

Лабораторная работа №4

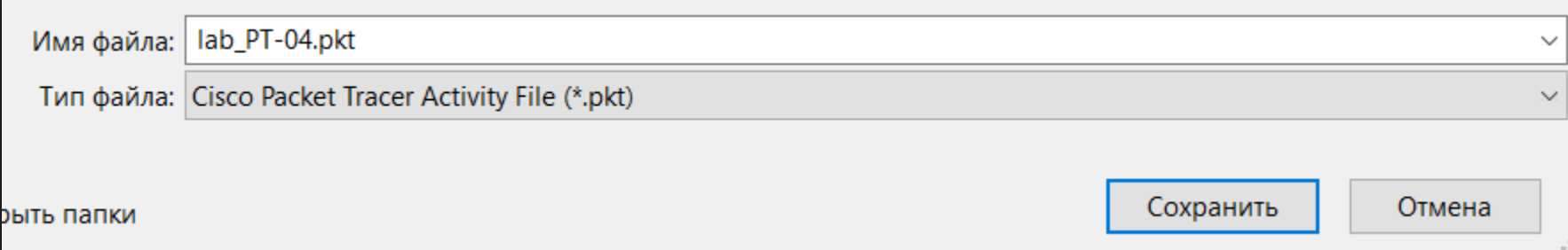
Первоначальное конфигурирование сети

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НПИБД-02-21

Новый проект



Имя файла: lab_PT-04.pkt

Тип файла: Cisco Packet Tracer Activity File (*.pkt)

Открыть папки

Сохранить Отмена

Рис. 1.1. Создание нового проекта.

