Wireshark

Захват и анализ Ethernet-кадров


```
630 9.650054    IntelCor_99:0d:6d    TP-Link_4a:ce:99    0x0800    66 IPv4
631 9.650202    IntelCor_99:0d:6d    TP-Link_4a:ce:99    0x0800   564 IPv4
632 9.657487    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800   264 IPv4
633 9.676855    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800   266 IPv4
634 9.702488    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800   261 IPv4
635 9.722895    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800   262 IPv4
636 9.739146    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800   257 IPv4
637 9.758506    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800   248 IPv4
638 9.777754    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    66 IPv4
639 9.777814    IntelCor_99:0d:6d    TP-Link_4a:ce:99    0x0800    54 IPv4

> Frame 631: 564 bytes on wire (4512 bits), 564 bytes captured (4512 bits) on interface \Device\NPF_{7BD2C2D4-8B0A-4EFA-A9C9-CA42812E314C}, id 0
v Ethernet II, Src: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d), Dst: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
    > Destination: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
    > Source: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
      Type: IPv4 (0x0800)
> Data (550 bytes)
```

1. b4:6b:fc:99:0d:6d
2. IntelCor


```
645 9.784297    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800   1514 IPv4
646 9.784741    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    535 IPv4
647 9.784766    IntelCor_99:0d:6d    TP-Link_4a:ce:99    0x0800     54 IPv4
648 9.799324    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    248 IPv4
649 9.820322    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    246 IPv4
650 9.840843    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    238 IPv4
651 9.861189    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    265 IPv4
652 9.868332    IntelCor_99:0d:6d    TP-Link_4a:ce:99    0x0800    510 IPv4
653 9.881786    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    248 IPv4
654 9.883638    IntelCor_99:0d:6d    TP-Link_4a:ce:99    0x0800    319 IPv4
655 9.897298    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    262 IPv4
656 9.917412    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800    251 IPv4
657 9.924074    TP-Link_4a:ce:99     IntelCor_99:0d:6d   0x0800     54 IPv4

> Frame 646: 535 bytes on wire (4280 bits), 535 bytes captured (4280 bits) on interface \Device\NPF_{7BD2C2D4-8B0A-4EFA-A9C9-CA42812E314C}, id 0
v Ethernet II, Src: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99), Dst: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
    > Destination: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
    > Source: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
      Type: IPv4 (0x0800)
> Data (521 bytes)
```

3. c0:06:c3:4a:ce:99, TP-Link
4. b4:6b:fc:99:0d:6d, совпадает с Ethernet-адресс моего компьютера

ARP-протокол

```
         No.    Time         Source              Destination         Protocol    Length   Info
         148 1.340772     IntelCor_99:0d:6d    Broadcast            ARP          42 Who has 192.168.0.1? Tell 192.168.0.103
         149 1.341575     TP-Link_4a:ce:99     IntelCor_99:0d:6d    ARP          42 192.168.0.1 is at c0:06:c3:4a:ce:99
```

```
> Frame 148: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface \Device\NPF_{7BD2C2D4-8B0A-4EFA-A9C9-CA42812E314C}, id 0
∨ Ethernet II, Src: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
   > Destination: Broadcast (ff:ff:ff:ff:ff:ff)
   > Source: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
     Type: ARP (0x0806)
∨ Address Resolution Protocol (request)
     Hardware type: Ethernet (1)
     Protocol type: IPv4 (0x0800)
     Hardware size: 6
     Protocol size: 4
     Opcode: request (1)
     Sender MAC address: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
     Sender IP address: 192.168.0.103
     Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
     Target IP address: 192.168.0.1
```

