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«Сибирский государственный университет телекоммуникаций и
информатики» (СибГУТИ)

Отчет по практической работе №4

«Адресация узлов в сетях. Статическая и динамическая конфигурация
узлов»

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1. К машинам добавлен VirtualBox Host-only адаптер
2. На обеих машинах прописаны команды
`sudo apt-get install avahi-autoipd`
3. В AstraLinux добавлен файл eth3 в директории `/etc/network/interfaces.d/` с содержимым:

auto eth3

iface eth3 inet ipv4ll

В БазальтОС добавлен файл `enp0s9/options` в директории `/etc/net/ifaces`

BOOTPROTO= ipv4ll

TYPE=eth

CONFIG_WIRELESS=no

SYSTEMD_BOOTPROTO=dhcp4

CONFIG_IPV4=yes

DISABLED=no

NM_CONTROLLED=no

SYSTEMD_CONTROLLED=no

4.

The image shows two terminal windows side-by-side, both running in Oracle VM VirtualBox. The left window is titled 'AstraLinux [Рабочий] - Oracle VM VirtualBox' and shows the output of the 'ip a' command. It displays details for the loopback interface 'lo' (127.0.0.1) and two Ethernet interfaces: 'eth0' (192.168.179.3) and 'eth1' (10.0.2.5). The right window is titled 'AltServer [Рабочий] - Oracle VM VirtualBox' and shows the output of the 'ip a' command. It displays details for the loopback interface 'lo' (127.0.0.1) and three Ethernet interfaces: 'enp0s3' (192.168.179.5), 'enp0s8' (fe80::a00:27ff:fe00:3ff1), and 'enp0s9' (169.254.9.4). Both windows show the standard output for each interface, including link layer information, IP address, and scope.

5.

Comment

Name

dhcp-server-pool

Addresses

▼ 10.8.64.0/18 ▲

Next Pool

▲ none ▼

Cancel

Apply

OK

invalid

No IP address on interface

Enabled

☒

Comment

▼ General

Name

dhcp1

Interface

ether2 ▼

Relay

▲ 10.8.64.1

Lease Time

00:30:00

Bootp Lease Time

forever ▼

Address Pool

dhcp_pool0 ▼

DHCP Option Set

▼

Server Address

▼

Delay Threshold

▼

Authoritative

yes ▼

Bootp Support

static ▼

Client MAC Limit

▼

Use RADIUS

no ▼

Always Broadcast

☒

Add ARP For Leases

☐

Use Framed As Classless

☒

Conflict Detection

☒

► Queues

Cancel

Apply

OK

Comment	<input type="text"/>
Address	<input type="text" value="10.8.64.1"/>
Gateway	▼
Netmask	▲ <input type="text" value="18"/>

6.

```
4: enp0s9: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:df:46:72 brd ff:ff:ff:ff:ff:ff
    inet 192.168.11.4/24 brd 192.168.11.255 scope global dynamic noprefixroute enp0s9
        valid_lft 499sec preferred_lft 424sec
    inet6 fe80::a00:27ff:fedf:4672/64 scope link
        valid_lft forever preferred_lft forever
d1orn@alt ~$ _
```

No.	Time	Source	Destination	Protocol	Length	Info
12	47.715489	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request - Transaction ID 0x81084efd
13	47.718489	192.168.179.2	255.255.255.255	DHCP	590	DHCP ACK - Transaction ID 0x81084efd
73	347.735162	192.168.179.5	192.168.179.2	DHCP	342	DHCP Request - Transaction ID 0xc2df425f
74	347.739505	192.168.179.2	192.168.179.5	DHCP	590	DHCP ACK - Transaction ID 0xc2df425f

7.

```
AstraLinux [Работает] - Oracle VirtualBox
Файл Машина Вид Ввод Устройства Справка
d1orn@astra:/etc/network/interfaces.d$ cat eth2
auto eth2
iface eth2 inet static
    address 10.8.64.3
    netmask 255.255.192.0
d1orn@astra:/etc/network/interfaces.d$ _
```