Схема L1

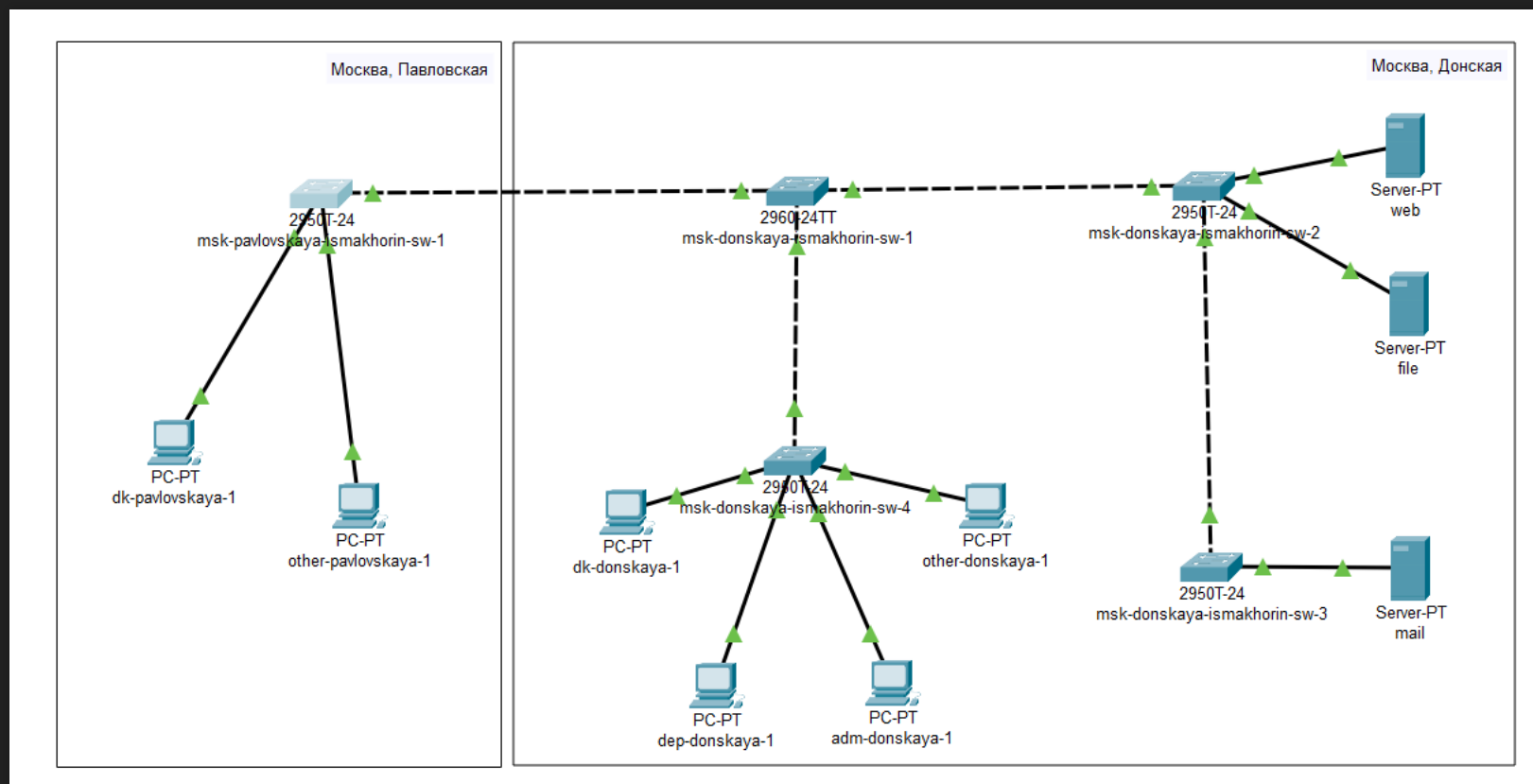


Рис. 1.2. Размещение коммутаторов и оконченных устройств согласно схеме сети L1.

Настройка коммутаторов



```
msk-donskaya-ismakhorin-sw-1
Physical Config CLI Attributes
IOS Command Line Interface
state to up

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname msk-donskaya-ismakhorin-sw-1
msk-donskaya-ismakhorin-sw-1(config)#interface vlan2
msk-donskaya-ismakhorin-sw-1(config-if)#no shutdown
msk-donskaya-ismakhorin-sw-1(config-if)#ip address 10.128.1.2 255.255.255.0
msk-donskaya-ismakhorin-sw-1(config-if)#exit
msk-donskaya-ismakhorin-sw-1(config)#
msk-donskaya-ismakhorin-sw-1(config)#ip default gateway 10.128.1.1
^
% Invalid input detected at '^' marker.

msk-donskaya-ismakhorin-sw-1(config)#ip default-gateway 10.128.1.1
msk-donskaya-ismakhorin-sw-1(config)#line vty 0 4
msk-donskaya-ismakhorin-sw-1(config-line)#password cisco
msk-donskaya-ismakhorin-sw-1(config-line)#login
msk-donskaya-ismakhorin-sw-1(config-line)#exit
msk-donskaya-ismakhorin-sw-1(config)#line console 0
msk-donskaya-ismakhorin-sw-1(config-line)#password cisco
msk-donskaya-ismakhorin-sw-1(config-line)#login
msk-donskaya-ismakhorin-sw-1(config-line)#exit
msk-donskaya-ismakhorin-sw-1(config)#enable secret cisco
msk-donskaya-ismakhorin-sw-1(config)#service password-encryption
msk-donskaya-ismakhorin-sw-1(config)#username admin privilege 1 secret cisco
msk-donskaya-ismakhorin-sw-1(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-ismakhorin-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ismakhorin-sw-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]: 2048
% Generating 2048 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-ismakhorin-sw-1(config)#line vty 0 4
*Mar 1 0:34:47.49: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ismakhorin-sw-1(config-line)#transport input ssh
msk-donskaya-ismakhorin-sw-1(config-line)#exit
msk-donskaya-ismakhorin-sw-1(config)#exit
msk-donskaya-ismakhorin-sw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-donskaya-ismakhorin-sw-1#write memory
Building configuration...
[OK]
msk-donskaya-ismakhorin-sw-1#
```

Рис. 1.3. Настройка коммутатора msk-donskaya-ismakhorin-sw-1, используя типовую конфигурацию.

Настройка коммутаторов



```
msk-donskaya-ismakhorin-sw-2
Physical Config CLI Attributes
IOS Command Line Interface

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname msk-donskaya-ismakhorin-sw-2
msk-donskaya-ismakhorin-sw-2(config)#interface vlan2
msk-donskaya-ismakhorin-sw-2(config-if)#no shutdown
msk-donskaya-ismakhorin-sw-2(config-if)#ip address 10.128.1.3 255.255.255.0
msk-donskaya-ismakhorin-sw-2(config-if)#exit
msk-donskaya-ismakhorin-sw-2(config)#ip default gateway 10.128.1.1
msk-donskaya-ismakhorin-sw-2(config)#exit

% Invalid input detected at '^' marker.

msk-donskaya-ismakhorin-sw-2(config)#ip default-gateway 10.128.1.1
msk-donskaya-ismakhorin-sw-2(config)#line vty 0 4
msk-donskaya-ismakhorin-sw-2(config-line)#password cisco
msk-donskaya-ismakhorin-sw-2(config-line)#login
msk-donskaya-ismakhorin-sw-2(config-line)#exit
msk-donskaya-ismakhorin-sw-2(config)#line console 0
msk-donskaya-ismakhorin-sw-2(config-line)#password cisco
msk-donskaya-ismakhorin-sw-2(config-line)#login
msk-donskaya-ismakhorin-sw-2(config-line)#exit
msk-donskaya-ismakhorin-sw-2(config)#enable secret cisco
msk-donskaya-ismakhorin-sw-2(config)#service password-encryption
msk-donskaya-ismakhorin-sw-2(config)#username admin privilege 1 secret cisco
msk-donskaya-ismakhorin-sw-2(config)#ip domain name donskeya.rudn.edu
msk-donskaya-ismakhorin-sw-2(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-ismakhorin-sw-2(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ismakhorin-sw-2.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]: 2048
% Generating 2048 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-ismakhorin-sw-2(config)#line vty 0 4
*Mar 1 0:24:5.326: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ismakhorin-sw-2(config-line)#transport input ssh
msk-donskaya-ismakhorin-sw-2(config-line)#exit
msk-donskaya-ismakhorin-sw-2(config)#exit
msk-donskaya-ismakhorin-sw-2#
%SYS-5-CONFIG_I: Configured from console by console

msk-donskaya-ismakhorin-sw-2#write memory
Building configuration...
[OK]
msk-donskaya-ismakhorin-sw-2#
```

