

# Динамическая маршрутизация

## Лабораторная работа № 15

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Шулуужук А. В.

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Российский университет дружбы народов, Москва, Россия

## Цели и задачи

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Настроить динамическую маршрутизацию между территориями организации.

## Выполнение лабораторной работы

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# Выполнение лабораторной работы

```
msk-donskaya-avshuluuzhuk-gw-1>en
Password:
msk-donskaya-avshuluuzhuk-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msk-donskaya-avshuluuzhuk-gw-1(config)#router ospf 1
msk-donskaya-avshuluuzhuk-gw-1(config-router)#router-id 10.128.254.1
msk-donskaya-avshuluuzhuk-gw-1(config-router)#network 10.0.0.0 0.255.255.255 area 0
msk-donskaya-avshuluuzhuk-gw-1(config-router)#^Z
msk-donskaya-avshuluuzhuk-gw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-donskaya-avshuluuzhuk-gw-1#wr m
Building configuration...
[OK]
msk-donskaya-avshuluuzhuk-gw-1#
```

Рис. 1: Настройка маршрутизатора msk-donskaya-gw-1

## Выполнение лабораторной работы

```
msk-q42-avshuluuzhuk-gw-1>en
Password:
msk-q42-avshuluuzhuk-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msk-q42-avshuluuzhuk-gw-1(config)#router ospf 1
msk-q42-avshuluuzhuk-gw-1(config-router)#router id 10.128.254.2
^
% Invalid input detected at '^' marker.

msk-q42-avshuluuzhuk-gw-1(config-router)#router-id 10.128.254.2
msk-q42-avshuluuzhuk-gw-1(config-router)#network 10.0.0.0 0.255.255.255 area 0
msk-q42-avshuluuzhuk-gw-1(config-router)#^Z
msk-q42-avshuluuzhuk-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
wr m
Building configuration...
[OK]
msk-q42-avshuluuzhuk-gw-1#
```

Рис. 2: Настройка маршрутизатора msk-q42-gw-1

# Выполнение лабораторной работы

```
msk-hostel-avshuluuzhuk-gw-1>en
Password:
msk-hostel-avshuluuzhuk-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msk-hostel-avshuluuzhuk-gw-1(config)#router ospf 1
msk-hostel-avshuluuzhuk-gw-1(config-router)#router-id 10.128.254.3
msk-hostel-avshuluuzhuk-gw-1(config-router)#network 10.0.0.0 0.255.255.255 area 0
msk-hostel-avshuluuzhuk-gw-1(config-router)#^Z
msk-hostel-avshuluuzhuk-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
wr m
Building configuration...
[OK]
msk-hostel-avshuluuzhuk-gw-1#
```

Рис. 3: Настройка маршрутизирующего коммутатора msk-hostel-gw-1

# Выполнение лабораторной работы

```
sch-sochi-avshuluuzhuk-gw-1>en
Password:
sch-sochi-avshuluuzhuk-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
sch-sochi-avshuluuzhuk-gw-1(config)#router ospf 1
sch-sochi-avshuluuzhuk-gw-1(config-router)#router-id 10.128.254.4
sch-sochi-avshuluuzhuk-gw-1(config-router)#network 10.0.0.0 0.255.255.255 area 0
sch-sochi-avshuluuzhuk-gw-1(config-router)#+Z
sch-sochi-avshuluuzhuk-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
wr m
Building configuration...
[OK]
sch-sochi-avshuluuzhuk-gw-1#
```

Рис. 4: Настройка маршрутизатора sch-sochi-gw-1

# Выполнение лабораторной работы

The screenshot shows a terminal window titled "msk-donskaya-avshuluuzhuk-gw-1". The window has tabs for "Physical", "Config", "CLI", and "Attributes", with "CLI" selected. The title bar also includes a "X" button.