8.

```
AstraLinux [Работает] - Oracle VirtualBox
Файл Машина Вид Ввод Устройства Справка
d1orn@astra:/etc/network/interfaces.d$ ping 10.8.64.2
PING 10.8.64.2 (10.8.64.2) 56(84) bytes of data.
64 bytes from 10.8.64.2: icmp_seq=1 ttl=64 time=1.35 ms
64 bytes from 10.8.64.2: icmp_seq=2 ttl=64 time=1.13 ms
64 bytes from 10.8.64.2: icmp_seq=3 ttl=64 time=2.18 ms
64 bytes from 10.8.64.2: icmp_seq=4 ttl=64 time=1.09 ms
64 bytes from 10.8.64.2: icmp_seq=5 ttl=64 time=1.08 ms
^C
--- 10.8.64.2 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4008ms
rtt min/avg/max/mdev = 1.087/1.370/2.182/0.418 ms
d1orn@astra:/etc/network/interfaces.d$ _
```

9.

```
AstraLinux [Работает] - Oracle VirtualBox
Файл Машина Вид Ввод Устройства Справка
d1orn@astra:/etc/network/interfaces.d$ ping 10.8.127.255
do you want to ping broadcast? Then -b. If not, check your local firewall rules.
d1orn@astra:/etc/network/interfaces.d$ ping -b 10.8.127.255
WARNING: pingng broadcast address
PING 10.8.127.255 (10.8.127.255) 56(84) bytes of data.
^C
--- 10.8.127.255 ping statistics ---
14 packets transmitted, 0 received, 100% packet loss, time 13290ms
d1orn@astra:/etc/network/interfaces.d$

AltServer [Работает] - Oracle VirtualBox
Файл Машина Вид Ввод Устройства Справка
d1orn@alt ~$ ping 10.8.64.3
PING 10.8.64.3 (10.8.64.3) 56(84) bytes of data.
From 10.8.127.255 icmp_seq=1 Destination Host Unreachable
From 10.8.127.255 icmp_seq=2 Destination Host Unreachable
From 10.8.127.255 icmp_seq=3 Destination Host Unreachable
From 10.8.127.255 icmp_seq=4 Destination Host Unreachable
From 10.8.127.255 icmp_seq=5 Destination Host Unreachable
From 10.8.127.255 icmp_seq=6 Destination Host Unreachable
^C
--- 10.8.64.3 ping statistics ---
7 packets transmitted, 0 received, +6 errors, 100% packet loss, time 6161ms
pipe 4
d1orn@alt ~$
```

10.

```

AstraLinux [Работает] - Oracle VirtualBox
Файл  Машина  Вид  Ввод  Устройства  Справка
dlorn@astra:/etc/network/interfaces.d$ ping 10.8.127.254
PING 10.8.127.254 (10.8.127.254) 56(84) bytes of data.
64 bytes from 10.8.127.254: icmp_seq=1 ttl=64 time=0.069 ms
64 bytes from 10.8.127.254: icmp_seq=2 ttl=64 time=0.035 ms
64 bytes from 10.8.127.254: icmp_seq=3 ttl=64 time=0.032 ms
64 bytes from 10.8.127.254: icmp_seq=4 ttl=64 time=0.025 ms
64 bytes from 10.8.127.254: icmp_seq=5 ttl=64 time=0.031 ms
^C
--- 10.8.127.254 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4082ms
rtt min/avg/max/mdev = 0.025/0.038/0.069/0.016 ms
dlorn@astra:/etc/network/interfaces.d$ _

```

11.

Виртуальные сети

Сети NAT

Облачные сети

Имя	IPv4 префикс	IPv6 префикс	DHCP сервер
VirtualBox Host-Only Ethernet Adapter	192.168.22.1/24		Выключен
VirtualBox Host-Only Ethernet Adapter #2	192.168.37.1/24		Выключен
VirtualBox Host-Only Ethernet Adapter #3	192.168.253.1/24		Выключен

Oracle VirtualBox Менеджер

Файл Машина Справка

Инструменты

Рouters

mt-01

Выключена

mt-02

Выключена

Machines

AstraLinux

Выключена

AltServer

Выключена

Создать

Добавить

Настроить

Сбросить

Запустить

Общие

Имя: mt-01

ОС: Other Linux (64-bit)

