ОТЧЕТ

по лабораторной работе №2

по дисциплине «Сети и телекоммуникации»

Тема: Настройка таблиц маршрутизации.

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Цель работы.

Изучить и практически освоить методы статической маршрутизации на узлах сетевого уровня в IP-сетях.

Задание.

1. Для всех узлов сети установить IP-адреса, маски подсетей и шлюзы по умолчанию, чтобы добиться успешного выполнения Echo-запроса ближайших соседей (находящихся в одной подсети).

2. Настроить таблицы маршрутизации на маршрутизаторах, чтобы добиться доставки пакетов от узла К1 к узлу К2 и обратно, от узла К2 к К3 и обратно, от узла К3 к К1 и обратно. Пакеты должны доходить до узлов кратчайшим путем.

3. Настроить таблицы маршрутизации на узлах К1, К2 и К3, чтобы обеспечить кратчайшую доставку пакетов между этими узлами, если это невозможно было обеспечить в п. 2.

В отчете привести конфигурацию TCP/IP для каждого из узлов, таблицы маршрутизации, результаты Echo-запросов между узлами К1, К2 и К3, а также обоснование правильности и оптимальности выбранных маршрутов.

Вариант 13. Файл со схемой сети: lab2_var13.jfst. Все маршрутизаторы и компьютеры имеют адреса из диапазона 172.1.1.1 – 172.254.254.254. Обозначения в задании: К1 – PC1, К2 – PC2, К3 – PC3.
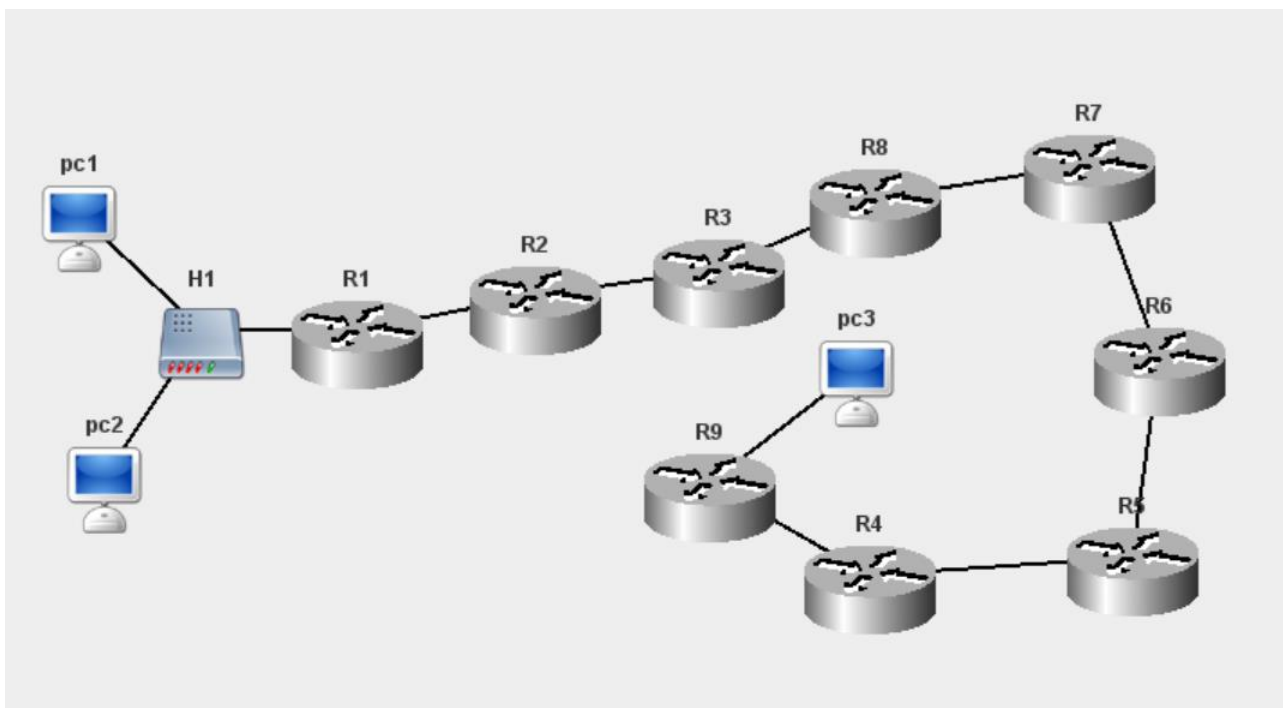
Выполнение работы.

Рис. 1. – Исходная схема сети.

1. Для всех узлов сети установлены IP-адреса, маски подсетей и шлюзы по умолчанию:

Node name	Interface	IP-address	Subnet mask	Default Gateway
pc1	eth0	172.168.0.1	255.255.255.0	172.168.0.11
pc2	eth0	172.168.0.2	255.255.255.0	172.168.0.11
pc3	eth0	172.168.8.2	255.255.255.0	172.168.8.1
R1	eth0	172.168.0.11	255.255.255.0	172.168.100.2
	eth1	172.168.100.1	255.255.255.0	
R2	eth0	172.168.100.2	255.255. 255.0	172.168.1.2
	eth1	172.168.1.1	255.255. 255.0	
R3	eth0	172.168.1.1	255.255. 255.0	172.168.2.1
	eth1	172.168.2.2	255.255. 255.0	
R4	eth0	172.168.7.1	255.255. 255.0	172.168.7.2
	eth1	172.168.6.2	255.255. 255.0	
R5	eth0	172.168.6.1	255.255. 255.0	172.168.6.2
	eth1	172.168.5.2	255.255. 255.0	

R6	eth0	172.168.4.2	255.255. 255.0	172.168.5.2
	eth1	172.168.5.1	255.255. 255.0	
R7	eth0	172.168.3.2	255.255. 255.0	172.168.4.2
	eth1	172.168.4.1	255.255. 255.0	
R8	eth0	172.168.2.1	255.255. 255.0	172.168.3.2
	eth1	172.168.3.1	255.255. 255.0	
R9	eth0	172.168.8.1	255.255. 255.0	172.168.7.1
	eth1	172.168.7.2	255.255. 255.0	

Табл. 1. – Настройки протокола TCP/IP.

2. Для отправки пакетов было выделено 10 подсетей: K1-R1-K2, R1-R2, R2-R3, R3-R8, R8-R7, R7-R6, R6-R5, R5-R4, R4-R9, R9-K3. Соответственно заданным IP-адресам K1 и K2 была определена маска: 255.255.255.0. Таким образом IP-адреса подсетей распознаются верно, без совпадений. Шлюзы по умолчанию распределены на ближайшие к компьютерам маршрутизаторы (R1 для K1 и K2, R9 для K3). Таким образом мы добиваемся успешного выполнения Echo-запроса ближайших соседей (находящихся в одной подсети) – от K1 до K2 и обратно.

Выполнен Echo-запрос с K1(pc1) на K2(pc2).

Вывод программы:

22:19:16-084 pc1 Echo Request Packet Network Created Echo Request packet to 172.168.0.2

22:19:16-084 pc1ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.0.2

22:19:16-084 pc1ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:19:16-084 pc1Ethernet Packet   Link   Sending packet from interface 27:8B:67:76:14:8D

22:19:16-084 pc2Ethernet Packet   Link   Recieved and accepted packet at interface 54:C2:BA:1B:84:68

22:19:16-084 pc2ARP_packet   Network   ProtocolStack received packet from local Interface.

22:19:16-084 pc2ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:19:16-084 pc2ARP Response Packet   DataLink   Created ARP Response packet to 172.168.0.1

22:19:16-084 pc2ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.0.1).

22:19:16-084 pc2Ethernet Packet   Link   Sending packet from interface 54:C2:BA:1B:84:68

22:19:16-084 pc1Ethernet Packet   Link   Recieved and accepted packet at interface 27:8B:67:76:14:8D

22:19:16-084 pc1ARP_packet   Network   ProtocolStack received packet from local Interface.

