

Презентация лабораторной работы №6

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Цель работы

- Настроить статическую маршрутизацию VLAN в сети.

Задачи

- Добавить в локальную сеть маршрутизатор, провести его первоначальную настройку.
- Настроить статическую маршрутизацию VLAN.

Результаты выполнения

- Добавили в локальную сеть маршрутизатор, провести его первоначальную настройку.

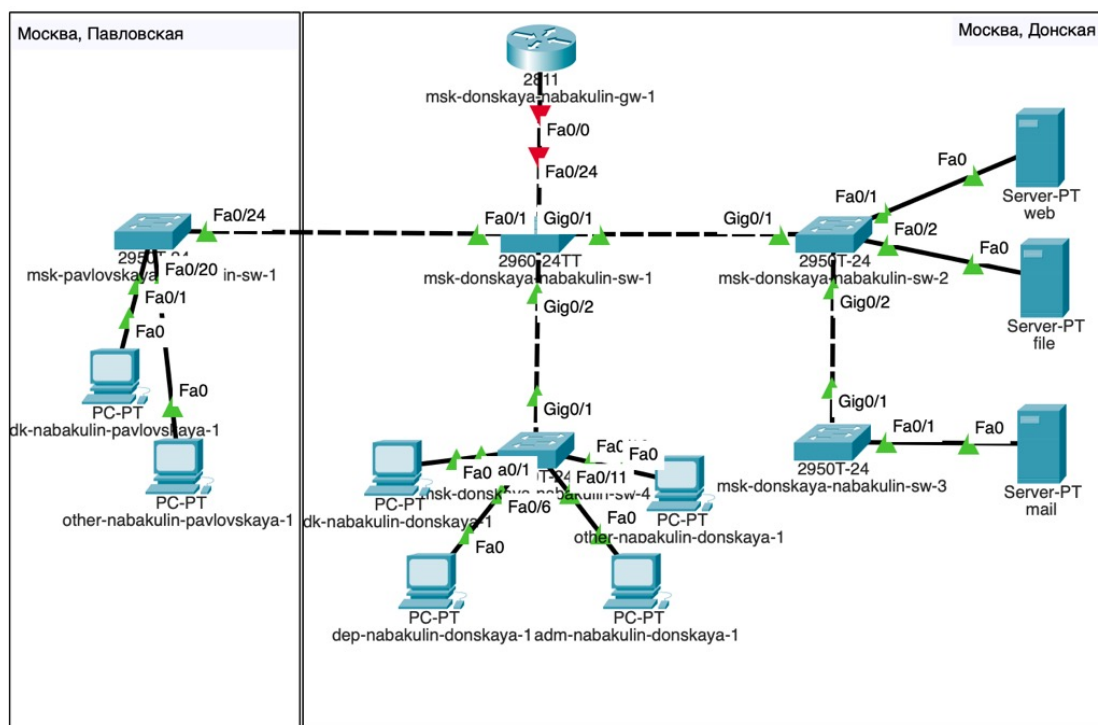


Рис. 1

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname msk-donskaya-nabakulin-gw-1
msk-donskaya-nabakulin-gw-1(config)#line vty 0 4
msk-donskaya-nabakulin-gw-1(config-line)#password cisco
msk-donskaya-nabakulin-gw-1(config-line)#login
msk-donskaya-nabakulin-gw-1(config-line)#line console 0
msk-donskaya-nabakulin-gw-1(config-line)#password cisco
msk-donskaya-nabakulin-gw-1(config-line)#login
msk-donskaya-nabakulin-gw-1(config-line)#enable secret cisco
msk-donskaya-nabakulin-gw-1(config)#service password-encryption
msk-donskaya-nabakulin-gw-1(config)#username admin privilege 1 secret cisco
msk-donskaya-nabakulin-gw-1(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-nabakulin-gw-1(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-nabakulin-gw-1.donskeya.rudn.edu
Choose the size of the key modulus in the range of 360 to 2048 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.
```

```
How many bits in the modulus [512]:
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]
```

```
msk-donskaya-nabakulin-gw-1(config)#line vty 0 4
*Mar 1 0:8:59.581: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:8:59.581: %SSH-5-ENABLED: SSH 1.5 has been enabled
msk-donskaya-nabakulin-gw-1(config-line)#transport input ssh
```

Рис. 2

Результаты выполнения

- Настроить статическую маршрутизацию VLAN.