Группы: Routers

Система

Оперативная память: 512 МБ

Порядок загрузки: Гибкий диск, Оптический диск, Жесткий диск

Ускорение: Nested Paging, PAE/NX, Паравиртуализация KVM

Дисплей

Видеопамять: 16 МБ

Графический контроллер: VMSVGA

Сервер удаленного дисплея: Выключен

Записи: Выключена

Носители

Контроллер: IDE

Вторичное устройство IDE 0: [Оптический привод] Пусто

Контроллер: SATA

SATA порт 0: chr-7.16.2.vdi (С множественным подключением, 128,00 МБ)

Аудио

Аудиодрайвер: По умолчанию

Аудиоконтроллер: ICH AC97

Сеть

Адаптер 1: Intel PRO/1000 MT Desktop (Виртуальный адаптер, "VirtualBox Host-Only Ethernet Adapter")

Адаптер 2: Intel PRO/1000 MT Desktop (Виртуальный адаптер, "VirtualBox Host-Only Ethernet Adapter #2")

Превью

mt-01

Oracle VirtualBox Менеджер

Файл Машина Справка

Инструменты

Рouters

mt-01

Выключена

mt-02

Выключена

Machines

AstraLinux

Выключена

AltServer

Выключена

Создать

Добавить

Настроить

Сбросить

Запустить

Общие

Имя: mt-02

ОС: Other Linux (64-bit)

Группы: Routers

Система

Оперативная память: 512 МБ

Порядок загрузки: Гибкий диск, Оптический диск, Жесткий диск

Ускорение: Nested Paging, PAE/NX, Паравиртуализация KVM

Дисплей

Видеопамять: 16 МБ

Графический контроллер: VMSVGA

Сервер удаленного дисплея: Выключен

Записи: Выключена

Носители

Контроллер: IDE

Вторичное устройство IDE 0: [Оптический привод] Пусто

Контроллер: SATA

SATA порт 0: chr-7.16.2.vdi (С множественным подключением, 128,00 МБ)