22:19:16-084 pc1ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:19:16-084 R1 Ethernet Packet   Link   Recieved and dropped packet at interface 41:48:82:26:C1:24

22:19:16-084 R1 Ethernet Packet   Link   Recieved and accepted packet at interface 41:48:82:26:C1:24

22:19:16-084	R1 ARP_packet	Network	ProtocolStack received packet from local Interface.	
22:19:16-084	pc1ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.0.2).	
22:19:16-084	pc1Ethernet Packet	Link	Sending packet from interface 27:8B:67:76:14:8D	
22:19:16-084	pc2Ethernet Packet	Link	Recieved and accepted packet at interface 54:C2:BA:1B:84:68	
22:19:16-084	pc2ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:19:16-084	pc2ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.	
22:19:16-084	pc2Echo Reply Packet	Network	Created Echo Reply packet to 172.168.0.1	
22:19:16-084	pc2ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.0.1).	
22:19:16-084	pc2Ethernet Packet	Link	Sending packet from interface 54:C2:BA:1B:84:68	
22:19:16-084	pc1Ethernet Packet	Link	Recieved and accepted packet at interface 27:8B:67:76:14:8D	
22:19:16-084	pc1ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:19:16-084	pc1ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.	
22:19:16-084	**pc1 Echo Reply Packet**	**Network**	**Echo reply packet received from 172.168.0.2**	
22:19:16-084	R1 Ethernet Packet	Link	Recieved and dropped packet at interface 41:48:82:26:C1:24	

Выполнен Echo-запрос с К2(pc2) на К1(pc1).

Вывод программы:

22:21:21-476	pc2Echo Request Packet	Network	Created Echo Request packet to 172.168.0.1	
22:21:21-476	pc2ARP Discovery Packet	DataLink	Created ARP discovery packet to source MAC address for IP 172.168.0.1	
22:21:21-476	pc2ARP_packet	Network	Sending broadcast packet from ProtocolStack.	
22:21:21-476	pc2Ethernet Packet	Link	Sending packet from interface 54:C2:BA:1B:84:68	
22:21:21-476	pc1Ethernet Packet	Link	Recieved and accepted packet at interface 27:8B:67:76:14:8D	
22:21:21-476	pc1ARP_packet	Network	ProtocolStack received packet from local Interface.	
22:21:21-476	pc1ARP_packet	Network	Confirmed Packet is for this Network Layer Device.	
22:21:21-476	pc1ARP Response Packet	DataLink	Created ARP Response packet to 172.168.0.2	
22:21:21-476	pc1ARP_packet	Network	Sending packet from ProtocolStack (to 172.168.0.2).	
22:21:21-476	pc1Ethernet Packet	Link	Sending packet from interface 27:8B:67:76:14:8D	
22:21:21-476	pc2Ethernet Packet	Link	Recieved and accepted packet at interface 54:C2:BA:1B:84:68	
22:21:21-476	pc2ARP_packet	Network	ProtocolStack received packet from local Interface.	
22:21:21-476	pc2ARP_packet	Network	Confirmed Packet is for this Network Layer Device.	
22:21:21-476	R1 Ethernet Packet	Link	Recieved and dropped packet at interface 41:48:82:26:C1:24	
22:21:21-476	R1 Ethernet Packet	Link	Recieved and accepted packet at interface 41:48:82:26:C1:24	
22:21:21-476	R1 ARP_packet	Network	ProtocolStack received packet from local Interface.	
22:21:21-476	pc2ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.0.1).	
22:21:21-476	pc2Ethernet Packet	Link	Sending packet from interface 54:C2:BA:1B:84:68	
22:21:21-476	pc1Ethernet Packet	Link	Recieved and accepted packet at interface 27:8B:67:76:14:8D	
22:21:21-476	pc1ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:21:21-476	pc1ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.	
22:21:21-476	pc1Echo Reply Packet	Network	Created Echo Reply packet to 172.168.0.2	
22:21:21-476	pc1ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.0.2).	
22:21:21-476	pc1Ethernet Packet	Link	Sending packet from interface 27:8B:67:76:14:8D	
22:21:21-476	pc2Ethernet Packet	Link	Recieved and accepted packet at interface 54:C2:BA:1B:84:68	

22:21:21-476	pc2ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:21:21-476	pc2ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:21:21-476	pc2Echo Reply Packet	Network	Echo reply packet received from 172.168.0.1
22:21:21-476	R1 Ethernet Packet	Link	Recieved and dropped packet at interface 41:48:82:26:C1:24
22:21:21-476	R1 Ethernet Packet	Link	Recieved and dropped packet at interface 41:48:82:26:C1:24

Остальные шлюзы по умолчанию настроены на ближайшие к маршрутизатору маршрутизаторы в направлении от К1-К2 к К3. Последний (на пути от К1-К2 к К3) маршрутизатор имеет шлюз по умолчанию на ближайший маршрутизатор в обратном направлении – от К3 к К1-К2 (шлюзы по умолчанию: R2 для R1, R3 для R1, R8 для R3, … , R9 для R4, R4 для R9). Это обеспечивает доставление сигналов от К1-К2 к К3. Чтобы сигнал доходил в обратную сторону, настраиваем таблицы маршрутизаторов для всех узлов R8-R1.

Рис.2-8. – таблицы маршрутизаторов для

R4:

```
S* default/0.0.0.0[0]  via 172.168.7.2 (eth0)
S  172.168.0.0/255.255.255.0[0]  via 172.168.6.1 (eth1)
C  172.168.6.2/255.255.255.0 is directly connected, eth1
C  172.168.7.1/255.255.255.0 is directly connected, eth0
```

R5:

```
S* default/0.0.0.0[0]  via 172.168.6.2 (eth0)
S  172.168.0.0/255.255.255.0[0]  via 172.168.5.1 (eth1)
C  172.168.5.2/255.255.255.0 is directly connected, eth1
C  172.168.6.1/255.255.255.0 is directly connected, eth0
```

R6:

```
S* default/0.0.0.0[0]  via 172.168.5.2 (eth0)
S  172.168.0.0/255.255.255.0[0]  via 172.168.4.1 (eth0)
C  172.168.5.1/255.255.255.0 is directly connected, eth1
C  172.168.4.2/255.255.255.0 is directly connected, eth0
```

R7:

```
S* default/0.0.0.0[0]  via 172.168.4.2 (eth0)
S  172.168.0.0/255.255.255.0[0]  via 172.168.3.1 (eth0)
C  172.168.4.1/255.255.255.0 is directly connected, eth1
C  172.168.3.2/255.255.255.0 is directly connected, eth0
```

R8:

```
S* default/0.0.0.0[0] via 172.168.3.2 (eth0)
S  172.168.0.0/255.255.255.0[0] via 172.168.2.2 (eth0)
S  172.168.2.0/255.255.255.0[0] via 172.168.2.1 (eth0)
C  172.168.3.1/255.255.255.0 is directly connected, eth1
C  172.168.2.1/255.255.255.0 is directly connected, eth0
```

R3:

```
S* default/0.0.0.0[0] via 172.168.2.1 (eth0)
S  172.168.0.0/255.255.255.0[0] via 172.168.1.1 (eth0)
C  172.168.2.2/255.255.255.0 is directly connected, eth1
C  172.168.1.2/255.255.255.0 is directly connected, eth0
```

R2:

```
S* default/0.0.0.0[0] via 172.168.1.2 (eth0)
S  172.168.0.0/255.255.255.0[0] via 172.168.100.1 (eth0)
C  172.168.1.1/255.255.255.0 is directly connected, eth1
C  172.168.100.2/255.255.255.0 is directly connected, eth0
```

В результате таких настроек успешно выполняются Echo-запросы между всеми узлами настроенных подсетей.

Выполнен Echo-запрос с К1(рс1) на К3(рс3).

Вывод программы:

22:29:09-492 pc1Echo Request Packet   Network   Created Echo Request packet to 172.168.8.2

22:29:09-492 pc1ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.0.11

22:29:09-492 pc1ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-492 pc1Ethernet Packet   Link   Sending packet from interface 27:8B:67:76:14:8D

22:29:09-492 pc2Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface 54:C2:BA:1B:84:68

22:29:09-492 pc2ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R1 Ethernet Packet   Link   Recieved and accepted packet at interface 41:48:82:26:C1:24

22:29:09-492 R1 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R1 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-492 R1 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.0.1

22:29:09-492 R1 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.0.1).