The main area is labeled "IOS Command Line Interface". It displays the output of the command "show ip route".

```
msk-donskaya-avshuluuzhuk-gw-1#sh ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
        E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
        i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
        * - candidate default, U - per-user static route, o - ODR
        P - periodic downloaded static route

Gateway of last resort is 198.51.100.1 to network 0.0.0.0

10.0.0.0/8 is variably subnetted, 21 subnets, 4 masks
C 10.128.0.0/24 is directly connected, FastEthernet0/0.3
L 10.128.0.1/32 is directly connected, FastEthernet0/0.3
C 10.128.1.0/24 is directly connected, FastEthernet0/0.2
L 10.128.1.1/32 is directly connected, FastEthernet0/0.2
C 10.128.3.0/24 is directly connected, FastEthernet0/0.101
L 10.128.3.1/32 is directly connected, FastEthernet0/0.101
C 10.128.4.0/24 is directly connected, FastEthernet0/0.102
L 10.128.4.1/32 is directly connected, FastEthernet0/0.102
C 10.128.5.0/24 is directly connected, FastEthernet0/0.103
L 10.128.5.1/32 is directly connected, FastEthernet0/0.103
C 10.128.6.0/24 is directly connected, FastEthernet0/0.104
L 10.128.6.1/32 is directly connected, FastEthernet0/0.104
C 10.128.255.0/30 is directly connected, FastEthernet0/1.5
L 10.128.255.1/32 is directly connected, FastEthernet0/1.5
C 10.128.255.4/30 is directly connected, FastEthernet0/1.6
L 10.128.255.5/32 is directly connected, FastEthernet0/1.6
S 10.129.0.0/16 [1/0] via 10.128.255.2
O 10.129.0.0/24 [110/2] via 10.128.255.2, 00:05:49, FastEthernet0/1.5
O 10.129.1.0/24 [110/2] via 10.128.255.2, 00:05:49, FastEthernet0/1.5
O 10.129.128.0/24 [110/3] via 10.128.255.2, 00:05:49, FastEthernet0/1.5
S* 0.0.0.0/0 [1/0] via 198.51.100.1

msk-donskaya-avshuluuzhuk-gw-1#
```

