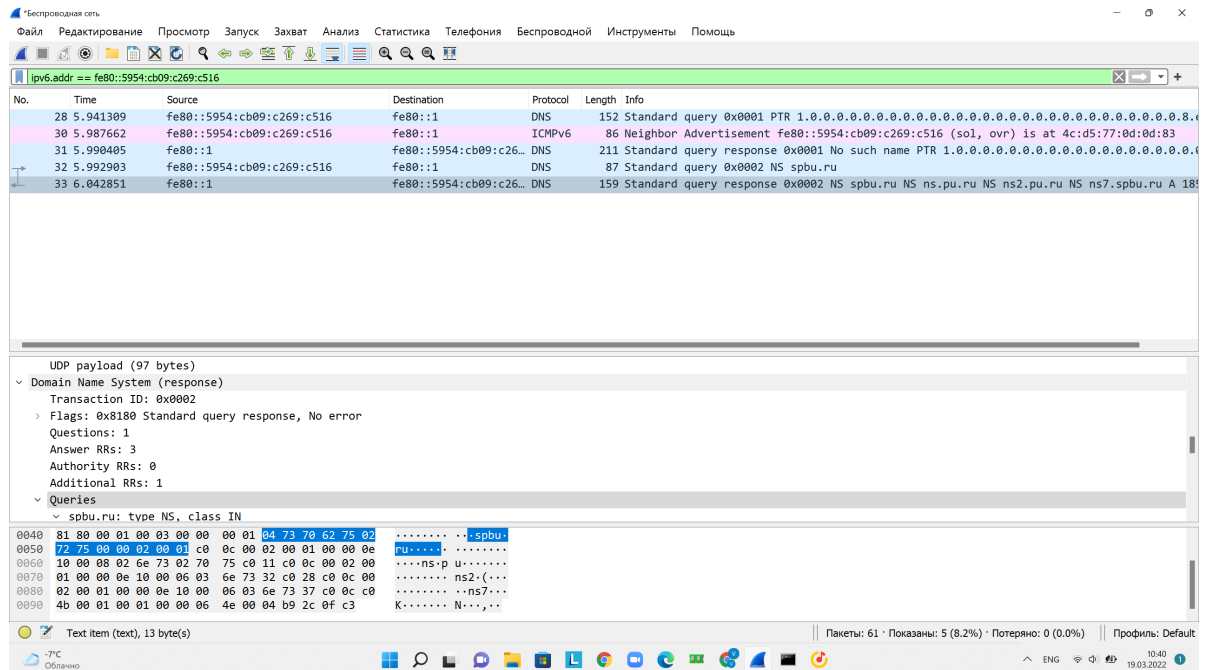
Type: A (Host Address) (1)

Class: IN (0x0001)

Time to live: 1614 (26 minutes, 54 seconds)

Data length: 4

Address: 185.44.15.195



5. а. Destination Address: fe80::1, да, совпадает с адресом локального DNS сервера.

б. Ответов в запросе нет.

Queries

ns2.pu.ru: type AAAA, class IN

Name: ns2.pu.ru

[Name Length: 9]

[Label Count: 3]

Type: AAAA (IPv6 Address) (28)

Class: IN (0x0001)

в. 1 ответ.

Answers

ns2.pu.ru: type A, class IN, addr 195.70.196.210

Name: ns2.pu.ru

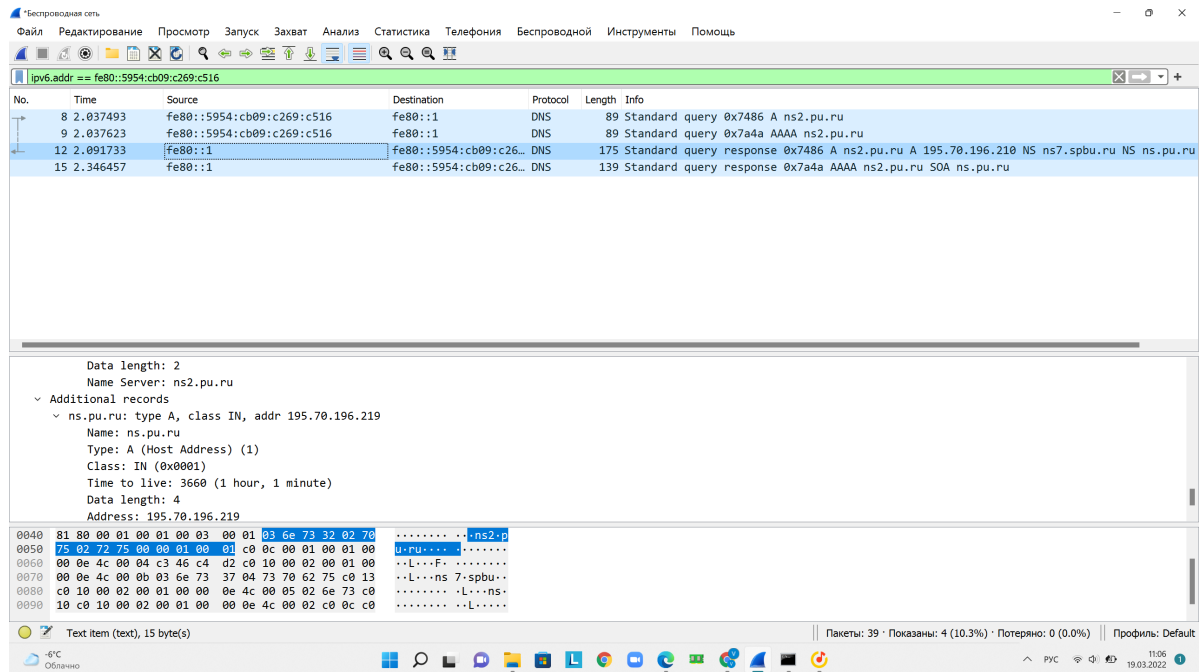
Type: A (Host Address) (1)

Class: IN (0x0001)

Time to live: 3660 (1 hour, 1 minute)

Data length: 4

Address: 195.70.196.210



6. а) База данных whois содержит регистрационные данные о владельцах доменных имён, IP-адресов и автономных систем.

б) DNS сервер: ns.pu.ru, имя: pu.ru

DNS сервер: ns1.sorbonne.fr, имя: sorbonne.fr

whois сервис: reg.ru

в)

```
C:\Users\Alex>nslookup 192.168.0.4 fe80::1
DNS request timed out.
    timeout was 2 seconds.
Server: UnKnown
Address: fe80::1

Name: laptop-8n9v1n1e
Address: 192.168.0.4

C:\Users\Alex>nslookup pu.ru ns.pu.ru
Server: ns.pu.ru
Address: 195.70.196.219

Name: pu.ru
Address: 195.70.219.99

C:\Users\Alex>nslookup sorbonne.fr ns1.sorbonne.fr
Server: ns1.sorbonne.fr
Address: 195.220.107.3

Name: sorbonne.fr
Address: 195.220.107.3

C:\Users\Alex>
```