

Лабораторная работа № 10

Настройка списков управления доступом (ACL)

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Цель

Освоить настройку прав доступа пользователей к ресурсам сети.

Задание

1. Требуется настроить правила доступа.
2. Требуется проверить правильность действия установленных правил доступа.
3. Требуется выполнить задание для самостоятельной работы по настройке прав доступа администратора сети на Павловской.
4. При выполнении работы необходимо учитывать соглашение об именовании.

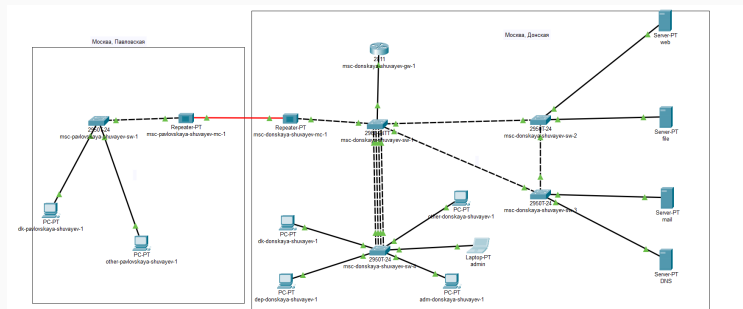


Figure 1: Размещение ноутбука администратора в сети other-donskaya-1

Выполнение лабораторной работы

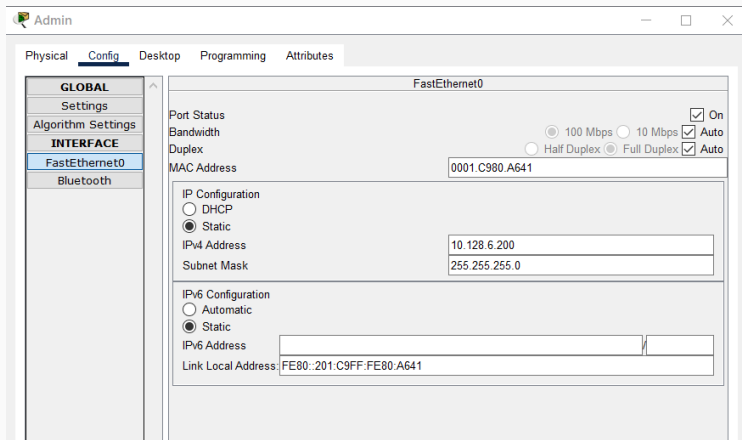


Figure 2: Задание статического ip-адреса ноутбуку admin

Выполнение лабораторной работы

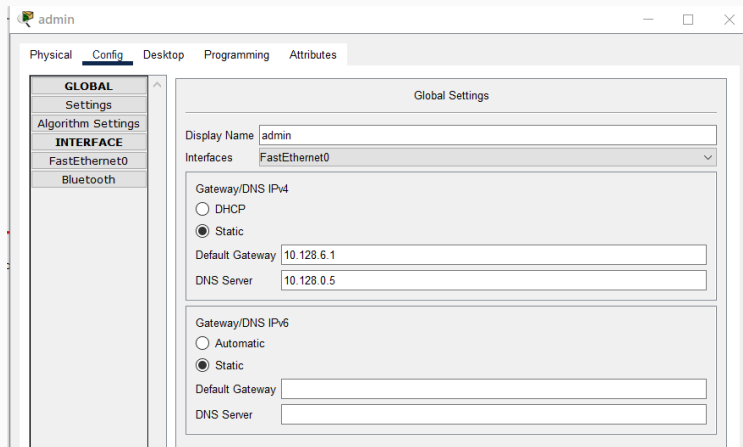


Figure 3: Задание gateway-адреса и адреса DNS-сервера ноутбуку admin

```
C:\>ping 10.128.0.5
```

```
Pinging 10.128.0.5 with 32 bytes of data:
```

```
Reply from 10.128.0.5: bytes=32 time<1ms TTL=127
```

```
Reply from 10.128.0.5: bytes=32 time<1ms TTL=127
```

```
Reply from 10.128.0.5: bytes=32 time=1ms TTL=127
```

```
Reply from 10.128.0.5: bytes=32 time<1ms TTL=127
```

```
Ping statistics for 10.128.0.5:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