Рис. 5: Проверка состояния протокола OSPF на маршрутизаторе msk-donskaya-gw-1

# Выполнение лабораторной работы

```
msk-q42-avshuluuzhuk-gw-1#sh ip ospf neighbor

Neighbor ID      Pri   State        Dead Time     Address          Interface
10.128.254.1      1    FULL/BDR    00:00:39    10.128.255.1    FastEthernet0/1.5
10.128.254.3      1    FULL/DR     00:00:39    10.129.1.2      FastEthernet1/0.202
msk-q42-avshuluuzhuk-gw-1#sh ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

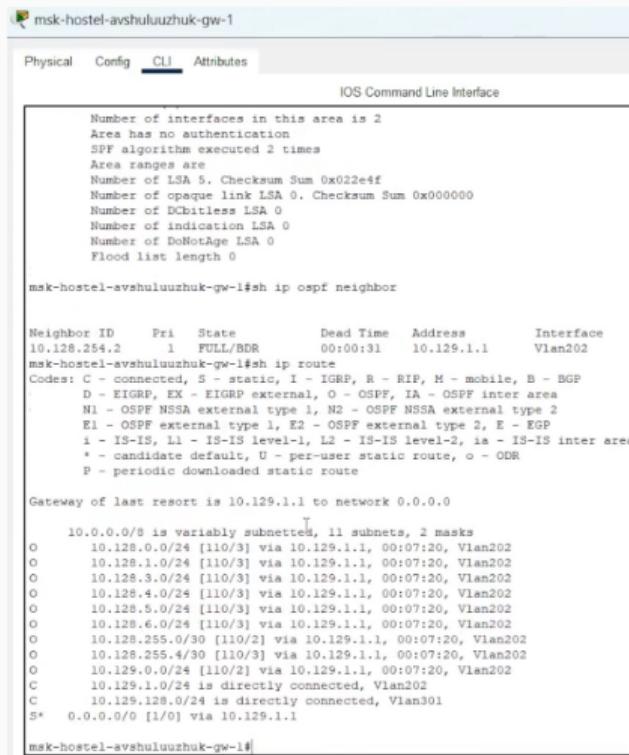
Gateway of last resort is 10.128.255.1 to network 0.0.0.0

10.0.0.0/8 is variably subnetted, 15 subnets, 4 masks
O   10.128.0.0/24 [110/2] via 10.128.255.1, 00:06:45, FastEthernet0/1.5
O   10.128.1.0/24 [110/2] via 10.128.255.1, 00:06:45, FastEthernet0/1.5
O   10.128.3.0/24 [110/2] via 10.128.255.1, 00:06:45, FastEthernet0/1.5
O   10.128.4.0/24 [110/2] via 10.128.255.1, 00:06:45, FastEthernet0/1.5
O   10.128.5.0/24 [110/2] via 10.128.255.1, 00:06:45, FastEthernet0/1.5
O   10.128.6.0/24 [110/2] via 10.128.255.1, 00:06:45, FastEthernet0/1.5
C   10.128.255.0/30 is directly connected, FastEthernet0/1.5
L   10.128.255.2/32 is directly connected, FastEthernet0/1.5
O   10.128.255.4/30 [110/2] via 10.128.255.1, 00:06:45, FastEthernet0/1.5
C   10.129.0.0/24 is directly connected, FastEthernet0/0.201
L   10.129.0.1/32 is directly connected, FastEthernet0/0.201
C   10.129.1.0/24 is directly connected, FastEthernet1/0.202
L   10.129.1.1/32 is directly connected, FastEthernet1/0.202
S   10.129.128.0/17 [1/0] via 10.129.1.2
O   10.129.128.0/24 [110/2] via 10.129.1.2, 00:06:55, FastEthernet1/0.202
S*  0.0.0.0/0 [1/0] via 10.128.255.1

msk-q42-avshuluuzhuk-gw-1#
```

Рис. 6: Проверка состояния протокола OSPF на маршрутизаторе msk-q42-gw-1

# Выполнение лабораторной работы



The screenshot shows a terminal window titled "msk-hostel-avshuluuzhuk-gw-1". The window has tabs for Physical, Config, CLI (which is selected), and Attributes. The main area displays the IOS Command Line Interface (CLI) output.

```
msk-hostel-avshuluuzhuk-gw-1
Physical Config CLI Attributes
IOS Command Line Interface

Number of interfaces in this area is 2
Area has no authentication
SPF algorithm executed 2 times
Area ranges are
Number of LSA 5. Checksum Sum 0x022e4f
Number of opaque link LSA 0. Checksum Sum 0x000000
Number of DCbitless LSA 0
Number of indication LSA 0
Number of DoNotAge LSA 0
Flood list length 0

msk-hostel-avshuluuzhuk-gw-1#sh ip ospf neighbor

Neighbor ID      Pri  State            Dead Time     Address          Interface
10.128.254.2      1    FULL/BDR        00:00:31    10.129.1.1      Vlan202
msk-hostel-avshuluuzhuk-gw-1#sh ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 10.129.1.1 to network 0.0.0.0

      10.0.0.0/8 is variably subnetted, 11 subnets, 2 masks
O   10.128.0/24 [110/3] via 10.129.1.1, 00:07:20, Vlan202
O   10.128.1/24 [110/3] via 10.129.1.1, 00:07:20, Vlan202
O   10.128.3/24 [110/3] via 10.129.1.1, 00:07:20, Vlan202
O   10.128.4/24 [110/3] via 10.129.1.1, 00:07:20, Vlan202
O   10.128.5/24 [110/3] via 10.129.1.1, 00:07:20, Vlan202
O   10.128.6/24 [110/3] via 10.129.1.1, 00:07:20, Vlan202
O   10.128.255.0/30 [110/2] via 10.129.1.1, 00:07:20, Vlan202
O   10.128.255.4/30 [110/3] via 10.129.1.1, 00:07:20, Vlan202
O   10.129.0/24 [110/2] via 10.129.1.1, 00:07:20, Vlan202
C   10.129.1.0/24 is directly connected, Vlan02
C   10.129.128.0/24 is directly connected, Vlan301
S*  0.0.0.0/0 [1/0] via 10.129.1.1

msk-hostel-avshuluuzhuk-gw-1#
```

