

**МИНОБРНАУКИ РОССИИ**

**федеральное государственное бюджетное образовательное учреждение**

**высшего образования**

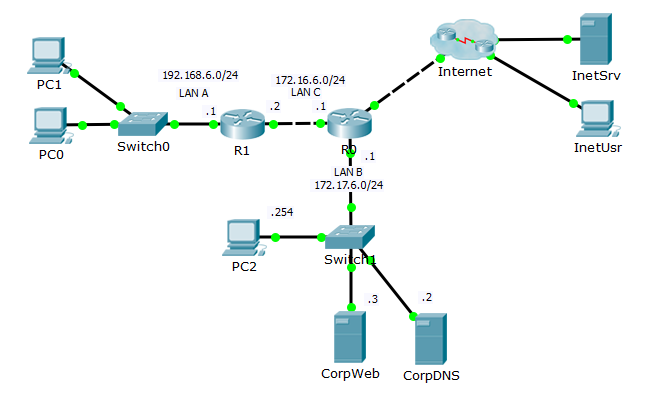
**«Московский государственный технологический университет «СТАНКИН»**

**(ФГБОУ ВО «МГТУ «СТАНКИН»)**

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| **Институт  информационных технологий** | **Кафедра информационных систем** |

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| **Основная образовательная программа 09.03.02 «Информационные системы и технологии»**  **Отчет по дисциплине «Информационно-телекоммуникационные сети»** | | | |
| **по лабораторной работе №6** | | | |
| **Тема «Трансляция сетевых адресов»**  **Вариант № 6** | | |
|  | | |
| **Проверил**  **преподаватель** |  | **Сосенушкин С.Е.** |
|  | подпись |  |
| **Выполнил**  **студент группы ИДБ-22-06** |  | **Мустафаева П.М.** |
|  | подпись |  |

## Схема сети



### 6.6.1. Сведения о конфигурации устройств

| Устр-во | Интерфейс | IP-адрес | Маска подсети | Шлюз |
| --- | --- | --- | --- | --- |
| R1 | fa0/0 | 192.168.6.1 | 255.255.255.0 |  |
| fa0/1 | 172.16.6.2 | 255.255.255.0 |  |
| R0 | fa0/0 | 172.17.6.1 | 255.255.255.0 |  |
| fa0/1 | 172.16.6.1 | 255.255.255.0 |  |
| Eth0/1/0 | 10.0.1.2 | 255.255.255.0 |  |
| PC 0 | NIC | 192.168.6.3 | 255.255.255.0 | 192.168.6.1 |
| PC 1 | NIC | 192.168.6.2 | 255.255.255.0 | 192.168.6.1 |
| PC 2 | NIC | 172.17.6.254 | 255.255.255.0 | 172.17.6.1 |
| CorpWeb | NIC | 172.17.6.3 | 255.255.255.0 | 172.17.6.1 |
| CorpDNS | NIC | 172.17.6.2 | 255.255.255.0 | 172.17.6.1 |
| 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 |

### 6.6.2. Сведения о настроенных NAT

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| --- | --- | --- | --- |
| Устр-во | Интер-фейс inside | Интер-фейс outside | Команды конфигурирования NAT  (включая пул и ACL) |
| R1 | F0/0 | F0/1 | ip nat pool LanANatPool 172.16.6.100 172.16.6.200 netmask 255.255.255.0  ip nat inside source list LanANatAcl pool LanANatPool  ip access-list extended LanANatAcl  permit ip 192.168.6.0 0.0.0.255 any |
| R0 | F0/0, F0/1 | E0/1/1 | ip nat inside source list CorpNatList interface Ethernet0/1/0 overload  ip nat inside source static 172.17.6.3 10.0.1.103  ip access-list extended CorpNatList  permit ip 172.16.0.0 0.15.255.255 any |