```
C:\>ping 10.128.0.2
```

```
Pinging 10.128.0.2 with 32 bytes of data:
```

```
Reply from 10.128.0.2: bytes=32 time<1ms TTL=127
```

```
Reply from 10.128.0.2: bytes=32 time<1ms TTL=127
```

```
Reply from 10.128.0.2: bytes=32 time<1ms TTL=127
```

```
Reply from 10.128.0.2: bytes=32 time=1ms TTL=127
```

```
Ping statistics for 10.128.0.2:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```



```
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark web
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.2 eq 80
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#
```

Figure 5: Настройка доступа к web-серверу по порту tcp 80

```
msc-donskaya-shuvayev-gw-1(config)#interface f0/0.3
msc-donskaya-shuvayev-gw-1(config-subif)#ip access-group servers-out
% Incomplete command.
msc-donskaya-shuvayev-gw-1(config-subif)#ip access-group servers-out out
msc-donskaya-shuvayev-gw-1(config-subif)#
```

Figure 6: Добавление списка управления доступом к интерфейсу

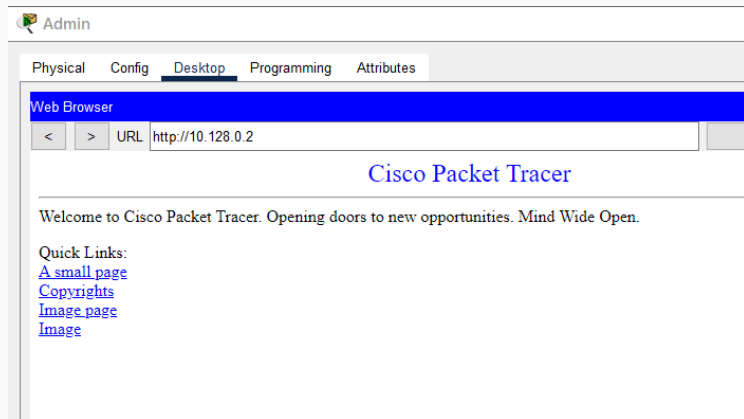


Figure 7: Проверка доступа к web-серверу через протокол HTTP

```
C:\>ftp 10.128.0.2
Trying to connect...10.128.0.2
Connected to 10.128.0.2
220- Welcome to PT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>
```

Figure 8: Проверка недоступности web-сервера через ping

```
msc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 range 20
ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 range 20
eq telnet
% Invalid input detected at '^' marker.
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 eq telnet
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#
```

Figure 9: Настройка дополнительного доступа для администратора по протоколам Telnet и FTP

```
C:\>ping 10.128.0.2

Pinging 10.128.0.2 with 32 bytes of data:

Reply from 10.128.6.1: Destination host unreachable.
Reply from 10.128.6.1: Destination host unreachable.
Reply from 10.128.6.1: Destination host unreachable.
Reply from 10.128.6.1: Destination host unreachable.

Ping statistics for 10.128.0.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 10.128.0.5

Pinging 10.128.0.5 with 32 bytes of data:

Reply from 10.128.6.1: Destination host unreachable.
Reply from 10.128.6.1: Destination host unreachable.
Reply from 10.128.6.1: Destination host unreachable.
Reply from 10.128.6.1: Destination host unreachable.

Ping statistics for 10.128.0.5:
```

```
mcs-donskaya-shuvayev-gw-1>en
Password:
mcs-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
mcs-donskaya-shuvayev-gw-1(config)#ip access-list extended servers out
                                     ^
% Invalid input detected at '^' marker.

mcs-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
mcs-donskaya-shuvayev-gw-1(config-ext-nacl)#remark file
mcs-donskaya-shuvayev-gw-1(config-ext-nacl)##permit tcp 10.128.0.0 0.0.255.255 host 10.128.0.3 eq
445
                                     ^
% Invalid input detected at '^' marker.

mcs-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp 10.128.0.0 0.0.255.255 host 10.128.0.3 eq
445
mcs-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.3 range 20 ftp
mcs-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
mcs-donskaya-shuvayev-gw-1(config)#exit
mcs-donskaya-shuvayev-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
write m
Building configuration...
[OK]
```

Figure 11: Проверка недоступности подключения по ftp у просто пользователя

Password:

```
msc-donskaya-shuvayev-gw-1>en
```

Password:

```
msc-donskaya-shuvayev-gw-1#conf t
```

Enter configuration commands, one per line. End with CNTL/Z.

```
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
```

```
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark mail
```

```
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq smtp
```

```
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq pop3
```

```
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#
```