Рис. 7: Проверка состояния протокола OSPF на маршрутизирующем коммутаторе msk-hostel-gw-1

# Выполнение лабораторной работы

```
sch-sochi-avshuluuzhuk-gw-1
Physical Config CLI Attributes
IOS Command Line Interface

Number of external LSA 0. Checksum Sum 0x000000
Number of opaque AS LSA 0. Checksum Sum 0x000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
External flood list length 0
Area BACKBONE (0)
    Number of interfaces in this area is 3
    Area has no authentication
    SPF algorithm executed 1 times
    Area ranges are
        Number of LSA 1. Checksum Sum 0x000f60
        Number of opaque link LSA 0. Checksum Sum 0x000000
        Number of DCbitless LSA 0
        Number of indication LSA 0
        Number of DoNotAge LSA 0
    Flood list length 0

sch-sochi-avshuluuzhuk-gw-1#sh ip ospf neighbor

sch-sochi-avshuluuzhuk-gw-1#sh ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
      i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
      * - candidate default, U - per-user static route, o - ODR
      P - periodic downloaded static route

Gateway of last resort is 10.128.255.5 to network 0.0.0.0

      10.0.0.0/8 is variably subnetted, 6 subnets, 3 masks
C        10.128.255.4/30 is directly connected, FastEthernet0/0.6
L        10.128.255.6/32 is directly connected, FastEthernet0/0.6
C        10.130.0.0/24 is directly connected, FastEthernet0/0.401
L        10.130.0.1/32 is directly connected, FastEthernet0/0.401
C        10.130.1.0/24 is directly connected, FastEthernet0/0.402
L        10.130.1.1/32 is directly connected, FastEthernet0/0.402
S*       0.0.0.0 [1/0] via 10.128.255.5

sch-sochi-avshuluuzhuk-gw-1#
```

Рис. 8: Проверка состояния протокола OSPF на маршрутизаторе sch-sochi-gw-1

## Выполнение лабораторной работы

```
provider-avshuluuzhuk-sw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
provider-avshuluuzhuk-sw-1(config)#vlan 7
provider-avshuluuzhuk-sw-1(config-vlan)#name q42-sochi
provider-avshuluuzhuk-sw-1(config-vlan)#exit
provider-avshuluuzhuk-sw-1(config)#interface vlan7
provider-avshuluuzhuk-sw-1(config-if)#
%LINK-5-CHANGED: Interface Vlan7, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan7, changed state to up

provider-avshuluuzhuk-sw-1(config-if)#no shutdown
provider-avshuluuzhuk-sw-1(config-if)#exit
provider-avshuluuzhuk-sw-1(config)#^Z
provider-avshuluuzhuk-sw-1#
%SYS-5-CONFIG_I: Configured from console by console
wr m
Building configuration...
[OK]
provider-avshuluuzhuk-sw-1#
```

Рис. 9: Настройка интерфейсов коммутатора provider-sw-1

# Выполнение лабораторной работы

```
msk-q42-avshuluuzhuk-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
msk-q42-avshuluuzhuk-gw-1(config)#interface f0/1.7
msk-q42-avshuluuzhuk-gw-1(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/1.7, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1.7, changed state to up

msk-q42-avshuluuzhuk-gw-1(config-subif)#encapsulation dot1Q 7
msk-q42-avshuluuzhuk-gw-1(config-subif)#ip address 10.128.255.9 255.255.255.252
msk-q42-avshuluuzhuk-gw-1(config-subif)#description sochi
msk-q42-avshuluuzhuk-gw-1(config-subif)#exit
msk-q42-avshuluuzhuk-gw-1(config)#^Z
msk-q42-avshuluuzhuk-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
wr m
Building configuration...
[OK]
msk-q42-avshuluuzhuk-gw-1#
```