Аудио

Аудиодрайвер: По умолчанию

Аудиоконтроллер: ICH AC97

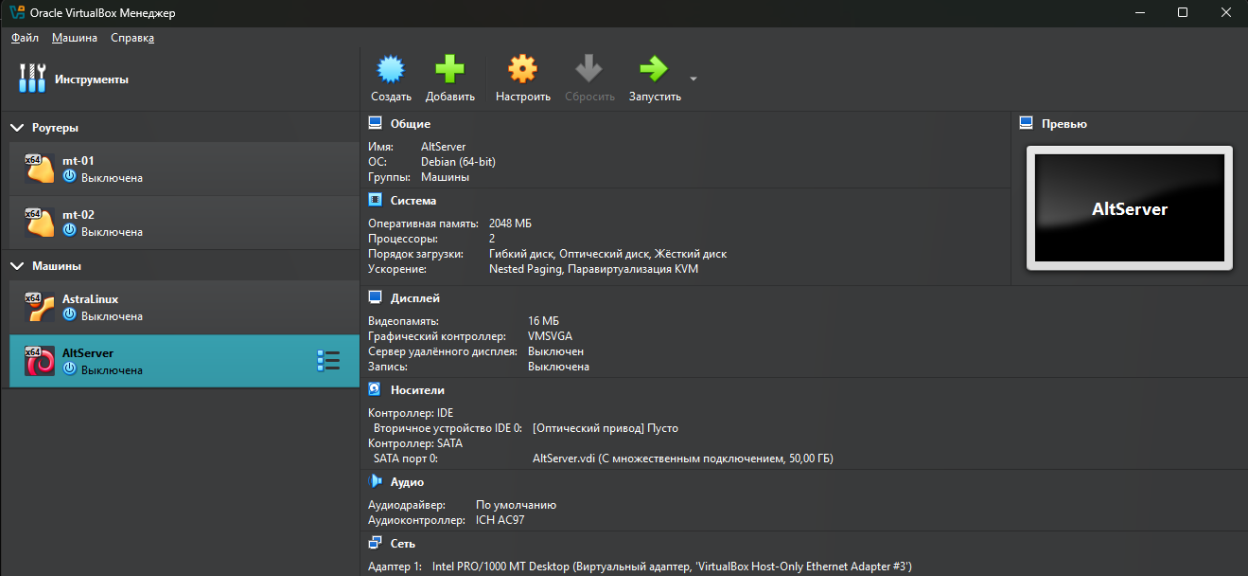
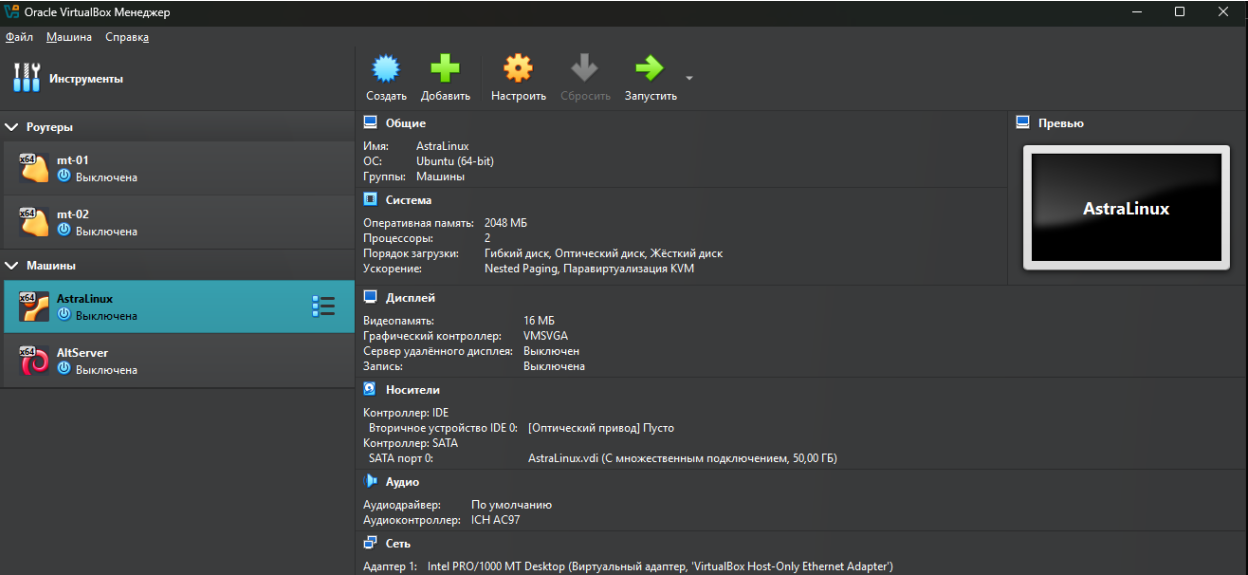
Сеть

Адаптер 1: Intel PRO/1000 MT Desktop (Виртуальный адаптер, "VirtualBox Host-Only Ethernet Adapter #2")

Адаптер 2: Intel PRO/1000 MT Desktop (Виртуальный адаптер, "VirtualBox Host-Only Ethernet Adapter #3")

Превью

mt-02



12.

```
AltServer [Работаer] - Oracle VirtualBox
Файл  Машина  Вид  Ввод  Устройства  Справка
[dlorn@alt ifaces]$ cat enp0s3/options
BOOTPROTO=dhcp
TYPE=eth
CONFIG_WIRELESS=no
SYSTEMD_BOOTPROTO=dhcp4
CONFIG_IPV4=yes
DISABLED=no
NM_CONTROLLED=no
SYSTEMD_CONTROLLED=no
[dlorn@alt ifaces]$ _
```

not invalid

Remove

Enabled ☒

Comment

▼ General

Name

Interface

Relay ▼

Lease Time

Bootp Lease Time

Address Pool

DHCP Option Set ▼

Server Address ▼

Delay Threshold ▼

Authoritative

Bootp Support

Client MAC Limit ▼

Use RADIUS

Always Broadcast ☐

Add ARP For Leases ☐

Use Framed As Classless ☒

Conflict Detection ☒

► Queues

► Script

Cancel

Apply

OK

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	::	ff02::16	Ethernet	60	[Packet size limited during capture]
2	24.953926	::	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
3	25.521907	::	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
4	25.841996	::	ff02::1:ff0c:8b9b	ICMPv6	86	Neighbor Solicitation for fe80::a00:27ff:fe0c:8b9b
5	26.865968	fe80::a00:27ff:fe0c:8b9b	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
6	26.866234	fe80::a00:27ff:fe0c:8b9b	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:0c:8b:9b
7	26.969299	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0x213ac197
8	27.201956	fe80::a00:27ff:fe0c:8b9b	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
9	31.217976	fe80::a00:27ff:fe0c:8b9b	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:0c:8b:9b
10	31.632172	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0x213ac197
11	38.745521	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0x213ac197
12	39.922068	fe80::a00:27ff:fe0c:8b9b	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:0c:8b:9b
13	54.331484	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0x213ac197
14	56.306245	fe80::a00:27ff:fe0c:8b9b	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:0c:8b:9b
15	87.538614	fe80::a00:27ff:fe0c:8b9b	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:0c:8b:9b