Figure 12: Настройка доступа к файловому серверу


```
msc-donskaya-shuvayev-gw-1#en
msc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark dns
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit udp 10.128.0.0 0.0.255.255 host 10.128.0.5 eq 53
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#
```

Figure 13: Настройка доступа к почтовому серверу

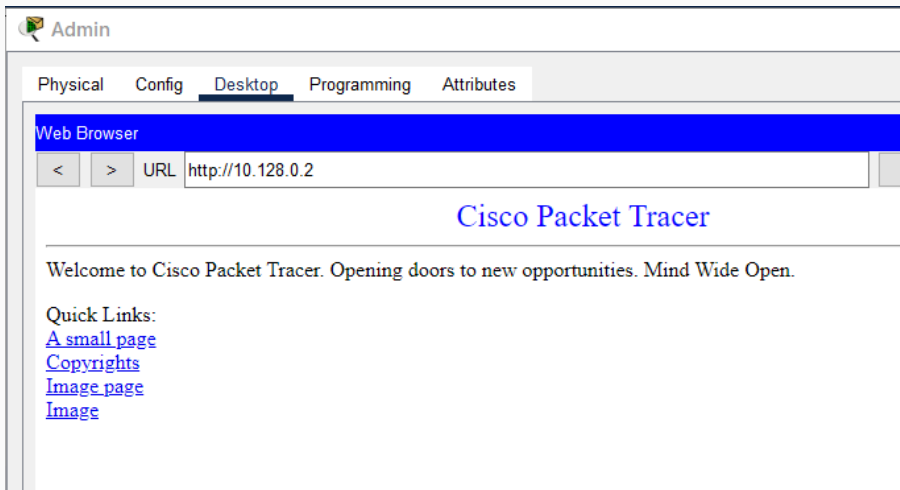


Figure 14: Настройка доступа к DNS-серверу

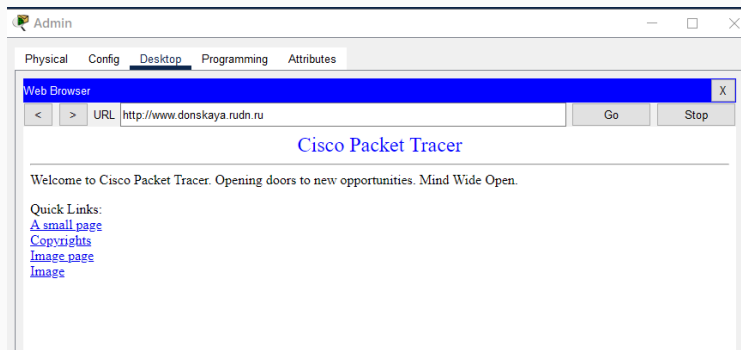


Figure 15: Проверка доступности web-сервера по ip-адресу

```
[OK]
msc-donskaya-shuvayev-gw-1#en
msc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#1 permit icmp any any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#
```

Figure 16: Проверка доступности web-сервера по имени

```
mso-donskaya-shuvayev-gw-1#show access-lists
Extended IP access list servers-out
  1 permit icmp any any
 10 permit tcp 10.128.0.0 0.0.255.255 host 10.128.0.3 eq 445
 20 permit tcp any host 10.128.0.3 range 20 ftp
 30 permit tcp any host 10.128.0.4 eq smtp
 40 permit tcp any host 10.128.0.4 eq pop3
 50 permit udp 10.128.0.0 0.0.255.255 host 10.128.0.5 eq domain
mso-donskaya-shuvayev-gw-1#
```

Figure 17: Разрешение icmp-запросов

```
msc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended other-in
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
msc-donskaya-shuvayev-gw-1(config)#interface f0/0.104
msc-donskaya-shuvayev-gw-1(config-subif)#ip access-group other in in
                                                                    ^
% Invalid input detected at '^' marker.

msc-donskaya-shuvayev-gw-1(config-subif)#ip access-group other-in in
msc-donskaya-shuvayev-gw-1(config-subif)#
```

Figure 18: Просмотр строк в списке контроля доступа

```
m-sc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
m-sc-donskaya-shuvayev-gw-1(config)#ip access-list extended management-out
m-sc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
m-sc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 10.128.1.0 0.0.0.255
                                                                    ^
% Invalid input detected at '^' marker.

m-sc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 10.128.1.0 0.0.0.255
m-sc-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
m-sc-donskaya-shuvayev-gw-1(config)#interface f0/0.2
m-sc-donskaya-shuvayev-gw-1(config-subif)#ip access-group management-out out
m-sc-donskaya-shuvayev-gw-1(config-subif)#
```