Рис. 10: Настройка маршрутизатора msk-q42-gw-1

## Выполнение лабораторной работы

```
sch-sochi-avshuluuzhuk-sw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
sch-sochi-avshuluuzhuk-sw-1(config)#vlan 7
sch-sochi-avshuluuzhuk-sw-1(config-vlan)#name q42-sochi
sch-sochi-avshuluuzhuk-sw-1(config-vlan)#exit
sch-sochi-avshuluuzhuk-sw-1(config)#interface vlan7
sch-sochi-avshuluuzhuk-sw-1(config-if)#
%LINK-5-CHANGED: Interface Vlan7, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan7, changed state to up

sch-sochi-avshuluuzhuk-sw-1(config-if)#no shutdown
sch-sochi-avshuluuzhuk-sw-1(config-if)#exit
sch-sochi-avshuluuzhuk-sw-1(config)#^Z
sch-sochi-avshuluuzhuk-sw-1#
%SYS-5-CONFIG_I: Configured from console by console
wr m
Building configuration...
[OK]
sch-sochi-avshuluuzhuk-sw-1#
```

Рис. 11: Настройка коммутатора sch-sochi-sw-1

# Выполнение лабораторной работы

```
sch-sochi-avshuluuzhuk-gw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
sch-sochi-avshuluuzhuk-gw-1(config)#interface f0/0.7
sch-sochi-avshuluuzhuk-gw-1(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.7, changed state to up

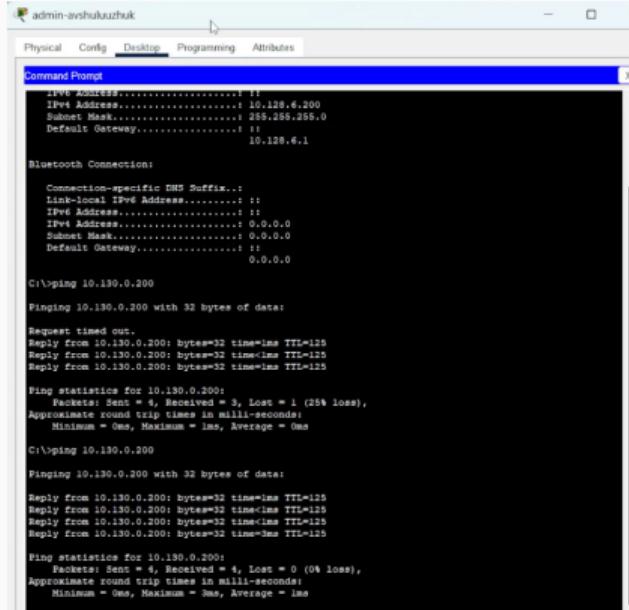
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.7, changed state to up

sch-sochi-avshuluuzhuk-gw-1(config-subif)#encapsulation dot1Q 7
sch-sochi-avshuluuzhuk-gw-1(config-subif)#ip address 10.128.255.10 255.255.255.252
sch-sochi-avshuluuzhuk-gw-1(config-subif)#description q42
00:14:26: %OSPF-5-ADJCHG: Process 1, Nbr 10.128.254.2 on FastEthernet0/0.7 from LOADING to FULL,
Loading Done

sch-sochi-avshuluuzhuk-gw-1(config-subif)#exit
sch-sochi-avshuluuzhuk-gw-1(config)#^Z
sch-sochi-avshuluuzhuk-gw-1#
%SYS-5-CONFIG_I: Configured from console by console
wr m
Building configuration...
[OK]
sch-sochi-avshuluuzhuk-gw-1#
```