22:29:09-492 R1 Ethernet Packet   Link   Sending packet from interface 41:48:82:26:C1:24

22:29:09-492 pc2Ethernet Packet   Link   Recieved and dropped packet at interface 54:C2:BA:1B:84:68

22:29:09-492 pc1Ethernet Packet   Link   Recieved and accepted packet at interface 27:8B:67:76:14:8D

22:29:09-492 pc1ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 pc1ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-492 pc1ICMP_packet   Network   Sending packet from ProtocolStack (to 172.168.0.11).

22:29:09-492 pc1Ethernet Packet   Link   Sending packet from interface 27:8B:67:76:14:8D

22:29:09-492 pc2Ethernet Packet   Link   Recieved and dropped packet at interface 54:C2:BA:1B:84:68

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22:29:09-492 R1 Ethernet Packet   Link   Recieved and accepted packet at interface 41:48:82:26:C1:24

22:29:09-492 R1 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R1 ICMP_packet   Network   Packet Received: Network Layer Device is Routable forwarding packet.

22:29:09-492 R1 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.100.2

22:29:09-492 R1 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-492 R1 Ethernet Packet   Link   Sending packet from interface C0:3A:B0:3D:9B:91

22:29:09-492 R2 Ethernet Packet   Link   Recieved and accepted packet at interface 68:A1:7A:33:82:9B

22:29:09-492 R2 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R2 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-492 R2 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.100.1

22:29:09-492 R2 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.100.1).

22:29:09-492 R2 Ethernet Packet   Link   Sending packet from interface 68:A1:7A:33:82:9B

22:29:09-492 R1 Ethernet Packet   Link   Recieved and accepted packet at interface C0:3A:B0:3D:9B:91

22:29:09-492 R1 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R1 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-492 R1 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.100.2).

22:29:09-492 R1 Ethernet Packet   Link   Sending packet from interface C0:3A:B0:3D:9B:91

22:29:09-492 R2 Ethernet Packet   Link   Recieved and accepted packet at interface 68:A1:7A:33:82:9B

22:29:09-492 R2 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R2 ICMP_packet   Network   Packet Received: Network Layer Device is Routable forwarding packet.

22:29:09-492 R2 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.1.2

22:29:09-492 R2 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-492 R2 Ethernet Packet   Link   Sending packet from interface 6F:A9:87:34:99:47

22:29:09-492 R3 Ethernet Packet   Link   Recieved and accepted packet at interface B5:74:24:66:B4:A2

22:29:09-492 R3 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R3 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-492 R3 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.1.1

22:29:09-492 R3 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.1.1).

22:29:09-492 R3 Ethernet Packet   Link   Sending packet from interface B5:74:24:66:B4:A2

22:29:09-492 R2 Ethernet Packet   Link   Recieved and accepted packet at interface 6F:A9:87:34:99:47

22:29:09-492 R2 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R2 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-492 R2 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.1.2).

22:29:09-492 R2 Ethernet Packet   Link   Sending packet from interface 6F:A9:87:34:99:47

22:29:09-492 R3 Ethernet Packet   Link   Recieved and accepted packet at interface B5:74:24:66:B4:A2

22:29:09-492 R3 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R3 ICMP_packet   Network   Packet Received: Network Layer Device is Routable forwarding packet.

22:29:09-492 R3 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.2.1

22:29:09-492 R3 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-492 R3 Ethernet Packet   Link   Sending packet from interface 11:25:14:C2:C5:C2

22:29:09-492 R8 Ethernet Packet   Link   Recieved and accepted packet at interface 2B:55:76:64:49:27

22:29:09-492 R8 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R8 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-492 R8 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.2.2

22:29:09-492 R8 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.2.2).

22:29:09-492 R8 Ethernet Packet   Link   Sending packet from interface 2B:55:76:64:49:27

22:29:09-492 R3 Ethernet Packet   Link   Recieved and accepted packet at interface 11:25:14:C2:C5:C2

22:29:09-492 R3 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-492 R3 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R3 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.2.1).

22:29:09-500 R3 Ethernet Packet   Link   Sending packet from interface 11:25:14:C2:C5:C2

22:29:09-500 R8 Ethernet Packet   Link   Recieved and accepted packet at interface 2B:55:76:64:49:27

22:29:09-500 R8 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R8 ICMP_packet   Network   Packet Received: Network Layer Device is Routable forwarding packet.

22:29:09-500 R8 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.3.2

22:29:09-500 R8 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-500 R8 Ethernet Packet   Link   Sending packet from interface 8C:8B:6A:34:60:98

22:29:09-500 R7 Ethernet Packet   Link   Recieved and accepted packet at interface 4D:87:56:25:4A:9A

22:29:09-500 R7 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R7 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R7 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.3.1

22:29:09-500 R7 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.3.1).

22:29:09-500 R7 Ethernet Packet   Link   Sending packet from interface 4D:87:56:25:4A:9A

22:29:09-500 R8 Ethernet Packet   Link   Recieved and accepted packet at interface 8C:8B:6A:34:60:98

22:29:09-500 R8 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R8 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R8 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.3.2).

22:29:09-500 R8 Ethernet Packet   Link   Sending packet from interface 8C:8B:6A:34:60:98

22:29:09-500 R7 Ethernet Packet   Link   Recieved and accepted packet at interface 4D:87:56:25:4A:9A

22:29:09-500 R7 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R7 ICMP_packet   Network   Packet Received: Network Layer Device is Routable forwarding packet.

22:29:09-500 R7 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.4.2

22:29:09-500 R7 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-500 R7 Ethernet Packet   Link   Sending packet from interface 20:29:BE:3E:6C:25

22:29:09-500 R6 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
4C:AC:BC:90:91:3C

22:29:09-500 R6 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R6 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R6 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.4.1

22:29:09-500 R6 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.4.1).

22:29:09-500 R6 Ethernet Packet   Link   Sending packet from interface 4C:AC:BC:90:91:3C

22:29:09-500 R7 Ethernet Packet   Link   Recieved and accepted packet at interface 20:29:BE:3E:6C:25

22:29:09-500 R7 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R7 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R7 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.4.2).

22:29:09-500 R7 Ethernet Packet   Link   Sending packet from interface 20:29:BE:3E:6C:25

22:29:09-500 R6 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
4C:AC:BC:90:91:3C

22:29:09-500 R6 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R6 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:29:09-500 R6 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address
for IP 172.168.5.2

22:29:09-500 R6 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-500 R6 Ethernet Packet   Link   Sending packet from interface 20:58:78:27:9D:4B

22:29:09-500 R5 Ethernet Packet   Link   Recieved and accepted packet at interface 60:62:62:57:14:8C

22:29:09-500 R5 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R5 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R5 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.5.1

22:29:09-500 R5 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.5.1).

22:29:09-500 R5 Ethernet Packet   Link   Sending packet from interface 60:62:62:57:14:8C

22:29:09-500 R6 Ethernet Packet   Link   Recieved and accepted packet at interface 20:58:78:27:9D:4B

22:29:09-500 R6 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R6 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R6 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.5.2).

22:29:09-500 R6 Ethernet Packet   Link   Sending packet from interface 20:58:78:27:9D:4B

22:29:09-500 R5 Ethernet Packet   Link   Recieved and accepted packet at interface 60:62:62:57:14:8C

22:29:09-500 R5 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R5 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:29:09-500 R5 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address
for IP 172.168.6.2

22:29:09-500 R5 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-500 R5 Ethernet Packet   Link   Sending packet from interface BD:7E:2C:5A:7B:64

22:29:09-500 R4 Ethernet Packet   Link   Recieved and accepted packet at interface AF:92:52:28:79:A4

22:29:09-500 R4 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R4 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R4 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.6.1

22:29:09-500 R4 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.6.1).

22:29:09-500 R4 Ethernet Packet   Link   Sending packet from interface AF:92:52:28:79:A4

22:29:09-500 R5 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
BD:7E:2C:5A:7B:64

22:29:09-500 R5 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R5 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R5 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.6.2).

22:29:09-500 R5 Ethernet Packet   Link   Sending packet from interface BD:7E:2C:5A:7B:64

22:29:09-500 R4 Ethernet Packet   Link   Recieved and accepted packet at interface AF:92:52:28:79:A4

22:29:09-500 R4 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R4 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:29:09-500 R4 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address
for IP 172.168.7.2

22:29:09-500 R4 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-500 R4 Ethernet Packet   Link   Sending packet from interface 8E:25:8F:2C:24:5B

22:29:09-500 R9 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
7A:6C:BC:95:C1:3B

22:29:09-500 R9 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R9 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R9 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.7.1

22:29:09-500 R9 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.7.1).