Figure 19: Настройка доступа для сети Other

Выполнение лабораторной работы

```
msc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended management-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 10.128.1.0 0.0.0.255
^
% Invalid input detected at '^' marker.

msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 10.128.1.0 0.0.0.255
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
msc-donskaya-shuvayev-gw-1(config)#interface f0/0.2
msc-donskaya-shuvayev-gw-1(config-subif)#ip access-group management-out out
msc-donskaya-shuvayev-gw-1(config-subif)#ip access extended servers-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark web
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit icmp any any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.2 eq www
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 range 20
ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 eq telnet
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark file
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp 10.128.0.0 0.0.255.255 host 10.128.0.3 eq
445
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.3 range 20 ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark mail
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq smtp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq pop3
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark dns
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit udp 10.128.0.0 0.0.255.255 host 10.128.0.5 eq
domain
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended servers-in
^
% Invalid input detected at '^' marker.

msc-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended servers-in
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended management-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 10.128.1.0 0.0.0.255
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#
```


Выполнение лабораторной работы

```
Pinging 10.128.0.2 with 32 bytes of data:

Reply from 10.128.0.2: bytes=32 time<lms TTL=127
Reply from 10.128.0.2: bytes=32 time<lms TTL=127
Reply from 10.128.0.2: bytes=32 time<lms TTL=127
Reply from 10.128.0.2: bytes=32 time<lms TTL=127

Ping statistics for 10.128.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.128.0.5

Pinging 10.128.0.5 with 32 bytes of data:

Reply from 10.128.0.5: bytes=32 time<lms TTL=127
Reply from 10.128.0.5: bytes=32 time<lms TTL=127
Reply from 10.128.0.5: bytes=32 time=lms TTL=127
Reply from 10.128.0.5: bytes=32 time<lms TTL=127

Ping statistics for 10.128.0.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = lms, Average = 0ms

C:\>ping 10.128.1.2

Pinging 10.128.1.2 with 32 bytes of data:

Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.

Ping statistics for 10.128.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>ping 10.128.3.30

Pinging 10.128.3.30 with 32 bytes of data:

Request timed out.
Reply from 10.128.3.30: bytes=32 time<1ms TTL=127
Reply from 10.128.3.30: bytes=32 time<1ms TTL=127
Reply from 10.128.3.30: bytes=32 time=15ms TTL=127

Ping statistics for 10.128.3.30:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 15ms, Average = 5ms

C:\>ftp 10.128.0.2
Trying to connect...10.128.0.2
Connected to 10.128.0.2
220- Welcome to FT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>quit
```

Figure 22: Пингование устройств с dep-donskaya-shuvayev-1

```
C:\>ping 10.128.1.2

Pinging 10.128.1.2 with 32 bytes of data:

Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.

Ping statistics for 10.128.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 10.128.1.3

Pinging 10.128.1.3 with 32 bytes of data:

Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.
Reply from 10.128.4.1: Destination host unreachable.

Ping statistics for 10.128.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Figure 23: Проверка доступности устройств с dk-donskaya-shuvayev-1

```
nsd-donskaya-shuvayev-gw-1>en
Password:
nsd-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
nsd-donskaya-shuvayev-gw-1(config)#ip access list extended servers-out
^
% Invalid input detected at '^' marker.

nsd-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
^
% Invalid input detected at '^' marker.

nsd-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
nsd-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.201 host 10.128.0.2 range 20
ftp
nsd-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.201 host 10.128.0.2 eq telnet
nsd-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended other-in
nsd-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.201 any
nsd-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
nsd-donskaya-shuvayev-gw-1(config)#exit
nsd-donskaya-shuvayev-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
#rite m
Building configuration...
[OK]
nsd-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
nsd-donskaya-shuvayev-gw-1(config)#ip access-list extended management-out
nsd-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.201 10.128.1.0 0.0.0.255
nsd-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
nsd-donskaya-shuvayev-gw-1(config)#exit
nsd-donskaya-shuvayev-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
#rite m
Building configuration...
[OK]
nsd-donskaya-shuvayev-gw-1#
```

Figure 24: Проверка доступности устройств с dk-donskaya-shuvayev-1