Рис. 12: Настройка маршрутизатора sch-sochi-gw-1

# Выполнение лабораторной работы



```
Physical Config Desktop Programming Attributes
Command Prompt
IPV6 Address.....: t
IPv4 Address.....: 10.128.6.200
Subnet Mask.....: 255.255.255.0
Default Gateway.....: t
10.128.6.1

Bluetooth Connection:
Connection-specific DNS Suffix.: t
Link-local IPv6 Address.....: t
IPv4 Address.....: t
IPv4 Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: t
0.0.0.0

C:\>ping 10.130.0.200

Pinging 10.130.0.200 with 32 bytes of data:

Request timed out.
Reply from 10.130.0.200: bytes=32 time=1ms TTL=125
Reply from 10.130.0.200: bytes=32 time=1ms TTL=125
Reply from 10.130.0.200: bytes=32 time=1ms TTL=125

Ping statistics for 10.130.0.200:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\>ping 10.130.0.200

Pinging 10.130.0.200 with 32 bytes of data:

Reply from 10.130.0.200: bytes=32 time=1ms TTL=125
Reply from 10.130.0.200: bytes=32 time=1ms TTL=125
Reply from 10.130.0.200: bytes=32 time=1ms TTL=125
Reply from 10.130.0.200: bytes=32 time=3ms TTL=125

Ping statistics for 10.130.0.200:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 3ms, Average = 1ms
```

Рис. 13: Пингование устройств

## Выполнение лабораторной работы

```
C:\>tracert 10.130.0.200

Tracing route to 10.130.0.200 over a maximum of 30 hops:

 1  0 ms      0 ms      0 ms      10.128.6.1
 2  0 ms      0 ms      0 ms      10.128.255.6
 3  0 ms      0 ms      0 ms      10.130.0.200

Trace complete.

C:\>tracert 10.130.0.200
```

Рис. 14: Просмотр маршрута пакетов

# Выполнение лабораторной работы

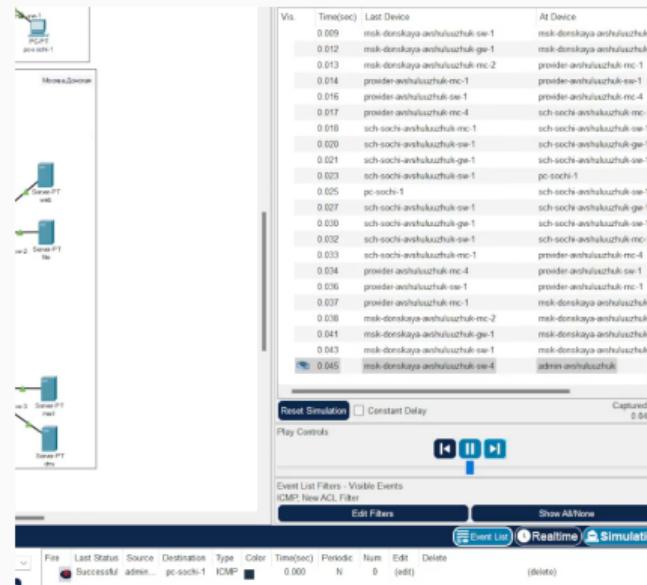


Рис. 15: Отслеживание пакета ICMP в режиме симуляции

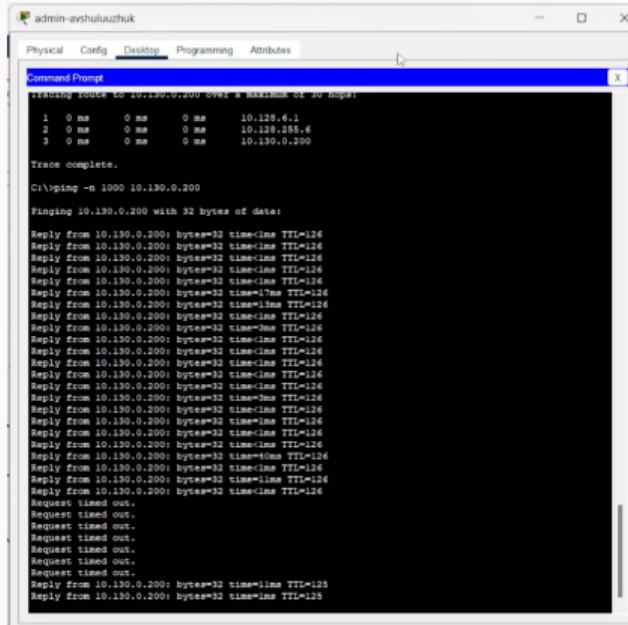
## Выполнение лабораторной работы

```
provider-avshuluuzhuk-sw-1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
provider-avshuluuzhuk-sw-1(config)#no vlan 6
provider-avshuluuzhuk-sw-1(config)#
%LINK-3-UPDOWN: Interface Vlan6, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan6, changed state to down
```