22:29:09-500 R9 Ethernet Packet   Link   Sending packet from interface 7A:6C:BC:95:C1:3B

22:29:09-500 R4 Ethernet Packet   Link   Recieved and accepted packet at interface 8E:25:8F:2C:24:5B

22:29:09-500 R4 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R4 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 R4 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.7.2).

22:29:09-500 R4 Ethernet Packet   Link   Sending packet from interface 8E:25:8F:2C:24:5B

22:29:09-500 R9 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
7A:6C:BC:95:C1:3B

22:29:09-500 R9 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 R9 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:29:09-500 R9 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address
for IP 172.168.8.2

22:29:09-500 R9 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:29:09-500 R9 Ethernet Packet   Link   Sending packet from interface 3F:88:58:8B:27:99

22:29:09-500 pc3Ethernet Packet   Link   Recieved and accepted packet at interface C2:16:84:7F:9B:80

22:29:09-500 pc3ARP_packet   Network   ProtocolStack received packet from local Interface.

22:29:09-500 pc3ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:29:09-500 pc3ARP Response Packet   DataLink   Created ARP Response packet to 172.168.8.1

22:29:09-500 pc3ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.8.1).

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22:29:09-500 pc3Ethernet Packet	Link	Sending packet from interface C2:16:84:7F:9B:80
22:29:09-500 R9 Ethernet Packet	Link	Recieved and accepted packet at interface 3F:88:58:8B:27:99
22:29:09-500 R9 ARP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500 R9 ARP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:29:09-500 R9 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.8.2).
22:29:09-500 R9 Ethernet Packet	Link	Sending packet from interface 3F:88:58:8B:27:99
22:29:09-500 pc3Ethernet Packet	Link	Recieved and accepted packet at interface C2:16:84:7F:9B:80
22:29:09-500 pc3ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500 pc3ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:29:09-500 pc3Echo Reply Packet	Network	Created Echo Reply packet to 172.168.0.1
22:29:09-500 pc3ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.8.1).
22:29:09-500 pc3Ethernet Packet	Link	Sending packet from interface C2:16:84:7F:9B:80
22:29:09-500 R9 Ethernet Packet	Link	Recieved and accepted packet at interface 3F:88:58:8B:27:99
22:29:09-500 R9 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500 R9 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:29:09-500 R9 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.7.1).
22:29:09-500 R9 Ethernet Packet	Link	Sending packet from interface 7A:6C:BC:95:C1:3B
22:29:09-500 R4 Ethernet Packet	Link	Recieved and accepted packet at interface 8E:25:8F:2C:24:5B
22:29:09-500 R4 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500 R4 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:29:09-500 R4 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.6.1).
22:29:09-500 R4 Ethernet Packet	Link	Sending packet from interface AF:92:52:28:79:A4
22:29:09-500 R5 Ethernet Packet	Link	Recieved and accepted packet at interface BD:7E:2C:5A:7B:64
22:29:09-500 R5 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500 R5 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:29:09-500 R5 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.5.1).
22:29:09-500 R5 Ethernet Packet	Link	Sending packet from interface 60:62:62:57:14:8C
22:29:09-500 R6 Ethernet Packet	Link	Recieved and accepted packet at interface 20:58:78:27:9D:4B
22:29:09-500 R6 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500 R6 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:29:09-500 R6 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.4.1).
22:29:09-500 R6 Ethernet Packet	Link	Sending packet from interface 4C:AC:BC:90:91:3C
22:29:09-500 R7 Ethernet Packet	Link	Recieved and accepted packet at interface 20:29:BE:3E:6C:25
22:29:09-500 R7 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500 R7 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:29:09-500 R7 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.3.1).
22:29:09-500 R7 Ethernet Packet	Link	Sending packet from interface 4D:87:56:25:4A:9A

22:29:09-500	R8 Ethernet Packet	Link	Recieved and accepted packet at interface 8C:8B:6A:34:60:98
22:29:09-500	R8 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500	R8 ICMP_packet	Network	Packet Received: Network Layer Device is Routable

forwarding packet.

22:29:09-500	R8 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.2.2).
22:29:09-500	R8 Ethernet Packet	Link	Sending packet from interface 2B:55:76:64:49:27
22:29:09-500	R3 Ethernet Packet	Link	Recieved and accepted packet at interface 11:25:14:C2:C5:C2
22:29:09-500	R3 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-500	R3 ICMP_packet	Network	Packet Received: Network Layer Device is Routable

forwarding packet.

22:29:09-500	R3 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.1.1).
22:29:09-500	R3 Ethernet Packet	Link	Sending packet from interface B5:74:24:66:B4:A2
22:29:09-500	R2 Ethernet Packet	Link	Recieved and accepted packet at interface 6F:A9:87:34:99:47
22:29:09-508	R2 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-509	R2 ICMP_packet	Network	Packet Received: Network Layer Device is Routable

forwarding packet.

22:29:09-509	R2 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.100.1).
22:29:09-509	R2 Ethernet Packet	Link	Sending packet from interface 68:A1:7A:33:82:9B
22:29:09-509	R1 Ethernet Packet	Link	Recieved and accepted packet at interface

C0:3A:B0:3D:9B:91

| 22:29:09-509 | R1 ICMP_packet | Network | ProtocolStack received packet from local Interface. |
| 22:29:09-509 | R1 ICMP_packet | Network | Packet Received: Network Layer Device is Routable |

forwarding packet.

22:29:09-509	R1 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.0.1).
22:29:09-509	R1 Ethernet Packet	Link	Sending packet from interface 41:48:82:26:C1:24
22:29:09-509	pc2 Ethernet Packet	Link	Recieved and dropped packet at interface 54:C2:BA:1B:84:68
22:29:09-509	pc1 Ethernet Packet	Link	Recieved and accepted packet at interface 27:8B:67:76:14:8D
22:29:09-509	pc1 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:29:09-509	pc1 ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:29:09-509	**pc1 Echo Reply Packet**	**Network**	**Echo reply packet received from 172.168.8.2**

Выполнен Echo-запрос с К3 на К1.

Вывод программы:

22:30:53-651	pc3 Echo Request Packet	Network	Created Echo Request packet to 172.168.0.1
22:30:53-651	pc3 ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.8.1).
22:30:53-651	pc3 Ethernet Packet	Link	Sending packet from interface C2:16:84:7F:9B:80
22:30:53-651	R9 Ethernet Packet	Link	Recieved and accepted packet at interface 3F:88:58:8B:27:99
22:30:53-651	R9 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:30:53-651	R9 ICMP_packet	Network	Packet Received: Network Layer Device is Routable

forwarding packet.

22:30:53-651	R9 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.7.1).
22:30:53-651	R9 Ethernet Packet	Link	Sending packet from interface 7A:6C:BC:95:C1:3B
22:30:53-651	R4 Ethernet Packet	Link	Recieved and accepted packet at interface 8E:25:8F:2C:24:5B

22:30:53-651 R4 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-651 R4 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-651 R4 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.6.1).	
22:30:53-651 R4 Ethernet Packet	Link	Sending packet from interface AF:92:52:28:79:A4	
22:30:53-651 R5 Ethernet Packet	Link	Recieved and accepted packet at interface BD:7E:2C:5A:7B:64	
22:30:53-651 R5 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-651 R5 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-651 R5 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.5.1).	
22:30:53-651 R5 Ethernet Packet	Link	Sending packet from interface 60:62:62:57:14:8C	
22:30:53-651 R6 Ethernet Packet	Link	Recieved and accepted packet at interface 20:58:78:27:9D:4B	
22:30:53-651 R6 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-651 R6 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-651 R6 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.4.1).	
22:30:53-651 R6 Ethernet Packet	Link	Sending packet from interface 4C:AC:BC:90:91:3C	
22:30:53-651 R7 Ethernet Packet	Link	Recieved and accepted packet at interface 20:29:BE:3E:6C:25	
22:30:53-654 R7 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R7 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R7 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.3.1).	
22:30:53-654 R7 Ethernet Packet	Link	Sending packet from interface 4D:87:56:25:4A:9A	
22:30:53-654 R8 Ethernet Packet	Link	Recieved and accepted packet at interface 8C:8B:6A:34:60:98	
22:30:53-654 R8 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R8 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R8 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.2.2).	
22:30:53-654 R8 Ethernet Packet	Link	Sending packet from interface 2B:55:76:64:49:27	
22:30:53-654 R3 Ethernet Packet	Link	Recieved and accepted packet at interface 11:25:14:C2:C5:C2	
22:30:53-654 R3 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R3 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R3 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.1.1).	
22:30:53-654 R3 Ethernet Packet	Link	Sending packet from interface B5:74:24:66:B4:A2	
22:30:53-654 R2 Ethernet Packet	Link	Recieved and accepted packet at interface 6F:A9:87:34:99:47	
22:30:53-654 R2 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R2 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R2 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.100.1).	
22:30:53-654 R2 Ethernet Packet	Link	Sending packet from interface 68:A1:7A:33:82:9B	