### 6.6.3. Анализ пакетов в режиме симуляции

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| --- | --- | --- | --- |
| **PC0 – www.corp.com** | | | |
| На устройстве | Source IP | Destination IP | Тип NAT |
| PC0 | 192.168.6.3 | 172.17.6.2 |  |
| R1(in) | 192.168.6.3 | 172.17.6.2 |  |
| R1(out) | 172.16.6.100 | 172.17.6.2 | Dinamic |
| R0(in) | 172.16.6.100 | 172.17.6.2 |  |
| R0(out) | 172.16.6.100 | 172.17.6.2 |  |
| corpDNS(in) | 172.16.6.100 | 172.17.6.2 |  |
| corpDNS(out) | 172.17.6.2 | 172.16.6.100 |  |
| R0(in) | 172.17.6.2 | 172.16.6.100 |  |
| R0(out) | 172.17.6.2 | 172.16.6.100 |  |
| R1(in) | 172.17.6.2 | 172.16.6.100 |  |
| R1(out) | 172.17.6.2 | 192.168.6.3 | Dinamic |
| PC0(in) | 172.17.6.2 | 192.168.6.3 |  |
| PC0(out) | 192.168.6.3 | 172.17.6.3 |  |
| R1(in) | 192.168.6.3 | 172.17.6.3 |  |
| R1(out) | 172.16.6.100 | 172.17.6.3 | Dinamic |
| R0(in) | 172.16.6.100 | 172.17.6.3 |  |
| R0(out) | 172.16.6.100 | 172.17.6.3 |  |
| CorpWeb(in) | 172.16.6.100 | 172.17.6.3 |  |
| CorpWeb(out) | 172.17.6.3 | 172.16.6.100 |  |
| R0(in) | 172.17.6.3 | 172.16.6.100 |  |
| R0(out) | 172.17.6.3 | 172.16.6.100 |  |
| R1(in) | 172.17.6.3 | 172.16.6.100 |  |
| R1(out) | 172.17.6.3 | 192.168.6.3 | Dinamic |
| PC0 | 172.17.6.3 | 192.168.6.3 |  |
| **PC0 – internet.com** | | | |
| На устройстве | Source IP | Destination IP | Тип NAT |
| PC0 | 192.168.6.3 | 172.17.6.2 |  |
| R1(in) | 192.168.6.3 | 172.17.6.2 |  |
| R1(out) | 172.16.6.100 | 172.17.6.2 | Dinamic |
| R0(in) | 172.16.6.100 | 172.17.6.2 |  |
| R0(out) | 172.16.6.100 | 172.17.6.2 |  |
| corpDNS(in) | 172.16.6.100 | 172.17.6.2 |  |
| corpDNS(out) | 172.17.6.2 | 172.16.6.100 |  |
| R0(in) | 172.17.6.2 | 172.16.6.100 |  |
| R0(out) | 172.17.6.2 | 172.16.6.100 |  |
| R1(in) | 172.17.6.2 | 172.16.6.100 |  |
| R1(out) | 172.17.6.2 | 192.168.6.3 | Dinamic |
| PC0(in) | 172.17.6.2 | 192.168.6.3 |  |
| PC0(out) | 192.168.6.3 | 10.0.2.99 |  |
| R1(in) | 192.168.6.3 | 10.0.2.99 |  |
| R1(out) | 172.16.6.100 | 10.0.2.99 | Dinamic |
| R0(in) | 172.16.6.100 | 10.0.2.99 |  |
| R0(out) | 10.0.1.2 | 10.0.2.99 | PAT |
| ISP | 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 | 10.0.2.99 | 10.0.1.2 |  |
| R0(in) | 10.0.2.99 | 10.0.1.2 |  |
| R0(out) | 10.0.2.99 | 172.16.6.100 | Dinamic |
| R1(in) | 10.0.2.99 | 172.16.6.100 |  |
| R1(out) | 10.0.2.99 | 192.168.6.3 |  |
| PC0 | 10.0.2.99 | 192.168.6.3 |  |

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| **PC2 – www.corp.com** | | | |
| На устройстве | Source IP | Destination IP | Тип NAT |
| PC2 | 172.17.6.254 | 172.17.6.2 |  |
| CorpDNS(in) | 172.17.6.254 | 172.17.6.2 |  |
| CorpDNS(out) | 172.17.6.2 | 172.17.6.254 |  |
| PC2(in) | 172.17.6.2 | 172.17.6.254 |  |
| PC2(out) | 172.17.6.254 | 172.17.6.3 |  |
| CorpWeb(in) | 172.17.6.254 | 172.17.6.3 |  |
| CorpWeb(out) | 172.17.6.3 | 172.17.6.254 |  |
| PC2 | 172.17.6.3 | 172.17.6.254 |  |
| **PC2 – internet.com** | | | |
| На устройстве | Source IP | Destination IP | Тип NAT |
| PC2 | 172.17.6.254 | 172.17.6.2 |  |
| CorpDNS(in) | 172.17.6.254 | 172.17.6.2 |  |
| CorpDNS(out) | 172.17.6.2 | 172.17.6.254 |  |
| PC2(in) | 172.17.6.2 | 172.17.6.254 |  |
| PC2(out) | 172.17.6.254 | 10.0.2.99 |  |
| R0(in) | 172.17.6.254 | 10.0.2.99 |  |
| R0(out) | 10.0.1.2 | 10.0.2.99 | PAT |
| ISP | 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 | 10.0.2.99 | 10.0.1.2 |  |
| R0(in) | 10.0.2.99 | 10.0.1.2 |  |
| R0(out) | 10.0.2.99 | 172.17.6.254 | Dinamic |
| PC2 | 10.0.2.99 | 172.17.6.254 |  |
| **InetUsr – www.corp.com** | | | |
| На устройстве | Source IP | Destination IP | Тип NAT |
| InetUsr | 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 |  |
| InetUst(out) | 192.168.1.3 | 10.0.1.103 |  |
| ISP | 10.0.2.2 | 10.0.1.103 |  |
| R0(in) | 10.0.2.2 | 10.0.1.103 |  |
| R0(out) | 10.0.2.2 | 172.17.6.3 | Static |
| CorpWeb(in) | 10.0.2.2 | 172.17.6.3 |  |
| CorpWeb(out) | 172.17.6.3 | 10.0.2.2 |  |
| R0(in) | 172.17.6.3 | 10.0.2.2 |  |
| R0(out) | 10.0.1.103 | 10.0.2.2 | PAT |
| ISP | 10.0.1.103 | 10.0.2.2 |  |
| InetUsr | 10.0.1.103 | 192.168.1.3 |  |
| **InetUsr – internet.com** | | | |
| На устройстве | Source IP | Destination IP | Тип NAT |
| InetUsr | 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 | 192.168.1.2 | 192.168.1.3 |  |