not invalid

Remove

Enabled ☒

▼ General

Name

dhcpRelay

Interface

ether2 ▼

DHCP Server VRF

main ▼

DHCP Server ▼

10.8.64.2 ▲

Delay Threshold ▼

Local Address ▼

Add Relay Info

☐

Relay Info Remote ID

► Status

Cancel

Apply

OK

13.

not invalid

Remove

Enabled

☒

Comment

General

Name

dhcpServer1

Interface

ether1

Relay

Lease Time

00:01:00

Bootp Lease Time

forever

Address Pool

dhcpPool1

DHCP Option Set

dhcpSet1

Server Address

Delay Threshold

Authoritative

yes

Bootp Support

static

Client MAC Limit

Use RADIUS

no

Always Broadcast

☐

Add ARP For Leases

☐

Use Framed As Classless

☒

Conflict Detection

☒

Queues

Script

Cancel

Apply

OK

14.

15.

Примените фильтр отображения ... <Ctrl-/>						
No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	fe80::a00:27ff:fe65:6c98	ff02::1	MNDP	209	5678 → 5678 Len=147
2	0.000440	10.8.0.2	255.255.255.255	MNDP	189	5678 → 5678 Len=147
3	0.000802	PCSSystemtec_65:6c:98	CDP/VTP/DTP/PagP/U...	CDP	121	Device ID: mt-01 Port ID: ether1
4	0.001410	PCSSystemtec_65:6c:98	LLDP_Multicast	LLDP	158	MA/08:00:27:17:c3:07 IN/ether1 121 SysN=mt-01
5	24.0068309	10.8.0.1	10.8.0.2	TCP	55	58453 → 80 [ACK] Seq=1 Ack=1 Win=254 Len=1
6	24.0068751	10.8.0.2	10.8.0.1	TCP	78	80 → 58453 [ACK] Seq=1 Ack=2 Win=1004 Len=0
7	27.411938	::	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
8	27.470962	::	ff02::1:ffc7:4b5a	ICMPv6	86	Neighbor Solicitation for fe80::a00:27ff:fec7:4b5a
9	28.263232	::	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
10	28.781216	fe80::a00:27ff:fec7:4b5a	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
11	28.782485	fe80::a00:27ff:fec7:4b5a	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a
12	29.101157	PCSSystemtec_65:6c:98	0a:00:27:00:00:05	ARP	60	Who has 10.8.0.1? Tell 10.8.0.2
13	29.101180	0a:00:27:00:00:05	PCSSystemtec_65:6c...	ARP	42	10.8.0.1 is at 0a:00:27:00:00:05
14	29.246899	fe80::a00:27ff:fec7:4b5a	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
15	30.004854	fe80::a00:27ff:fe65:6c98	ff02::1	MNDP	209	5678 → 5678 Len=147
16	30.005784	10.8.0.2	255.255.255.255	MNDP	189	5678 → 5678 Len=147
17	30.006474	PCSSystemtec_65:6c:98	CDP/VTP/DTP/PagP/U...	CDP	121	Device ID: mt-01 Port ID: ether1
18	30.006936	PCSSystemtec_65:6c:98	LLDP_Multicast	LLDP	158	MA/08:00:27:17:c3:07 IN/ether1 121 SysN=mt-01
19	32.695203	fe80::a00:27ff:fec7:4b5a	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a
20	32.904736	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0x357d9e46
21	32.908464	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
22	32.908770	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
23	33.415075	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request - Transaction ID 0x357d9e46
24	33.981291	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
25	35.021469	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
26	40.260510	fe80::a00:27ff:fec7:4b5a	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a
27	54.889623	fe80::a00:27ff:fec7:4b5a	ff02::1	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a
28	60.012365	fe80::a00:27ff:fe65:6c98	ff02::1	MNDP	209	5678 → 5678 Len=147
29	60.013049	10.8.0.2	255.255.255.255	MNDP	189	5678 → 5678 Len=147
30	60.013536	PCSSystemtec_65:6c:98	CDP/VTP/DTP/PagP/U...	CDP	121	Device ID: mt-01 Port ID: ether1
31	60.014391	PCSSystemtec_65:6c:98	LLDP_Multicast	LLDP	158	MA/08:00:27:17:c3:07 IN/ether1 121 SysN=mt-01
32	69.069550	10.8.0.1	10.8.0.2	TCP	55	[TCP Keep-Alive] 58453 → 80 [ACK] Seq=1 Ack=1
33	69.071479	10.8.0.2	10.8.0.1	TCP	78	[TCP Keep-Alive ACK] 80 → 58453 [ACK] Seq=1 A
34	74.141136	PCSSystemtec_65:6c:98	0a:00:27:00:00:05	ARP	60	Who has 10.8.0.1? Tell 10.8.0.2
35	74.141157	0a:00:27:00:00:05	PCSSystemtec_65:6c...	ARP	42	10.8.0.1 is at 0a:00:27:00:00:05