22:30:53-654 R1 Ethernet Packet	Link	Recieved and accepted packet at interface C0:3A:B0:3D:9B:91	
22:30:53-654 R1 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R1 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R1 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.0.1).	
22:30:53-654 R1 Ethernet Packet	Link	Sending packet from interface 41:48:82:26:C1:24	
22:30:53-654 pc2Ethernet Packet	Link	Recieved and dropped packet at interface 54:C2:BA:1B:84:68	
22:30:53-654 pc1Ethernet Packet	Link	Recieved and accepted packet at interface 27:8B:67:76:14:8D	
22:30:53-654 pc1ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 pc1ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.	
22:30:53-654 pc1Echo Reply Packet	Network	Created Echo Reply packet to 172.168.8.2	
22:30:53-654 pc1ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.0.11).	
22:30:53-654 pc1Ethernet Packet	Link	Sending packet from interface 27:8B:67:76:14:8D	
22:30:53-654 pc2Ethernet Packet	Link	Recieved and dropped packet at interface 54:C2:BA:1B:84:68	
22:30:53-654 R1 Ethernet Packet	Link	Recieved and accepted packet at interface 41:48:82:26:C1:24	
22:30:53-654 R1 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R1 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R1 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.100.2).	
22:30:53-654 R1 Ethernet Packet	Link	Sending packet from interface C0:3A:B0:3D:9B:91	
22:30:53-654 R2 Ethernet Packet	Link	Recieved and accepted packet at interface 68:A1:7A:33:82:9B	
22:30:53-654 R2 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R2 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R2 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.1.2).	
22:30:53-654 R2 Ethernet Packet	Link	Sending packet from interface 6F:A9:87:34:99:47	
22:30:53-654 R3 Ethernet Packet	Link	Recieved and accepted packet at interface B5:74:24:66:B4:A2	
22:30:53-654 R3 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R3 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R3 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.2.1).	
22:30:53-654 R3 Ethernet Packet	Link	Sending packet from interface 11:25:14:C2:C5:C2	
22:30:53-654 R8 Ethernet Packet	Link	Recieved and accepted packet at interface 2B:55:76:64:49:27	
22:30:53-654 R8 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R8 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	
22:30:53-654 R8 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.3.2).	
22:30:53-654 R8 Ethernet Packet	Link	Sending packet from interface 8C:8B:6A:34:60:98	
22:30:53-654 R7 Ethernet Packet	Link	Recieved and accepted packet at interface 4D:87:56:25:4A:9A	
22:30:53-654 R7 ICMP_packet	Network	ProtocolStack received packet from local Interface.	
22:30:53-654 R7 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.	

22:30:53-654 R7 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.4.2).

22:30:53-654 R7 Ethernet Packet   Link   Sending packet from interface 20:29:BE:3E:6C:25

22:30:53-654 R6 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
4C:AC:BC:90:91:3C

22:30:53-654 R6 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:30:53-654 R6 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:30:53-654 R6 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.5.2).

22:30:53-654 R6 Ethernet Packet   Link   Sending packet from interface 20:58:78:27:9D:4B

22:30:53-654 R5 Ethernet Packet   Link   Recieved and accepted packet at interface 60:62:62:57:14:8C

22:30:53-654 R5 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:30:53-654 R5 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:30:53-654 R5 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.6.2).

22:30:53-654 R5 Ethernet Packet   Link   Sending packet from interface BD:7E:2C:5A:7B:64

22:30:53-654 R4 Ethernet Packet   Link   Recieved and accepted packet at interface AF:92:52:28:79:A4

22:30:53-654 R4 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:30:53-654 R4 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:30:53-654 R4 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.7.2).

22:30:53-654 R4 Ethernet Packet   Link   Sending packet from interface 8E:25:8F:2C:24:5B

22:30:53-654 R9 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
7A:6C:BC:95:C1:3B

22:30:53-654 R9 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:30:53-654 R9 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:30:53-654 R9 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.8.2).

22:30:53-654 R9 Ethernet Packet   Link   Sending packet from interface 3F:88:58:8B:27:99

22:30:53-654 pc3Ethernet Packet   Link   Recieved and accepted packet at interface C2:16:84:7F:9B:80

22:30:53-654 pc3ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:30:53-654 pc3ICMP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:30:53-654 pc3   Echo Reply Packet   Network   Echo reply packet received from 172.168.0.1

Выполнен Echo-запрос с К2 на К3.

Вывод программы:

22:31:27-422 pc2Echo Request Packet   Network   Created Echo Request packet to 172.168.8.2

22:31:27-422 pc2ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address
for IP 172.168.0.11

22:31:27-422 pc2ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:31:27-422 pc2Ethernet Packet   Link   Sending packet from interface 54:C2:BA:1B:84:68

22:31:27-422 pc1Ethernet Packet   Link   Recieved and accepted packet at interface 27:8B:67:76:14:8D

22:31:27-422 pc1ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R1 Ethernet Packet   Link   Recieved and accepted packet at interface 41:48:82:26:C1:24

22:31:27-422 R1 ARP_packet　　　　　Network　　　ProtocolStack received packet from local Interface.

22:31:27-422 R1 ARP_packet　　　　　Network　　　Confirmed Packet is for this Network Layer Device.

22:31:27-422 R1 ARP Response Packet　　　DataLink　　Created ARP Response packet to 172.168.0.2

22:31:27-422 R1 ARP_packet　　　　　Network　　　Sending packet from ProtocolStack (to 172.168.0.2).

22:31:27-422 R1 Ethernet Packet　　　Link　　　Sending packet from interface 41:48:82:26:C1:24

22:31:27-422 pc2Ethernet Packet　　　Link　　　Recieved　　and　　accepted　　packet　　at　　interface
54:C2:BA:1B:84:68

22:31:27-422 pc2ARP_packet　　　　　Network　　　ProtocolStack received packet from local Interface.

22:31:27-422 pc2ARP_packet　　　　　Network　　　Confirmed Packet is for this Network Layer Device.

22:31:27-422 pc1Ethernet Packet　　　Link　　　Recieved and dropped packet at interface 27:8B:67:76:14:8D

22:31:27-422 pc2ICMP_packet　　　　　Network　　　Sending packet from ProtocolStack (to 172.168.0.11).

22:31:27-422 pc2Ethernet Packet　　　Link　　　Sending packet from interface 54:C2:BA:1B:84:68

22:31:27-422 pc1Ethernet Packet　　　Link　　　Recieved and dropped packet at interface 27:8B:67:76:14:8D

22:31:27-422 R1 Ethernet Packet　　　Link　　　Recieved and accepted packet at interface 41:48:82:26:C1:24

22:31:27-422 R1 ICMP_packet　　　　　Network　　　ProtocolStack received packet from local Interface.

22:31:27-422 R1 ICMP_packet　　　　　Network　　　Packet Received: Network Layer Device is Routable
forwarding packet.

22:31:27-422 R1 ARP Discovery Packet　　　DataLink　　Created ARP discovery packet to source MAC address
for IP 172.168.100.2

22:31:27-422 R1 ARP_packet　　　　　Network　　　Sending broadcast packet from ProtocolStack.

22:31:27-422 R1 Ethernet Packet　　　Link　　　Sending packet from interface C0:3A:B0:3D:9B:91

22:31:27-422 R2 Ethernet Packet　　　Link　　　Recieved and accepted packet at interface 68:A1:7A:33:82:9B

22:31:27-422 R2 ARP_packet　　　　　Network　　　ProtocolStack received packet from local Interface.