```
msk-donskaya-nabakulin-gw-1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
msk-donskaya-nabakulin-gw-1(config)#interface f0/0
msk-donskaya-nabakulin-gw-1(config-if)#no shutdown

msk-donskaya-nabakulin-gw-1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

msk-donskaya-nabakulin-gw-1(config-if)#interface f0/0.2
msk-donskaya-nabakulin-gw-1(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.2, changed state to up

msk-donskaya-nabakulin-gw-1(config-subif)#encapsulation dot1Q 2
msk-donskaya-nabakulin-gw-1(config-subif)#ip address 10.128.1.1 255.255.255.0
msk-donskaya-nabakulin-gw-1(config-subif)#description management
msk-donskaya-nabakulin-gw-1(config-subif)#interface f0/0.3
msk-donskaya-nabakulin-gw-1(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.3, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.3, changed state to up

msk-donskaya-nabakulin-gw-1(config-subif)#encapsulation dot1Q 3
msk-donskaya-nabakulin-gw-1(config-subif)#ip address 10.128.0.1 255.255.255.0
msk-donskaya-nabakulin-gw-1(config-subif)#description servers
msk-donskaya-nabakulin-gw-1(config-subif)#interface f0/0.101
msk-donskaya-nabakulin-gw-1(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.101, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.101, changed state to up

msk-donskaya-nabakulin-gw-1(config-subif)#encapsulation dot1Q 101
msk-donskaya-nabakulin-gw-1(config-subif)#ip address 10.128.3.1 255.255.255.0
msk-donskaya-nabakulin-gw-1(config-subif)#description dk
msk-donskaya-nabakulin-gw-1(config-subif)#interface f0/0.100
```

Рис. 3

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 10.128.3.202

Pinging 10.128.3.202 with 32 bytes of data:

Reply from 10.128.3.202: bytes=32 time=1ms TTL=128
Reply from 10.128.3.202: bytes=32 time<1ms TTL=128
Reply from 10.128.3.202: bytes=32 time<1ms TTL=128

Ping statistics for 10.128.3.202:
    Packets: Sent = 3, Received = 3, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

Control-C
^C
C:\>ping 10.128.4.201

Pinging 10.128.4.201 with 32 bytes of data:

Request timed out.
Reply from 10.128.4.201: bytes=32 time<1ms TTL=127
Reply from 10.128.4.201: bytes=32 time<1ms TTL=127

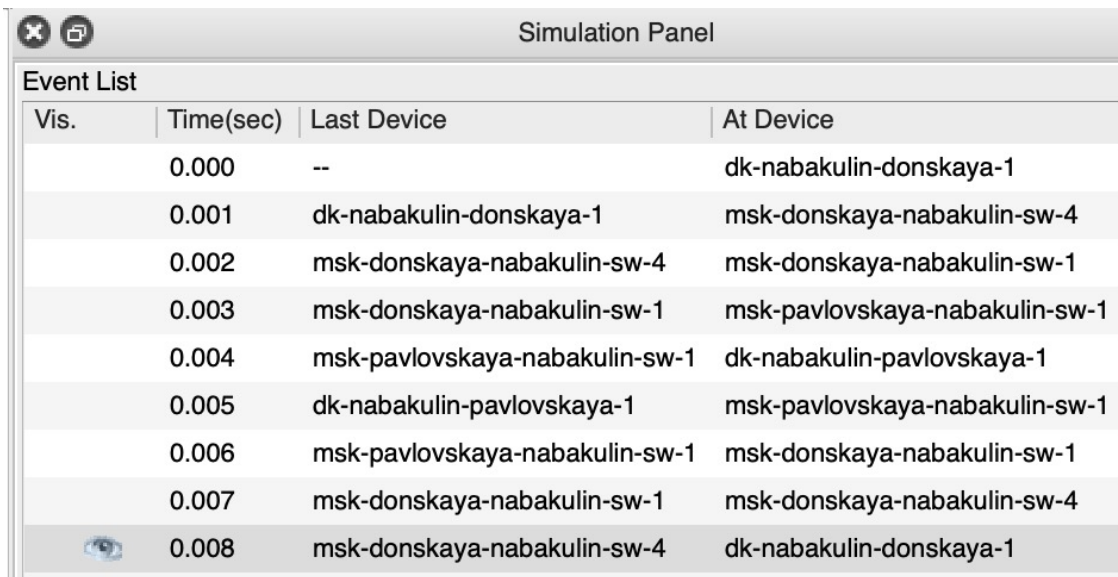
Ping statistics for 10.128.4.201:
    Packets: Sent = 3, Received = 2, Lost = 1 (34% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

Control-C
^C
```

