Лаборатория работа 6

Статическая маршрутизация VLAN

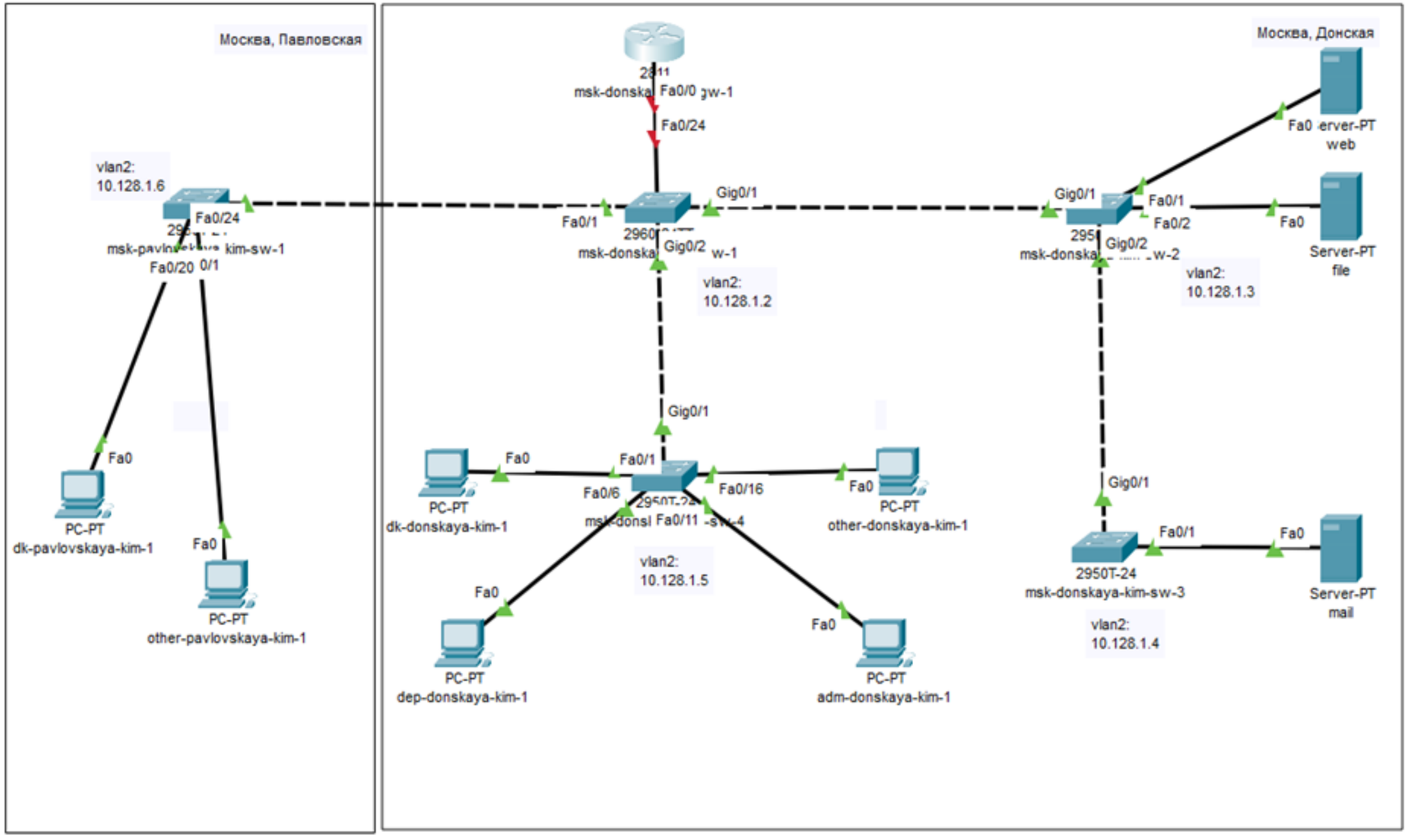
ПОДГОТОВИЛА: КИМ РЕАЧНА
ГРУППА: НПИБД-02-20

Цель работы:

Настроить статическую маршрутизацию VLAN в сети.