22:31:27-422 R2 ARP_packet　　　　　Network　　　Confirmed Packet is for this Network Layer Device.

22:31:27-422 R2 ARP Response Packet　　　DataLink　　Created ARP Response packet to 172.168.100.1

22:31:27-422 R2 ARP_packet　　　　　Network　　　Sending packet from ProtocolStack (to 172.168.100.1).

22:31:27-422 R2 Ethernet Packet　　　Link　　　Sending packet from interface 68:A1:7A:33:82:9B

22:31:27-422 R1 Ethernet Packet　　　Link　　　Recieved　　and　　accepted　　packet　　at　　interface
C0:3A:B0:3D:9B:91

22:31:27-422 R1 ARP_packet　　　　　Network　　　ProtocolStack received packet from local Interface.

22:31:27-422 R1 ARP_packet　　　　　Network　　　Confirmed Packet is for this Network Layer Device.

22:31:27-422 R1 ICMP_packet　　　　　Network　　　Forwarding packet from ProtocolStack(to 172.168.100.2).

22:31:27-422 R1 Ethernet Packet　　　Link　　　Sending packet from interface C0:3A:B0:3D:9B:91

22:31:27-422 R2 Ethernet Packet　　　Link　　　Recieved and accepted packet at interface 68:A1:7A:33:82:9B

22:31:27-422 R2 ICMP_packet　　　　　Network　　　ProtocolStack received packet from local Interface.

22:31:27-422 R2 ICMP_packet　　　　　Network　　　Packet Received: Network Layer Device is Routable
forwarding packet.

22:31:27-422 R2 ARP Discovery Packet　　　DataLink　　Created ARP discovery packet to source MAC address
for IP 172.168.1.2

22:31:27-422 R2 ARP_packet　　　　　Network　　　Sending broadcast packet from ProtocolStack.

22:31:27-422 R2 Ethernet Packet　　　Link　　　Sending packet from interface 6F:A9:87:34:99:47

22:31:27-422 R3 Ethernet Packet　　　Link　　　Recieved and accepted packet at interface B5:74:24:66:B4:A2

22:31:27-422 R3 ARP_packet　　　　　Network　　　ProtocolStack received packet from local Interface.

22:31:27-422 R3 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R3 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.1.1

22:31:27-422 R3 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.1.1).

22:31:27-422 R3 Ethernet Packet   Link   Sending packet from interface B5:74:24:66:B4:A2

22:31:27-422 R2 Ethernet Packet   Link   Recieved and accepted packet at interface 6F:A9:87:34:99:47

22:31:27-422 R2 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R2 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R2 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.1.2).

22:31:27-422 R2 Ethernet Packet   Link   Sending packet from interface 6F:A9:87:34:99:47

22:31:27-422 R3 Ethernet Packet   Link   Recieved and accepted packet at interface B5:74:24:66:B4:A2

22:31:27-422 R3 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R3 ICMP_packet   Network   Packet Received: Network Layer Device is Routable forwarding packet.

22:31:27-422 R3 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.2.1

22:31:27-422 R3 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:31:27-422 R3 Ethernet Packet   Link   Sending packet from interface 11:25:14:C2:C5:C2

22:31:27-422 R8 Ethernet Packet   Link   Recieved and accepted packet at interface 2B:55:76:64:49:27

22:31:27-422 R8 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R8 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R8 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.2.2

22:31:27-422 R8 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.2.2).

22:31:27-422 R8 Ethernet Packet   Link   Sending packet from interface 2B:55:76:64:49:27

22:31:27-422 R3 Ethernet Packet   Link   Recieved and accepted packet at interface 11:25:14:C2:C5:C2

22:31:27-422 R3 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R3 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R3 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.2.1).

22:31:27-422 R3 Ethernet Packet   Link   Sending packet from interface 11:25:14:C2:C5:C2

22:31:27-422 R8 Ethernet Packet   Link   Recieved and accepted packet at interface 2B:55:76:64:49:27

22:31:27-422 R8 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R8 ICMP_packet   Network   Packet Received: Network Layer Device is Routable forwarding packet.

22:31:27-422 R8 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address for IP 172.168.3.2

22:31:27-422 R8 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:31:27-422 R8 Ethernet Packet   Link   Sending packet from interface 8C:8B:6A:34:60:98

22:31:27-422 R7 Ethernet Packet   Link   Recieved and accepted packet at interface 4D:87:56:25:4A:9A

22:31:27-422 R7 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R7 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R7 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.3.1

22:31:27-422 R7 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.3.1).

22:31:27-422 R7 Ethernet Packet   Link   Sending packet from interface 4D:87:56:25:4A:9A

22:31:27-422 R8 Ethernet Packet   Link   Recieved and accepted packet at interface 8C:8B:6A:34:60:98

22:31:27-422 R8 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R8 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R8 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.3.2).

22:31:27-422 R8 Ethernet Packet   Link   Sending packet from interface 8C:8B:6A:34:60:98

22:31:27-422 R7 Ethernet Packet   Link   Recieved and accepted packet at interface 4D:87:56:25:4A:9A

22:31:27-422 R7 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R7 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:31:27-422 R7 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address
for IP 172.168.4.2

22:31:27-422 R7 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:31:27-422 R7 Ethernet Packet   Link   Sending packet from interface 20:29:BE:3E:6C:25

22:31:27-422 R6 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
4C:AC:BC:90:91:3C

22:31:27-422 R6 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R6 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R6 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.4.1

22:31:27-422 R6 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.4.1).

22:31:27-422 R6 Ethernet Packet   Link   Sending packet from interface 4C:AC:BC:90:91:3C

22:31:27-422 R7 Ethernet Packet   Link   Recieved and accepted packet at interface 20:29:BE:3E:6C:25

22:31:27-422 R7 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R7 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R7 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.4.2).

22:31:27-422 R7 Ethernet Packet   Link   Sending packet from interface 20:29:BE:3E:6C:25

22:31:27-422 R6 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface
4C:AC:BC:90:91:3C

22:31:27-422 R6 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R6 ICMP_packet   Network   Packet Received: Network Layer Device is Routable
forwarding packet.

22:31:27-422 R6 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address
for IP 172.168.5.2

22:31:27-422 R6 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:31:27-422 R6 Ethernet Packet   Link   Sending packet from interface 20:58:78:27:9D:4B

22:31:27-422 R5 Ethernet Packet   Link   Recieved and accepted packet at interface 60:62:62:57:14:8C

22:31:27-422 R5 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R5 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R5 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.5.1

22:31:27-422 R5 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.5.1).

22:31:27-422 R5 Ethernet Packet   Link   Sending packet from interface 60:62:62:57:14:8C

22:31:27-422 R6 Ethernet Packet   Link   Recieved and accepted packet at interface 20:58:78:27:9D:4B

22:31:27-422 R6 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-422 R6 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-422 R6 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.5.2).

22:31:27-422 R6 Ethernet Packet   Link   Sending packet from interface 20:58:78:27:9D:4B

22:31:27-422 R5 Ethernet Packet   Link   Recieved and accepted packet at interface 60:62:62:57:14:8C

22:31:27-422 R5 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-430 R5 ICMP_packet   Network   Packet Received: Network Layer Device is Routable

forwarding packet.

22:31:27-430 R5 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address

for IP 172.168.6.2

22:31:27-430 R5 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:31:27-430 R5 Ethernet Packet   Link   Sending packet from interface BD:7E:2C:5A:7B:64

22:31:27-430 R4 Ethernet Packet   Link   Recieved and accepted packet at interface AF:92:52:28:79:A4

22:31:27-430 R4 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-430 R4 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-431 R4 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.6.1

22:31:27-431 R4 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.6.1).

22:31:27-431 R4 Ethernet Packet   Link   Sending packet from interface AF:92:52:28:79:A4

22:31:27-431 R5 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface

BD:7E:2C:5A:7B:64

22:31:27-431 R5 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-431 R5 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-431 R5 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.6.2).

22:31:27-431 R5 Ethernet Packet   Link   Sending packet from interface BD:7E:2C:5A:7B:64

22:31:27-431 R4 Ethernet Packet   Link   Recieved and accepted packet at interface AF:92:52:28:79:A4

22:31:27-431 R4 ICMP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-431 R4 ICMP_packet   Network   Packet Received: Network Layer Device is Routable

forwarding packet.