Рис. 1.4. Настройка коммутатора msk-donskaya-ismakhorin-sw-2, используя типовую конфигурацию.

Настройка коммутаторов



```
msk-donskaya-ismakhorin-sw-3
Physical Config CLI Attributes
IOS Command Line Interface
% Invalid input detected at '^' marker.
Switch(config)#hostname msk-donskaya-ismakhorin-sw-3
msk-donskaya-ismakhorin-sw-3(config)#interface vlan2
msk-donskaya-ismakhorin-sw-3(config-if)#no shutdown
msk-donskaya-ismakhorin-sw-3(config-if)#ip address 10.128.1.2 255.255.255.0
msk-donskaya-ismakhorin-sw-3(config-if)#ip address 10.128.1.4 255.255.255.0
msk-donskaya-ismakhorin-sw-3(config-if)#exit
msk-donskaya-ismakhorin-sw-3(config)#ip default gateway 10.128.1.1
% Invalid input detected at '^' marker.
msk-donskaya-ismakhorin-sw-3(config)#ip default-gateway 10.128.1.1
msk-donskaya-ismakhorin-sw-3(config)#line vty 0 4
msk-donskaya-ismakhorin-sw-3(config-line)#password cisco
msk-donskaya-ismakhorin-sw-3(config-line)#login
msk-donskaya-ismakhorin-sw-3(config-line)#exit
msk-donskaya-ismakhorin-sw-3(config)#line console 0
msk-donskaya-ismakhorin-sw-3(config-line)#password cisco
msk-donskaya-ismakhorin-sw-3(config-line)#login
msk-donskaya-ismakhorin-sw-3(config-line)#exit
msk-donskaya-ismakhorin-sw-3(config)#enable secret cisco
msk-donskaya-ismakhorin-sw-3(config)#service password encryption
% Invalid input detected at '^' marker.
msk-donskaya-ismakhorin-sw-3(config)#service password-encryption
msk-donskaya-ismakhorin-sw-3(config)#username admin privilege 1 secret cisco
msk-donskaya-ismakhorin-sw-3(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-ismakhorin-sw-3(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ismakhorin-sw-3.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]: 2048
% Generating 2048 bit RSA keys, keys will be non-exportable...[OK]
msk-donskaya-ismakhorin-sw-3(config)#line vty 0 4
*Mar 1 0:28:58.136: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ismakhorin-sw-3(config-line)#transport input ssh
msk-donskaya-ismakhorin-sw-3(config-line)#exit
msk-donskaya-ismakhorin-sw-3(config)#exit
msk-donskaya-ismakhorin-sw-3#
%SYS-5-CONFIG_I: Configured from console by console
msk-donskaya-ismakhorin-sw-3#write memory
Building configuration...
[OK]
msk-donskaya-ismakhorin-sw-3#
```

Рис. 1.5. Настройка коммутатора msk-donskaya-ismakhorin-sw-3, используя типовую конфигурацию.