1. Source: b4:6b:fc:99:0d:6d, Destination: ff:ff:ff:ff:ff:ff
2. Содержится IP-адресс отправителя
3. Поле в ARP Target MAC address
4. Поле в ARP Sender MAC address

```
         148 1.340772     IntelCor_99:0d:6d    Broadcast            ARP          42 Who has 192.168.0.1? Tell 192.168.0.103
         149 1.341575     TP-Link_4a:ce:99     IntelCor_99:0d:6d    ARP          42 192.168.0.1 is at c0:06:c3:4a:ce:99
```

```
> Frame 149: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface \Device\NPF_{7BD2C2D4-8B0A-4EFA-A9C9-CA42812E314C}, id 0
∨ Ethernet II, Src: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99), Dst: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
   > Destination: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
   > Source: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
     Type: ARP (0x0806)
∨ Address Resolution Protocol (reply)
     Hardware type: Ethernet (1)
     Protocol type: IPv4 (0x0800)
     Hardware size: 6
     Protocol size: 4
     Opcode: reply (2)
     Sender MAC address: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
     Sender IP address: 192.168.0.1
     Target MAC address: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)
     Target IP address: 192.168.0.103
```

Программирование

Rest Service

POST http://127.0.0.1:8080/auth/RegisterUser

Params | Authorization | Headers (9) | Body ● | Pre-request Script | Tests | Settings

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL JSON

```
1  {
2  ····"email": "snob-1432e@mail.ru",
3  ····"password": "123456789"
4  }
```

Body Cookies Headers (3) Test Results

Pretty Raw Preview Visualize Text

```
1  User registered successful
```

GET http://127.0.0.1:8080/auth/SignIn

Params | Authorization | Headers (9) | Body ● | Pre-request Script | Tests | Settings

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL JSON

```
1  {
2  ····"email": "snob-1432e@mail.ru",
3  ····"password": "123456789"
4  }
```

Body Cookies Headers (3) Test Results

Pretty Raw Preview Visualize Text

```
1  Sign in successful with token 1dc44b2c-28f1-400d-911d-bd817253ef20
```

GET http://127.0.0.1:8080/product/

Params | Authorization | Headers (9) | Body ● | Pre-request Script | Tests | Settings

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL JSON

```
1  {
2  ····
3  }
```

Body Cookies Headers (3) Test Results

Pretty Raw Preview Visualize JSON

```
1  [
2      {
3          "name": "Shared product",
4          "id": "bc9586ad-0e4a-4e23-9efa-562ad58ad47e"
5      },
6      {
7          "name": "Shared product 2",
8          "id": "4d057ed5-10d2-4641-bdd3-1b9e1a0bd03c"
9      }
10 ]
```

GET http://127.0.0.1:8080/product/

Params | Authorization | Headers (9) | Body ● | Pre-request Script | Tests | Settings

○ none ○ form-data ○ x-www-form-urlencoded ● raw ○ binary ○ GraphQL JSON

```
1  {
2  ····"token": "1dc44b2c-28f1-400d-911d-bd817253ef20"
3  }
```

Body Cookies Headers (3) Test Results

Pretty Raw Preview Visualize JSON

```
1  [
2      {
3          "name": "Shared product",
4          "id": "bc9586ad-0e4a-4e23-9efa-562ad58ad47e"
5      },
6      {
7          "name": "Shared product 2",
8          "id": "4d057ed5-10d2-4641-bdd3-1b9e1a0bd03c"
9      },
10     {
11         "name": "Product only for registered",
12         "id": "d3c4e0ce-11ee-454b-93cf-149cf49d7c32",
13         "onlyForRegistered": true
14     }
15 ]
```

ServerKt

```
D:\Java\jdk-11\bin\java.exe ...
Email sent to user snob-1432e@mail.ru
```
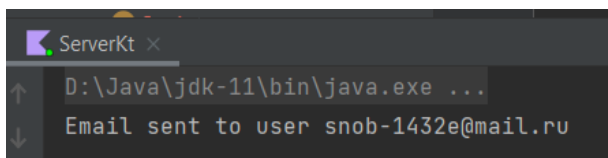
Welcome back!

Auth Rest Service Сегодня, 19:10
Кому: вам

Рады видеть вас в нашем сервисе вновь!

↩ Ответить   ➜ Переслать   Предложить звонок   Создать событие

▶ Прочитать письмо