```
msc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark web
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit icmp any any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.2 eq www
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 range 20
ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 eq telnet
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark file
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp 10.128.0.0 0.0.255.255 host 10.128.0.3 eq
445
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.3 range 20 ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark mail
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq smtp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq pop3
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark dns
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit udp 10.128.0.0 0.0.255.255 host 10.128.0.5 eq
domain
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.201 host 10.128.0.2 range 20
ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.201 host 10.128.0.2 eq telnet
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended management-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.201 10.128.1.0 0.0.0.255
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 10.128.1.0 0.0.0.255
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended other-in
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200
% Incomplete command.
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.201 any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
msc-donskaya-shuvayev-gw-1(config)#exit
msc-donskaya-shuvayev-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
write m
Building configuration...
[OK]
msc-donskaya-shuvayev-gw-1#
```

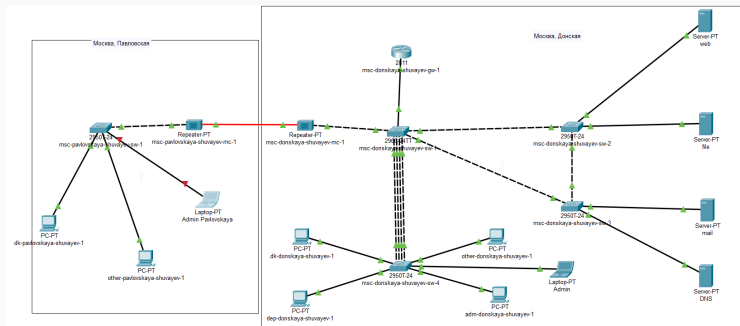
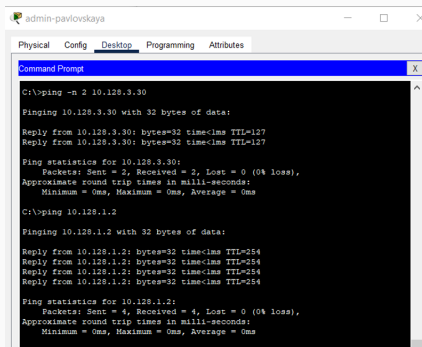


Figure 26: Настройка доступов для admin-pavlovskaya

```
msc-donskaya-shuvayev-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msc-donskaya-shuvayev-gw-1(config)#ip access-list extended servers-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark web
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit icmp any any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.2 eq www
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 range 20
ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.200 host 10.128.0.2 eq telnet
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark file
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp 10.128.0.0 0.0.255.255 host 10.128.0.3 eq
445
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.3 range 20 ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark mail
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq smtp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp any host 10.128.0.4 eq pop3
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark dns
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit udp 10.128.0.0 0.0.255.255 host 10.128.0.5 eq
domain
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.201 host 10.128.0.2 range 20
ftp
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit tcp host 10.128.6.201 host 10.128.0.2 eq telnet
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended management-out
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.201 10.128.1.0 0.0.0.255
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 10.128.1.0 0.0.0.255
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#ip access-list extended other-in
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#remark admin
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200
% Incomplete command.
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.200 any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#permit ip host 10.128.6.201 any
msc-donskaya-shuvayev-gw-1(config-ext-nacl)#exit
msc-donskaya-shuvayev-gw-1(config)#exit
msc-donskaya-shuvayev-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
write m
Building configuration...
[OK]
msc-donskaya-shuvayev-gw-1#
```

Figure 27: Список контроля доступа



The screenshot shows a Windows Command Prompt window titled "admin-pavlovskaya". The window has tabs for "Physical", "Config", "Desktop", "Programming", and "Attributes", with "Desktop" currently selected. The Command Prompt displays the following text:

```
C:\>ping -n 2 10.128.3.30

Pinging 10.128.3.30 with 32 bytes of data:

Reply from 10.128.3.30: bytes=32 time<1ms TTL=127
Reply from 10.128.3.30: bytes=32 time<1ms TTL=127

Ping statistics for 10.128.3.30:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.128.1.2

Pinging 10.128.1.2 with 32 bytes of data:

Reply from 10.128.1.2: bytes=32 time<1ms TTL=254
Reply from 10.128.1.2: bytes=32 time<1ms TTL=254
Reply from 10.128.1.2: bytes=32 time<1ms TTL=254
Reply from 10.128.1.2: bytes=32 time<1ms TTL=254

Ping statistics for 10.128.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Figure 28: Проверка корректности настроенного доступа

В процессе выполнения данной лабораторной работы я освоил настройку прав доступа пользователей к ресурсам сети.