Рис. 16: Отключение vlan 6

# Выполнение лабораторной работы



The screenshot shows a Windows Command Prompt window with the title bar 'admin-avshuluuzhuk'. The window has tabs: Physical, Config, Desktop, Programming, Attributes. The 'Desktop' tab is selected. The command prompt window contains the following text:

```
Administrator: Command Prompt
Tracing route to 10.130.0.200 over a maximum of 30 hops:
  1  0 ms    0 ms    0 ms    10.128.6.1
  2  0 ms    0 ms    0 ms    10.128.255.6
  3  0 ms    0 ms    0 ms    10.130.0.200

Trace complete.

C:\>ping -n 1000 10.130.0.200

Pinging 10.130.0.200 with 32 bytes of data:
Reply from 10.130.0.200: bytes=32 time<1ms TTL=126
Request timed out.
Reply from 10.130.0.200: bytes=32 time<1ms TTL=125
Reply from 10.130.0.200: bytes=32 time<1ms TTL=125
```

Рис. 17: Соединение между устройствами

## Выполнение лабораторной работы

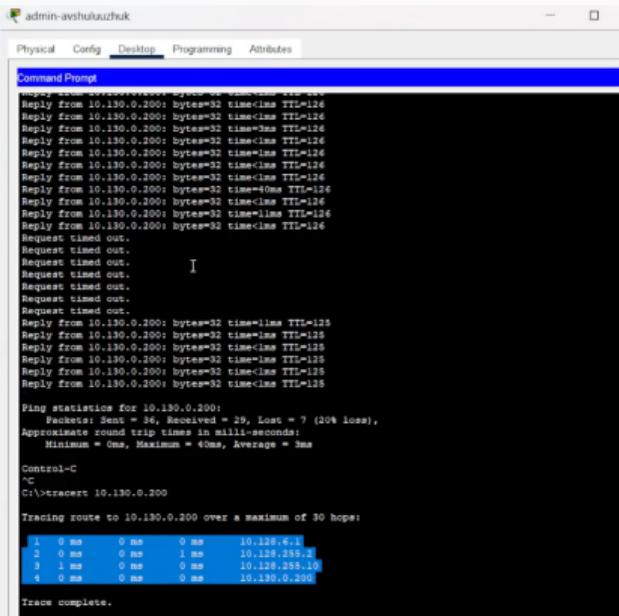


Рис. 18: Изменение маршрута движения пакетов

# Выполнение лабораторной работы

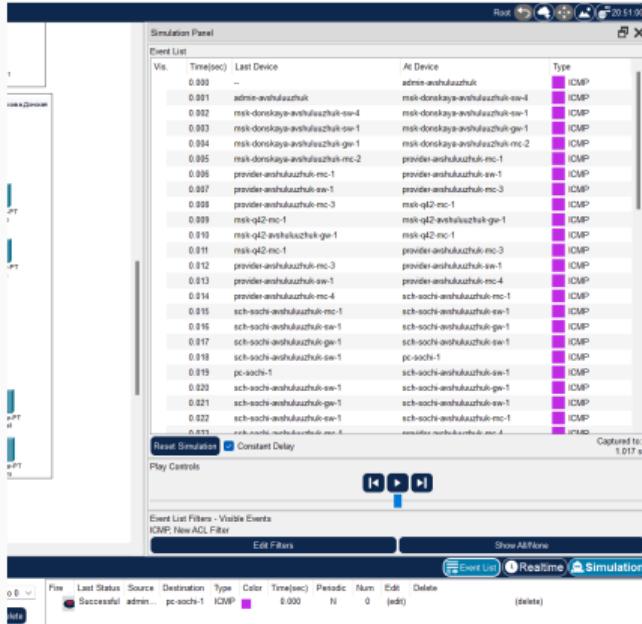


Рис. 19: Отслеживание пакета ICMP в режиме симуляции после изменения маршрута

## Выполнение лабораторной работы

```
provider-avshuluuzhuk-sw-1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