Задание:

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


Москва, Павловская
Москва, Донская
vlan2:
10.128.1.6
Fa0/24
Fa0/20
0/1
Fa0
PC-PT
dk-pavlovskaya-kim-1
Fa0
PC-PT
other-pavlovskaya-kim-1
Fa0/24
Gig0/1
Fa0/1
Gig0/2
vlan2:
10.128.1.2
Gig0/1
Fa0
PC-PT
dk-donskaya-kim-1
Fa0/1
Fa0/6
Fa0/16
Fa0
PC-PT
other-donskaya-kim-1
Fa0/11
vlan2:
10.128.1.5
Fa0
PC-PT
dep-donskaya-kim-1
Fa0
PC-PT
adm-donskaya-kim-1
Gig0/1
Fa0/1
Gig0/2
Fa0/1
Fa0/2
Fa0
Server-PT
file
vlan2:
10.128.1.3
Gig0/1
Fa0/1
Fa0
2950T-24
msk-donskaya-kim-sw-3
Server-PT
mail
vlan2:
10.128.1.4
Fa0
erver-PT
web

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname msk-donskaya-kim-gw-1
msk-donskaya-kim-gw-1(config)#line vty 0 4
msk-donskaya-kim-gw-1(config-line)#password cisco
msk-donskaya-kim-gw-1(config-line)#login
msk-donskaya-kim-gw-1(config-line)#exit
msk-donskaya-kim-gw-1(config)#line console 0
msk-donskaya-kim-gw-1(config-line)#password cisco
msk-donskaya-kim-gw-1(config-line)#login
msk-donskaya-kim-gw-1(config-line)#exit
msk-donskaya-kim-gw-1(config)#enable secret cisco
msk-donskaya-kim-gw-1(config)#service password-encryption
msk-donskaya-kim-gw-1(config)#username admin privilege 1 secret cisco
msk-donskaya-kim-gw-1(config)#ip domain-name donskaya.rudn.edu
msk-donskaya-kim-gw-1(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-kim-gw-1.donskaya.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]: 2048
% Generating 2048 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-kim-gw-1(config)#line vty 0 4
*Mar 1 0:6:54.931: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-kim-gw-1(config-line)#transport input ssh
```

```
msk-donskaya-kim-sw-1>enable
Password:
msk-donskaya-kim-sw-1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
msk-donskaya-kim-sw-1(config)#interface f0/24
msk-donskaya-kim-sw-1(config-if)#switchport mode trunk


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

msk-donskaya-kim-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-kim-gw-1(config)#interface f0/0.2
msk-donskaya-kim-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-kim-gw-1(config-subif)#encapsulation dot1Q 2
msk-donskaya-kim-gw-1(config-subif)#ip address 10.128.1.1 255.255.255.0
msk-donskaya-kim-gw-1(config-subif)#description management
```

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

Ping statistics for 10.128.3.202:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.128.3.202

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

Ping statistics for 10.128.3.202:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.128.5.201

Pinging 10.128.5.201 with 32 bytes of data:

Reply from 10.128.5.201: bytes=32 time<1ms TTL=127
Reply from 10.128.5.201: bytes=32 time=1ms TTL=127
Reply from 10.128.5.201: bytes=32 time<1ms TTL=127
Reply from 10.128.5.201: bytes=32 time=10ms TTL=127

Ping statistics for 10.128.5.201:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 2ms
```

