



Рис.1. Схема сети.

Сведения о конфигурации устройств

| Устр-во | Интерфейс | IP-адрес | Маска подсети | Шлюз |
|---------|-----------|--------------|---------------|-------------|
| R1 | F0/0 | 192.168.5.1 | 255.255.255.0 | - |
| | F0/1 | 172.16.5.1 | 255.255.255.0 | - |
| R0 | F0/1 | 172.16.5.2 | 255.255.255.0 | - |
| | F0/0 | 172.17.5.1 | 255.255.255.0 | - |
| | E0/1/0 | 10.0.1.2 | 255.255.255.0 | - |
| PC 0 | NIC | 192.168.5.2 | 255.255.255.0 | 192.168.5.1 |
| PC 1 | NIC | 192.168.5.3 | 255.255.255.0 | 192.168.5.1 |
| PC 2 | NIC | 172.17.5.254 | 255.255.255.0 | 172.17.5.1 |
| CorpWeb | NIC | 172.17.5.252 | 255.255.255.0 | 172.17.5.1 |
| CorpDNS | NIC | 172.17.2.253 | 255.255.255.0 | 172.17.5.1 |
| InetUsr | NIC | 192.168.1.3 | 255.255.255.0 | 192.168.1.1 |
| InetSrv | NIC | 192.168.1.2 | 255.255.255.0 | 192.168.1.1 |

Сведения о настроенных NAT

| Устр-во | Интерфейс | Интерфейс outside | Команды конфигурирования NAT (включая пул и ACL) |
|---------|-----------|-------------------|---|
|---------|-----------|-------------------|---|

| | inside | e | |
|----|---------------|--------------|---|
| R1 | F0/0 | F0/1 | <pre> ! ip dhcp excluded-address 192.168.5.1 ! ip dhcp pool LAN_A_DHCP network 192.168.5.0 255.255.255.0 default-router 192.168.5.1 dns-server 172.17.5.253 ! ip nat pool LAN_A_Translate 172.16.5.100 172.16.5.200 netmask 255.255.255.0 ip nat inside source list LAN_A_SETUP pool LAN_A_Translate ip classless ip route 0.0.0.0 0.0.0.0 FastEthernet0/1 ip access-list extended LAN_A_SETUP permit ip 192.168.5.0 0.0.0.255 any </pre> |
| R0 | F0/1, F0/0 | Eth0/1 /0 | <pre> ip nat inside source list LAN_B_SETUP interface Ethernet0/1/0 overload ip nat inside source list corp_nat_setup interface Ethernet0/1/0 overload ip nat inside source static 172.17.5.252 10.0.1.103 ip nat inside source static 172.17.5.253 10.0.1.104 ip classless ip route 0.0.0.0 0.0.0.0 Ethernet0/1/0 ip access-list extended corp_nat_setup permit ip 172.16.5.0 0.0.0.255 any ip access-list extended LAN_B_SETUP permit ip 172.17.5.0 0.0.0.255 any </pre> |

Анализ пакетов в режиме симуляции

PC0 – www.corp.com

| На устройстве | Source IP | Destination IP | Тип NAT |
|---------------|--------------|----------------|--------------|
| PC0 - out | 192.168.5.2 | 172.17.5.252 | |
| R1 - in | 192.168.5.2 | 172.17.5.252 | динамический |
| R1 - out | 172.16.5.100 | 172.17.5.252 | |
| R0 - in | 172.16.5.100 | 172.17.5.252 | |
| R0 - out | 172.16.5.100 | 172.17.5.252 | |
| CorpWeb - in | 172.16.5.100 | 172.17.5.252 | |
| CorpWeb - out | 172.17.5.252 | 172.16.2.100 | |
| R0 - in | 172.17.5.252 | 172.16.2.100 | |
| R0 - out | 172.17.5.252 | 172.16.2.100 | динамический |
| R1 - in | 172.17.5.252 | 172.16.2.100 | |
| R1 - out | 172.17.5.252 | 192.168.5.2 | |
| P0 - in | 172.17.5.252 | 192.168.5.2 | |