provider-avshuluuzhuk-sw-1(config)#vlan 6
provider-avshuluuzhuk-sw-1(config-vlan)#^Z
provider-avshuluuzhuk-sw-1#
%SYS-5-CONFIG_I: Configured from console by console
```

Рис. 20: Восстановление vlan 6

## Выполнение лабораторной работы

```
C:\>tracert 10.130.0.200

Tracing route to 10.130.0.200 over a maximum of 30 hops:

  1  0 ms      0 ms      0 ms      10.128.6.1
  2  0 ms      0 ms      0 ms      10.128.255.2
  3  0 ms      1 ms      0 ms      10.128.255.10
  4  0 ms      0 ms      0 ms      10.130.0.200

Trace complete.

C:\>tracert 10.130.0.200

Tracing route to 10.130.0.200 over a maximum of 30 hops:

  1  0 ms      0 ms      0 ms      10.128.6.1
  2  0 ms      0 ms      0 ms      10.128.255.6
  3  5 ms      0 ms      0 ms      10.130.0.200 [
```

Рис. 21: Изменение маршрута движения пакетов

# Выполнение лабораторной работы

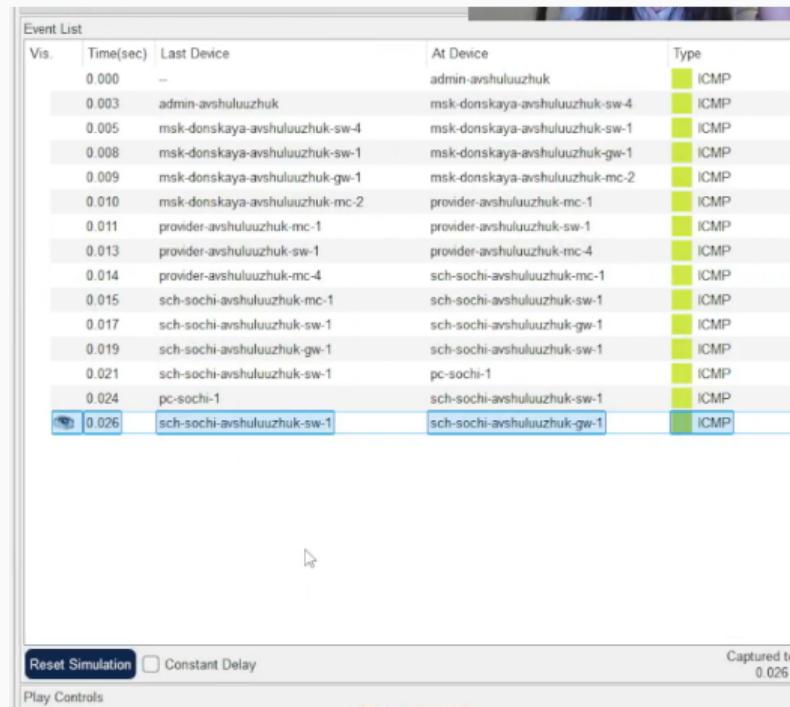


Рис. 22: Отслеживание пакета ICMP в режиме симуляции

## Выводы

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## Результаты работы

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В результате выполнения лабораторной работы была настроена динамическая маршрутизацию между территориями организа- ции.