Astralinux:pcapng

Файл Правка Вид Запуск Захват Анализ Статистика Телефония Беспроводная связь Инструменты Справка

Примените фильтр отображения ... <Ctrl-/>

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000			Ethernet	60	[Packet size limited during capture]
2	38.791769	fe80::a00:27ff:fe65:6c98	ff02::1	MNDP	209	5678 → 5678 Len=147
3	38.791907	10.8.0.2	255.255.255.255	MNDP	189	5678 → 5678 Len=147
4	38.791921	PCSSystemtec_65:6c:98	CDP/VTP/DTP/PagP/U...	CDP	121	Device ID: mt-01 Port ID: ether1
5	38.791931	PCSSystemtec_65:6c:98	LLDP_Multicast	LLDP	158	MA/08:00:27:17:c3:07 IN/ether1 121 SysN=mt-01
6	38.860254	::	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
7	38.868420	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0xa7610215
8	38.893679	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
9	38.895462	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
10	39.300403	::	ff02::1:ffc7:4b5a	ICMPv6	86	Neighbor Solicitation for fe80::a00:27ff:fec7:4b5a
11	39.426619	10.8.0.2	10.8.0.3	DHCP	342	DHCP Offer - Transaction ID 0xa7610215
12	39.428032	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request - Transaction ID 0xa7610215
13	39.429678	10.8.0.2	10.8.0.3	DHCP	342	DHCP ACK - Transaction ID 0xa7610215
14	39.523902	::	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
15	39.952829	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
16	40.324213	fe80::a00:27ff:fec7:4b5a	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
17	40.324586	fe80::a00:27ff:fec7:4b5a	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a
18	40.993345	PCSSystemtec_65:6c:98	Broadcast	ARP	60	Who has 10.8.0.3? Tell 10.8.0.2
19	41.285731	fe80::a00:27ff:fec7:4b5a	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
20	44.515963	fe80::a00:27ff:fec7:4b5a	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a
21	47.514732	fe80::a00:27ff:fe65:6c98	ff02::1	MNDP	209	5678 → 5678 Len=147
22	47.515403	10.8.0.2	255.255.255.255	MNDP	189	5678 → 5678 Len=147
23	47.515903	PCSSystemtec_65:6c:98	CDP/VTP/DTP/PagP/U...	CDP	121	Device ID: mt-01 Port ID: ether1
24	47.516377	PCSSystemtec_65:6c:98	LLDP_Multicast	LLDP	158	MA/08:00:27:17:c3:07 IN/ether1 121 SysN=mt-01
25	52.707991	fe80::a00:27ff:fec7:4b5a	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a
26	69.882307	fe80::a00:27ff:fec7:4b5a	ff02::2	ICMPv6	70	Router Solicitation from 08:00:27:c7:4b:5a

16.