22:31:27-431 R4 ARP Discovery Packet   DataLink   Created ARP discovery packet to source MAC address

for IP 172.168.7.2

22:31:27-431 R4 ARP_packet   Network   Sending broadcast packet from ProtocolStack.

22:31:27-431 R4 Ethernet Packet   Link   Sending packet from interface 8E:25:8F:2C:24:5B

22:31:27-431 R9 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface

7A:6C:BC:95:C1:3B

22:31:27-432 R9 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-432 R9 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-432 R9 ARP Response Packet   DataLink   Created ARP Response packet to 172.168.7.1

22:31:27-432 R9 ARP_packet   Network   Sending packet from ProtocolStack (to 172.168.7.1).

22:31:27-432 R9 Ethernet Packet   Link   Sending packet from interface 7A:6C:BC:95:C1:3B

22:31:27-432 R4 Ethernet Packet   Link   Recieved and accepted packet at interface 8E:25:8F:2C:24:5B

22:31:27-432 R4 ARP_packet   Network   ProtocolStack received packet from local Interface.

22:31:27-432 R4 ARP_packet   Network   Confirmed Packet is for this Network Layer Device.

22:31:27-432 R4 ICMP_packet   Network   Forwarding packet from ProtocolStack(to 172.168.7.2).

22:31:27-432 R4 Ethernet Packet   Link   Sending packet from interface 8E:25:8F:2C:24:5B

22:31:27-432 R9 Ethernet Packet   Link   Recieved   and   accepted   packet   at   interface

7A:6C:BC:95:C1:3B

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22:31:27-432 R9 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432 R9 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432 R9 ARP Discovery Packet	DataLink	Created ARP discovery packet to source MAC address for IP 172.168.8.2
22:31:27-432 R9 ARP_packet	Network	Sending broadcast packet from ProtocolStack.
22:31:27-432 R9 Ethernet Packet	Link	Sending packet from interface 3F:88:58:8B:27:99
22:31:27-432 pc3 Ethernet Packet	Link	Recieved and accepted packet at interface C2:16:84:7F:9B:80
22:31:27-432 pc3 ARP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432 pc3 ARP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:31:27-432 pc3 ARP Response Packet	DataLink	Created ARP Response packet to 172.168.8.1
22:31:27-432 pc3 ARP_packet	Network	Sending packet from ProtocolStack (to 172.168.8.1).
22:31:27-432 pc3 Ethernet Packet	Link	Sending packet from interface C2:16:84:7F:9B:80
22:31:27-432 R9 Ethernet Packet	Link	Recieved and accepted packet at interface 3F:88:58:8B:27:99
22:31:27-432 R9 ARP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432 R9 ARP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:31:27-432 R9 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.8.2).
22:31:27-432 R9 Ethernet Packet	Link	Sending packet from interface 3F:88:58:8B:27:99
22:31:27-432 pc3 Ethernet Packet	Link	Recieved and accepted packet at interface C2:16:84:7F:9B:80
22:31:27-432 pc3 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432 pc3 ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:31:27-432 pc3 Echo Reply Packet	Network	Created Echo Reply packet to 172.168.0.2
22:31:27-432 pc3 ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.8.1).
22:31:27-432 pc3 Ethernet Packet	Link	Sending packet from interface C2:16:84:7F:9B:80
22:31:27-432 R9 Ethernet Packet	Link	Recieved and accepted packet at interface 3F:88:58:8B:27:99
22:31:27-432 R9 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432 R9 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432 R9 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.7.1).
22:31:27-432 R9 Ethernet Packet	Link	Sending packet from interface 7A:6C:BC:95:C1:3B
22:31:27-432 R4 Ethernet Packet	Link	Recieved and accepted packet at interface 8E:25:8F:2C:24:5B
22:31:27-432 R4 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432 R4 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432 R4 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.6.1).
22:31:27-432 R4 Ethernet Packet	Link	Sending packet from interface AF:92:52:28:79:A4
22:31:27-432 R5 Ethernet Packet	Link	Recieved and accepted packet at interface BD:7E:2C:5A:7B:64
22:31:27-432 R5 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432 R5 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432 R5 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.5.1).
22:31:27-432 R5 Ethernet Packet	Link	Sending packet from interface 60:62:62:57:14:8C

Time	Device	Packet	Layer	Message
22:31:27-432	R6	Ethernet Packet	Link	Recieved and accepted packet at interface 20:58:78:27:9D:4B
22:31:27-432	R6	ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432	R6	ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432	R6	ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.4.1).
22:31:27-432	R6	Ethernet Packet	Link	Sending packet from interface 4C:AC:BC:90:91:3C
22:31:27-432	R7	Ethernet Packet	Link	Recieved and accepted packet at interface 20:29:BE:3E:6C:25
22:31:27-432	R7	ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432	R7	ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432	R7	ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.3.1).
22:31:27-432	R7	Ethernet Packet	Link	Sending packet from interface 4D:87:56:25:4A:9A
22:31:27-432	R8	Ethernet Packet	Link	Recieved and accepted packet at interface 8C:8B:6A:34:60:98
22:31:27-432	R8	ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432	R8	ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432	R8	ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.2.2).
22:31:27-432	R8	Ethernet Packet	Link	Sending packet from interface 2B:55:76:64:49:27
22:31:27-432	R3	Ethernet Packet	Link	Recieved and accepted packet at interface 11:25:14:C2:C5:C2
22:31:27-432	R3	ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432	R3	ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432	R3	ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.1.1).
22:31:27-432	R3	Ethernet Packet	Link	Sending packet from interface B5:74:24:66:B4:A2
22:31:27-432	R2	Ethernet Packet	Link	Recieved and accepted packet at interface 6F:A9:87:34:99:47
22:31:27-432	R2	ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432	R2	ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432	R2	ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.100.1).
22:31:27-432	R2	Ethernet Packet	Link	Sending packet from interface 68:A1:7A:33:82:9B
22:31:27-432	R1	Ethernet Packet	Link	Recieved and accepted packet at interface C0:3A:B0:3D:9B:91
22:31:27-432	R1	ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432	R1	ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:27-432	R1	ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.0.2).
22:31:27-432	R1	Ethernet Packet	Link	Sending packet from interface 41:48:82:26:C1:24
22:31:27-432	pc2	Ethernet Packet	Link	Recieved and accepted packet at interface 54:C2:BA:1B:84:68
22:31:27-432	pc2	ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:27-432	pc2	ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:31:27-432	**pc2**	**Echo Reply Packet**	**Network**	**Echo reply packet received from 172.168.8.2**
22:31:27-432	pc1	Ethernet Packet	Link	Recieved and dropped packet at interface 27:8B:67:76:14:8D

Выполнен Echo-запрос с К3 на К2.

Вывод программы:

22:31:56-107 pc3Echo Request Packet　　　Network　　　　Created Echo Request packet to 172.168.0.2

22:31:56-107 pc3ICMP_packet　　　　　Network　　　　Sending packet from ProtocolStack (to 172.168.8.1).

22:31:56-107 pc3Ethernet Packet　　　Link　　Sending packet from interface C2:16:84:7F:9B:80

22:31:56-107 R9 Ethernet Packet　　　Link　　Recieved and accepted packet at interface 3F:88:58:8B:27:99

22:31:56-107 R9 ICMP_packet　　　　　Network　　　　ProtocolStack received packet from local Interface.

22:31:56-107 R9 ICMP_packet　　　　　Network　　　　Packet Received: Network Layer Device is Routable forwarding packet.

22:31:56-107 R9 ICMP_packet　　　　　Network　　　　Forwarding packet from ProtocolStack(to 172.168.7.1).

22:31:56-107 R9 Ethernet Packet　　　Link　　Sending packet from interface 7A:6C:BC:95:C1:3B

22:31:56-107 R4 Ethernet Packet　　　Link　　Recieved and accepted packet at interface 8E:25:8F:2C:24:5B

22:31:56-107 R4 ICMP_packet　　　　　Network　　　　ProtocolStack received packet from local Interface.

22:31:56-107 R4 ICMP_packet　　　　　Network　　　　Packet Received: Network Layer Device is Routable forwarding packet.