Рис. 4

Результаты выполнения

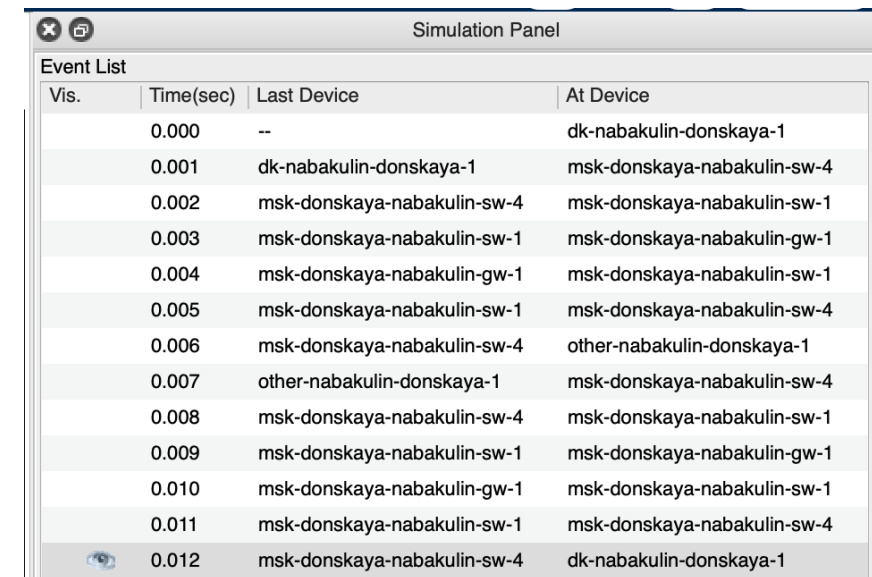
- Настроить статическую маршрутизацию VLAN.



Simulation Panel

Vis.	Time(sec)	Last Device	At Device
	0.000	--	dk-nabakulin-donskaya-1
	0.001	dk-nabakulin-donskaya-1	msk-donskaya-nabakulin-sw-4
	0.002	msk-donskaya-nabakulin-sw-4	msk-donskaya-nabakulin-sw-1
	0.003	msk-donskaya-nabakulin-sw-1	msk-pavlovskaya-nabakulin-sw-1
	0.004	msk-pavlovskaya-nabakulin-sw-1	dk-nabakulin-pavlovskaya-1
	0.005	dk-nabakulin-pavlovskaya-1	msk-pavlovskaya-nabakulin-sw-1
	0.006	msk-pavlovskaya-nabakulin-sw-1	msk-donskaya-nabakulin-sw-1
	0.007	msk-donskaya-nabakulin-sw-1	msk-donskaya-nabakulin-sw-4
	0.008	msk-donskaya-nabakulin-sw-4	dk-nabakulin-donskaya-1

Рис. 5



Simulation Panel

Vis.	Time(sec)	Last Device	At Device
	0.000	--	dk-nabakulin-donskaya-1
	0.001	dk-nabakulin-donskaya-1	msk-donskaya-nabakulin-sw-4
	0.002	msk-donskaya-nabakulin-sw-4	msk-donskaya-nabakulin-sw-1
	0.003	msk-donskaya-nabakulin-sw-1	msk-donskaya-nabakulin-gw-1
	0.004	msk-donskaya-nabakulin-gw-1	msk-donskaya-nabakulin-sw-1
	0.005	msk-donskaya-nabakulin-sw-1	msk-donskaya-nabakulin-sw-4
	0.006	msk-donskaya-nabakulin-sw-4	other-nabakulin-donskaya-1
	0.007	other-nabakulin-donskaya-1	msk-donskaya-nabakulin-sw-4
	0.008	msk-donskaya-nabakulin-sw-4	msk-donskaya-nabakulin-sw-1
	0.009	msk-donskaya-nabakulin-sw-1	msk-donskaya-nabakulin-gw-1
	0.010	msk-donskaya-nabakulin-gw-1	msk-donskaya-nabakulin-sw-1
	0.011	msk-donskaya-nabakulin-sw-1	msk-donskaya-nabakulin-sw-4
	0.012	msk-donskaya-nabakulin-sw-4	dk-nabakulin-donskaya-1

Рис. 6

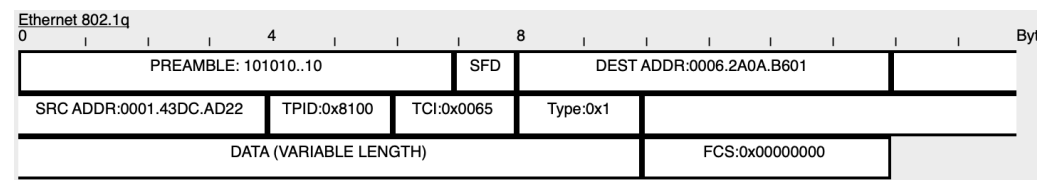


Рис. 7