mt-01.pcapng						
Файл Правка Вид Запуск Захват Анализ Статистика Телефония Беспроводная связь Инструменты Справка						
Примените фильтр отображения ... <Ctrl-/>						
No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000			Ethernet	60	[Packet size limited during capture]
2	27.050699	::	ff02::16	ICMPv6	110	Multicast Listener Report Message v2
3	27.240327	::	ff02::1:ff65:6c98	ICMPv6	86	Neighbor Solicitation for fe80::a00:27ff:fe65:6c98
4	27.260358	::	ff02::16	ICMPv6	110	Multicast Listener Report Message v2
5	28.304258	fe80::a00:27ff:fe65:6c98	ff02::16	ICMPv6	130	Multicast Listener Report Message v2
6	28.330380	fe80::a00:27ff:fe65:6c98	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
7	28.481212	fe80::a00:27ff:fe65:6c98	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
8	29.180393	fe80::a00:27ff:fe65:6c98	ff02::16	ICMPv6	130	Multicast Listener Report Message v2

mt-02.pcapng						
Файл Правка Вид Запуск Захват Анализ Статистика Телефония Беспроводная связь Инструменты Справка						
Примените фильтр отображения ... <Ctrl-/>						
No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000			Ethernet	60	[Packet size limited during capture]
2	27.024121	::	ff02::16	ICMPv6	110	Multicast Listener Report Message v2
3	27.024192	::	ff02::1:ff17:c307	ICMPv6	86	Neighbor Solicitation for fe80::a00:27ff:fe17:c307
4	27.024212	::	ff02::16	ICMPv6	110	Multicast Listener Report Message v2
5	27.024231	fe80::a00:27ff:fe17:c307	ff02::16	ICMPv6	130	Multicast Listener Report Message v2
6	27.024251	fe80::a00:27ff:fe17:c307	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
7	27.031489	fe80::a00:27ff:fe17:c307	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
8	27.031503	fe80::a00:27ff:fe17:c307	ff02::16	ICMPv6	130	Multicast Listener Report Message v2
9	29.314758	::	ff02::16	ICMPv6	110	Multicast Listener Report Message v2
10	29.655019	::	ff02::16	ICMPv6	110	Multicast Listener Report Message v2
11	30.005156	::	ff02::1:ffd6:8d	ICMPv6	86	Neighbor Solicitation for fe80::a00:27ff:fed6:8d
12	30.378173	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover - Transaction ID 0xd5bad1e0
13	30.397917	PCSSystemtec_17:c3:07	Broadcast	ARP	60	Who has 10.8.127.254? Tell 10.8.64.2
14	30.399226	PCSSystemtec_17:c3:07	Broadcast	ARP	60	Who has 10.8.127.254? Tell 10.8.64.2
15	30.943462	10.8.64.2	255.255.255.255	DHCP	342	DHCP Offer - Transaction ID 0xd5bad1e0
16	30.944072	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request - Transaction ID 0xd5bad1e0
17	30.946781	10.8.64.2	255.255.255.255	DHCP	342	DHCP ACK - Transaction ID 0xd5bad1e0
18	31.048132	fe80::a00:27ff:fed6:8d	ff02::16	ICMPv6	130	Multicast Listener Report Message v2
19	31.075152	fe80::a00:27ff:fed6:8d	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
20	31.244615	fe80::a00:27ff:fed6:8d	ff02::16	ICMPv6	130	Multicast Listener Report Message v2
21	31.427462	PCSSystemtec_17:c3:07	Broadcast	ARP	60	Who has 10.8.127.254? Tell 10.8.64.2
22	31.428169	PCSSystemtec_d6:00:8d	PCSSystemtec_17:c3:07	ARP	60	10.8.127.254 is at 08:00:27:d6:00:8d
23	31.429047	10.8.64.2	10.8.127.254	ICMP	70	Echo (ping) request id=0xa200, seq=256/1, ttl=64
24	31.429346	10.8.127.254	10.8.64.2	ICMP	70	Echo (ping) reply id=0xa200, seq=256/1, ttl=64
25	31.454522	fe80::a00:27ff:fed6:8d	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
26	36.485466	PCSSystemtec_d6:00:8d	PCSSystemtec_17:c3:07	ARP	60	Who has 10.8.64.2? Tell 10.8.127.254
27	36.487419	PCSSystemtec_17:c3:07	PCSSystemtec_d6:00:8d	ARP	60	10.8.64.2 is at 08:00:27:17:c3:07