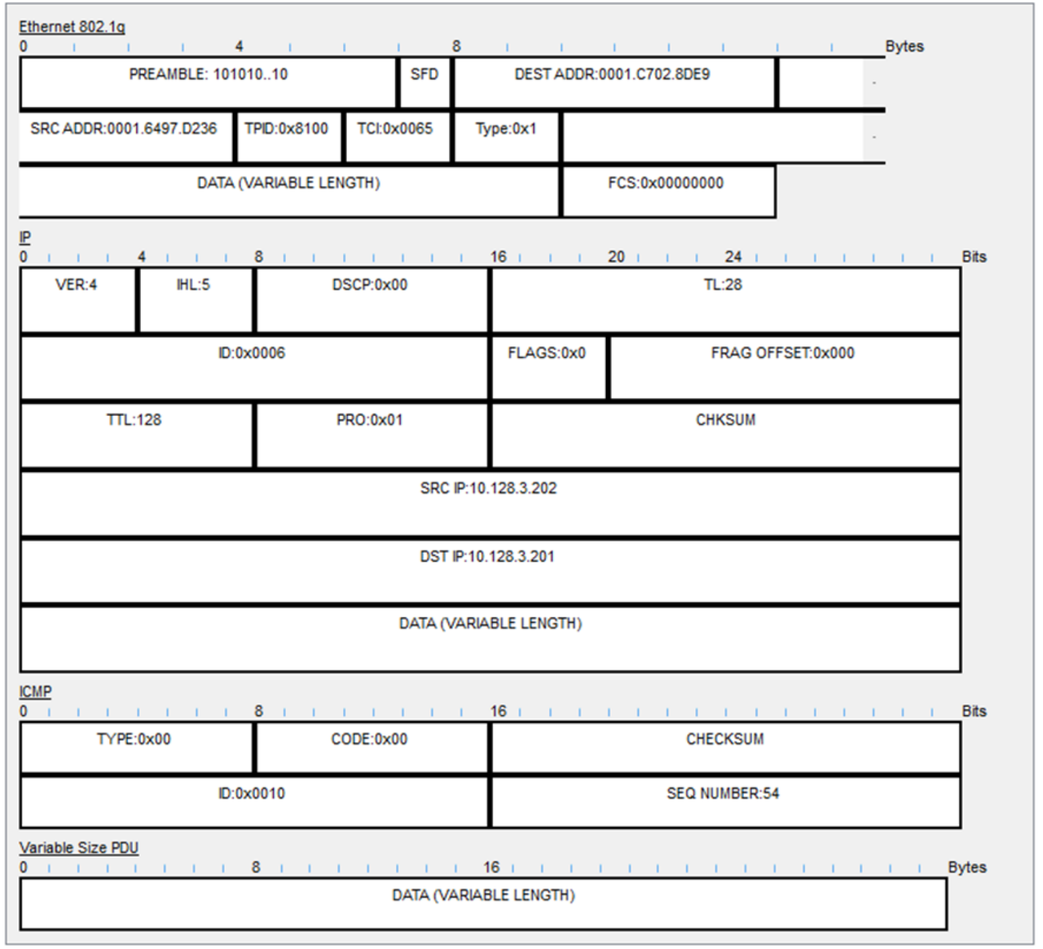
```
C:\>ping 10.128.6.201

Pinging 10.128.6.201 with 32 bytes of data:

Reply from 10.128.6.201: bytes=32 time<1ms TTL=127
Reply from 10.128.6.201: bytes=32 time=1ms TTL=127
Reply from 10.128.6.201: bytes=32 time=9ms TTL=127
Reply from 10.128.6.201: bytes=32 time<1ms TTL=127

Ping statistics for 10.128.6.201:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 9ms, Average = 2ms

C:\>ping 10.128.0.3

Pinging 10.128.0.3 with 32 bytes of data:

Request timed out.
Reply from 10.128.0.3: bytes=32 time<1ms TTL=127
Reply from 10.128.0.3: bytes=32 time<1ms TTL=127
Reply from 10.128.0.3: bytes=32 time<1ms TTL=127

Ping statistics for 10.128.0.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.128.0.2

Pinging 10.128.0.2 with 32 bytes of data:

Request timed out.
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 = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

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

PDU Information at Device: msk-donskaya-kim-sw-4

OSI Model | Inbound PDU Details | Outbound PDU Details

PDU Formats



Вывод

Настроила статическую маршрутизацию VLAN в сети.

Спасибо за внимание!