Настройка коммутаторов



```
msk-donskaya-ismakhorin-sw-4
Physical Config CLI Attributes
IOS Command Line Interface

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, changed
state to up

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname msk-donskaya-ismakhorin-sw-4
msk-donskaya-ismakhorin-sw-4(config)#interface vlan2
msk-donskaya-ismakhorin-sw-4(config-if)#no shutdown
msk-donskaya-ismakhorin-sw-4(config-if)#ip address 10.128.1.5 255.255.255.0
msk-donskaya-ismakhorin-sw-4(config-if)#exit
msk-donskaya-ismakhorin-sw-4(config)#ip default gateway 10.128.1.1
msk-donskaya-ismakhorin-sw-4(config)#ip default-gateway 10.128.1.1
% Invalid input detected at '^' marker.

msk-donskaya-ismakhorin-sw-4(config)#ip default-gateway 10.128.1.1
msk-donskaya-ismakhorin-sw-4(config)#line vty 0 4
msk-donskaya-ismakhorin-sw-4(config-line)#password cisco
msk-donskaya-ismakhorin-sw-4(config-line)#login
msk-donskaya-ismakhorin-sw-4(config-line)#exit
msk-donskaya-ismakhorin-sw-4(config)#line console 0
msk-donskaya-ismakhorin-sw-4(config-line)#password cisco
msk-donskaya-ismakhorin-sw-4(config-line)#login
msk-donskaya-ismakhorin-sw-4(config-line)#exit
msk-donskaya-ismakhorin-sw-4(config)#enable secret cisco
msk-donskaya-ismakhorin-sw-4(config)#service password-encryption
msk-donskaya-ismakhorin-sw-4(config)#username admin privilege 1 secret cisco
msk-donskaya-ismakhorin-sw-4(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-ismakhorin-sw-4(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ismakhorin-sw-4.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]: 2048
% Generating 2048 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-ismakhorin-sw-4(config)#line vty 0 4
*Mar 1 0:33:13.715: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ismakhorin-sw-4(config-line)#transport input ssh
msk-donskaya-ismakhorin-sw-4(config-line)#exit
msk-donskaya-ismakhorin-sw-4(config)#exit
msk-donskaya-ismakhorin-sw-4#
%SYS-5-CONFIG I: Configured from console by console

msk-donskaya-ismakhorin-sw-4#write memory
Building configuration...
[OK]
msk-donskaya-ismakhorin-sw-4#
```

Рис. 1.6. Настройка коммутатора msk-donskaya-ismakhorin-sw-4, используя типовую конфигурацию.

Настройка коммутаторов



```
msk-pavlovskaya-ismakhorin-sw-1
Physical Config CLI Attributes
IOS Command Line Interface

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname msk-pavlovskaya-ismakhorin-sw-1
msk-pavlovskaya-ismakhorin-sw-1(config)#interface vlan2
msk-pavlovskaya-ismakhorin-sw-1(config-if)#no shutdown
msk-pavlovskaya-ismakhorin-sw-1(config-if)#ip address 10.128.1.2
255.255.255.0
msk-pavlovskaya-ismakhorin-sw-1(config-if)#ip address 10.128.1.6
255.255.255.0
msk-pavlovskaya-ismakhorin-sw-1(config-if)#exit
msk-pavlovskaya-ismakhorin-sw-1(config)#ip default gateway 10.128.1.1
^
% Invalid input detected at '^' marker.

msk-pavlovskaya-ismakhorin-sw-1(config)#line vty 0 4
msk-pavlovskaya-ismakhorin-sw-1(config-line)#password cisco
msk-pavlovskaya-ismakhorin-sw-1(config-line)#login
msk-pavlovskaya-ismakhorin-sw-1(config-line)#exit
msk-pavlovskaya-ismakhorin-sw-1(config)#line console 0
msk-pavlovskaya-ismakhorin-sw-1(config-line)#password cisco
msk-pavlovskaya-ismakhorin-sw-1(config-line)#login
msk-pavlovskaya-ismakhorin-sw-1(config-line)#exit
msk-pavlovskaya-ismakhorin-sw-1(config)#enable secret cisco
msk-pavlovskaya-ismakhorin-sw-1(config)#service password-encryption
msk-pavlovskaya-ismakhorin-sw-1(config)#username admin privilege 1 secret
cisco
msk-pavlovskaya-ismakhorin-sw-1(config)#ip domain-name donskeya.rudn.edu
msk-pavlovskaya-ismakhorin-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-pavlovskaya-ismakhorin-
sw-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]: 2048
% Generating 2048 bit RSA keys, keys will be non-exportable...[OK]

msk-pavlovskaya-ismakhorin-sw-1(config)#line vty 0 4
*Mar 1 0:38:15.524: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-pavlovskaya-ismakhorin-sw-1(config-line)#transport input ssh
msk-pavlovskaya-ismakhorin-sw-1(config-line)#exit
msk-pavlovskaya-ismakhorin-sw-1(config)#exit
msk-pavlovskaya-ismakhorin-sw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-pavlovskaya-ismakhorin-sw-1#write memory
Building configuration...
[OK]
msk-pavlovskaya-ismakhorin-sw-1#
```

Рис. 1.7. Настройка коммутатора msk-pavlovskaya-ismakhorin-sw-1, используя типовую конфигурацию.

ВЫВОД

- В ходе выполнения лабораторной работы мы научились проводить подготовительную работу по первоначальной настройке коммутаторов сети.

Спасибо за внимание!