22:31:56-107 R4 ICMP_packet　　　　　Network　　　　Forwarding packet from ProtocolStack(to 172.168.6.1).

22:31:56-107 R4 Ethernet Packet　　　Link　　Sending packet from interface AF:92:52:28:79:A4

22:31:56-107 R5 Ethernet Packet　　　Link　　Recieved　and　accepted　packet　at　interface BD:7E:2C:5A:7B:64

22:31:56-107 R5 ICMP_packet　　　　　Network　　　　ProtocolStack received packet from local Interface.

22:31:56-107 R5 ICMP_packet　　　　　Network　　　　Packet Received: Network Layer Device is Routable forwarding packet.

22:31:56-107 R5 ICMP_packet　　　　　Network　　　　Forwarding packet from ProtocolStack(to 172.168.5.1).

22:31:56-107 R5 Ethernet Packet　　　Link　　Sending packet from interface 60:62:62:57:14:8C

22:31:56-107 R6 Ethernet Packet　　　Link　　Recieved and accepted packet at interface 20:58:78:27:9D:4B

22:31:56-107 R6 ICMP_packet　　　　　Network　　　　ProtocolStack received packet from local Interface.

22:31:56-107 R6 ICMP_packet　　　　　Network　　　　Packet Received: Network Layer Device is Routable forwarding packet.

22:31:56-107 R6 ICMP_packet　　　　　Network　　　　Forwarding packet from ProtocolStack(to 172.168.4.1).

22:31:56-107 R6 Ethernet Packet　　　Link　　Sending packet from interface 4C:AC:BC:90:91:3C

22:31:56-107 R7 Ethernet Packet　　　Link　　Recieved and accepted packet at interface 20:29:BE:3E:6C:25

22:31:56-107 R7 ICMP_packet　　　　　Network　　　　ProtocolStack received packet from local Interface.

22:31:56-107 R7 ICMP_packet　　　　　Network　　　　Packet Received: Network Layer Device is Routable forwarding packet.

22:31:56-107 R7 ICMP_packet　　　　　Network　　　　Forwarding packet from ProtocolStack(to 172.168.3.1).

22:31:56-107 R7 Ethernet Packet　　　Link　　Sending packet from interface 4D:87:56:25:4A:9A

22:31:56-107 R8 Ethernet Packet　　　Link　　Recieved and accepted packet at interface 8C:8B:6A:34:60:98

22:31:56-107 R8 ICMP_packet　　　　　Network　　　　ProtocolStack received packet from local Interface.

22:31:56-107 R8 ICMP_packet　　　　　Network　　　　Packet Received: Network Layer Device is Routable forwarding packet.

22:31:56-107 R8 ICMP_packet　　　　　Network　　　　Forwarding packet from ProtocolStack(to 172.168.2.2).

22:31:56-107 R8 Ethernet Packet　　　Link　　Sending packet from interface 2B:55:76:64:49:27

22:31:56-107 R3 Ethernet Packet	Link	Recieved and accepted packet at interface 11:25:14:C2:C5:C2
22:31:56-107 R3 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-108 R3 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-108 R3 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.1.1).
22:31:56-108 R3 Ethernet Packet	Link	Sending packet from interface B5:74:24:66:B4:A2
22:31:56-108 R2 Ethernet Packet	Link	Recieved and accepted packet at interface 6F:A9:87:34:99:47
22:31:56-108 R2 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-108 R2 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-108 R2 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.100.1).
22:31:56-108 R2 Ethernet Packet	Link	Sending packet from interface 68:A1:7A:33:82:9B
22:31:56-108 R1 Ethernet Packet	Link	Recieved and accepted packet at interface C0:3A:B0:3D:9B:91
22:31:56-108 R1 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-108 R1 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-108 R1 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.0.2).
22:31:56-108 R1 Ethernet Packet	Link	Sending packet from interface 41:48:82:26:C1:24
22:31:56-108 pc2Ethernet Packet	Link	Recieved and accepted packet at interface 54:C2:BA:1B:84:68
22:31:56-108 pc2ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-108 pc2ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.
22:31:56-108 pc2Echo Reply Packet	Network	Created Echo Reply packet to 172.168.8.2
22:31:56-108 pc2ICMP_packet	Network	Sending packet from ProtocolStack (to 172.168.0.11).
22:31:56-108 pc2Ethernet Packet	Link	Sending packet from interface 54:C2:BA:1B:84:68
22:31:56-108 pc1Ethernet Packet	Link	Recieved and dropped packet at interface 27:8B:67:76:14:8D
22:31:56-108 R1 Ethernet Packet	Link	Recieved and accepted packet at interface 41:48:82:26:C1:24
22:31:56-108 R1 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-108 R1 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-108 R1 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.100.2).
22:31:56-108 R1 Ethernet Packet	Link	Sending packet from interface C0:3A:B0:3D:9B:91
22:31:56-109 R2 Ethernet Packet	Link	Recieved and accepted packet at interface 68:A1:7A:33:82:9B
22:31:56-109 R2 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R2 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-109 R2 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.1.2).
22:31:56-109 R2 Ethernet Packet	Link	Sending packet from interface 6F:A9:87:34:99:47
22:31:56-109 R3 Ethernet Packet	Link	Recieved and accepted packet at interface B5:74:24:66:B4:A2
22:31:56-109 R3 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R3 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.

22:31:56-109 R3 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.2.1).
22:31:56-109 R3 Ethernet Packet	Link	Sending packet from interface 11:25:14:C2:C5:C2
22:31:56-109 R8 Ethernet Packet	Link	Recieved and accepted packet at interface 2B:55:76:64:49:27
22:31:56-109 R8 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R8 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-109 R8 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.3.2).
22:31:56-109 R8 Ethernet Packet	Link	Sending packet from interface 8C:8B:6A:34:60:98
22:31:56-109 R7 Ethernet Packet	Link	Recieved and accepted packet at interface 4D:87:56:25:4A:9A
22:31:56-109 R7 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R7 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-109 R7 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.4.2).
22:31:56-109 R7 Ethernet Packet	Link	Sending packet from interface 20:29:BE:3E:6C:25
22:31:56-109 R6 Ethernet Packet	Link	Recieved and accepted packet at interface 4C:AC:BC:90:91:3C
22:31:56-109 R6 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R6 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-109 R6 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.5.2).
22:31:56-109 R6 Ethernet Packet	Link	Sending packet from interface 20:58:78:27:9D:4B
22:31:56-109 R5 Ethernet Packet	Link	Recieved and accepted packet at interface 60:62:62:57:14:8C
22:31:56-109 R5 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R5 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-109 R5 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.6.2).
22:31:56-109 R5 Ethernet Packet	Link	Sending packet from interface BD:7E:2C:5A:7B:64
22:31:56-109 R4 Ethernet Packet	Link	Recieved and accepted packet at interface AF:92:52:28:79:A4
22:31:56-109 R4 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R4 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-109 R4 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.7.2).
22:31:56-109 R4 Ethernet Packet	Link	Sending packet from interface 8E:25:8F:2C:24:5B
22:31:56-109 R9 Ethernet Packet	Link	Recieved and accepted packet at interface 7A:6C:BC:95:C1:3B
22:31:56-109 R9 ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 R9 ICMP_packet	Network	Packet Received: Network Layer Device is Routable forwarding packet.
22:31:56-109 R9 ICMP_packet	Network	Forwarding packet from ProtocolStack(to 172.168.8.2).
22:31:56-109 R9 Ethernet Packet	Link	Sending packet from interface 3F:88:58:8B:27:99
22:31:56-109 pc3Ethernet Packet	Link	Recieved and accepted packet at interface C2:16:84:7F:9B:80
22:31:56-109 pc3ICMP_packet	Network	ProtocolStack received packet from local Interface.
22:31:56-109 pc3ICMP_packet	Network	Confirmed Packet is for this Network Layer Device.

22:31:56-109 pc3   Echo Reply Packet   Network   Echo reply packet received from 172.168.0.2

22:31:56-109 pc1Ethernet Packet   Link   Recieved and dropped packet at interface 27:8B:67:76:14:8D

3. Настройка таблицы маршрутизации на узлах К1, К2 и К3 не требуется.

Выводы.

Были изучены и практически освоены основы статической маршрутизации на узлах сетевого уровня в IP-сетях.