PC0 – internet.com

| На устройстве | Source IP | Destination IP | Тип NAT |
|---------------|--------------|----------------|---------------|
| PC0 - out | 192.168.5.2 | 10.0.2.99 | |
| R1 - in | 192.168.5.2 | 10.0.2.99 | динамический |
| R1 - out | 172.16.5.100 | 10.0.2.99 | |
| R0 - in | 172.16.5.100 | 10.0.2.99 | перегруженный |
| R0 - out | 10.0.1.2 | 10.0.2.99 | |
| ISP - in | 10.0.1.2 | 10.0.2.99 | |
| ISP - out | 10.0.1.2 | 10.0.2.99 | |
| InetSrv - in | 10.0.2.99 | 192.168.1.2 | |
| InetSrv - out | 192.168.1.2 | 10.0.1.2 | |
| ISP - in | 10.0.2.99 | 10.0.1.2 | |
| ISP - out | 10.0.2.99 | 10.0.1.2 | |
| R0 - in | 10.0.2.99 | 10.0.1.2 | перегруженный |
| R0 - out | 10.0.2.99 | 172.16.5.100 | |
| R1 - in | 10.0.2.99 | 172.16.5.100 | динамический |
| R1 - out | 10.0.2.99 | 192.168.5.2 | |
| PC0 - in | 10.0.2.99 | 192.168.5.2 | |

PC2 – www.corp.com

| На устройстве | Source IP | Destination IP | Тип NAT |
|---------------|--------------|----------------|---------|
| PC2 - out | 172.17.5.254 | 172.17.5.252 | |
| CorpWeb - in | 172.17.5.254 | 172.17.5.252 | |
| CorpWeb - out | 172.17.5.252 | 172.17.5.254 | |
| PC2 - in | 172.17.5.252 | 172.17.5.254 | |

PC2 – internet.com

| На устройстве | Source IP | Destination IP | Тип NAT |
|---------------|--------------|----------------|---------------|
| PC2 - out | 172.17.5.254 | 10.0.2.99 | |
| R0 - in | 172.17.5.254 | 10.0.2.99 | перегруженный |
| R0 - out | 10.0.1.2 | 10.0.2.99 | |
| ISP - in | 10.0.1.2 | 10.0.2.99 | |
| ISP - out | 10.0.1.2 | 10.0.2.99 | |
| InetSrv - in | 10.0.1.2 | 192.168.1.2 | |
| InetSrv - out | 192.168.1.2 | 10.0.1.2 | |
| ISP - in | 10.0.2.99 | 10.0.1.2 | |
| ISP - out | 10.0.2.99 | 10.0.1.2 | |
| R0 - in | 10.0.2.99 | 10.0.1.2 | перегруженный |
| R0 - out | 10.0.2.99 | 172.17.5.254 | |
| PC2 - in | 10.0.2.99 | 172.17.5.254 | |

InetUsr – www.corp.com

| На устройстве | Source IP | Destination IP | Тип NAT |
|---------------|--------------|----------------|---------------|
| InetUsr - out | 192.168.1.3 | 10.0.1.103 | |
| ISP - in | 10.0.2.2 | 10.0.1.103 | |
| ISP - out | 10.0.2.2 | 10.0.1.103 | |
| R0 - in | 10.0.2.2 | 10.0.1.103 | перегруженный |
| R0 - out | 10.0.2.2 | 172.17.5.252 | |
| CorpWeb - in | 10.0.2.2 | 172.17.5.252 | |
| CorpWeb - out | 172.17.5.252 | 10.0.2.2 | |
| R0 - in | 172.17.5.252 | 10.0.2.2 | перегруженный |
| R0 - out | 10.0.1.103 | 10.0.2.2 | |
| ISP - in | 10.0.1.103 | 10.0.2.2 | |
| ISP - out | 10.0.1.103 | 10.0.2.2 | |
| InetUsr - in | 10.0.1.103 | 192.168.1.3 | |

InetUsr – internet.com

| На устройстве | Source IP | Destination IP | Тип NAT |
|---------------|-------------|----------------|---------|
| InetUsr - out | 192.168.1.3 | 192.168.1.2 | |
| InetSrv - in | 192.168.1.3 | 192.168.1.2 | |
| InetSrv - out | 192.168.1.2 | 192.168.1.3 | |
| InetUsr - in | 192.168.1.2 | 192.168.1.3 | |