Лабораторная работа №4

Администрирование локальных сетей

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Провести подготовительную работу по первоначальной настройке коммутаторов сети.
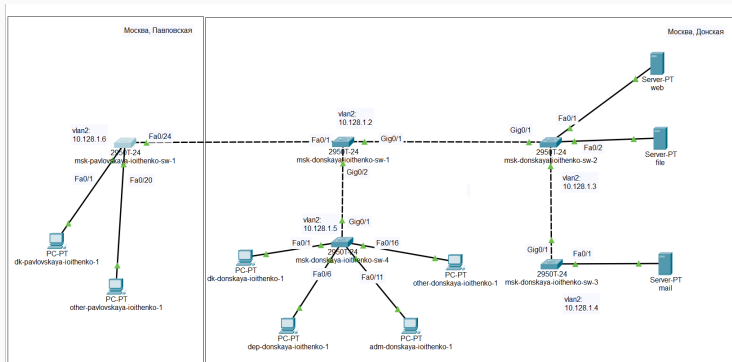
Выполнение лабораторной работы

Рис. 1: Схема сети

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname msk-donskaya-ioithenko-sw-1
msk-donskaya-ioithenko-sw-1(config)#interface vlan2
msk-donskaya-ioithenko-sw-1(config-if)#no shutdown
msk-donskaya-ioithenko-sw-1(config-if)#ip address 10.128.1.2 255.255.255.0
msk-donskaya-ioithenko-sw-1(config-if)#exit
msk-donskaya-ioithenko-sw-1(config)#ip default-gateway 10.128.1.1
msk-donskaya-ioithenko-sw-1(config)#line vty 0 4
msk-donskaya-ioithenko-sw-1(config-line)#password cisco
msk-donskaya-ioithenko-sw-1(config-line)#login
msk-donskaya-ioithenko-sw-1(config-line)#exit
msk-donskaya-ioithenko-sw-1(config)#line console 0
msk-donskaya-ioithenko-sw-1(config-line)#password cisco
msk-donskaya-ioithenko-sw-1(config-line)#login
msk-donskaya-ioithenko-sw-1(config-line)#exit
msk-donskaya-ioithenko-sw-1(config)#enable secret cisco
msk-donskaya-ioithenko-sw-1(config)#service password-encryption
msk-donskaya-ioithenko-sw-1(config)#username admin privilege 1 secret cisco
msk-donskaya-ioithenko-sw-1(config)#ip domain-name donskaya.rudn.edu
msk-donskaya-ioithenko-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ioithenko-sw-1.donskaya.rudn.edu
Choose the size of the key modulus in the range of 360 to 4096 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-ioithenko-sw-1(config)#line vty 0 4
*Mar 1 0:20:16.686: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ioithenko-sw-1(config-line)#transport input ssh
msk-donskaya-ioithenko-sw-1(config-line)#exit
msk-donskaya-ioithenko-sw-1(config)#exit
msk-donskaya-ioithenko-sw-1#write memory
%SYS-5-CONFIG_I: Configured from console by console

Building configuration...
[OK]
msk-donskaya-ioithenko-sw-1#
```

Рис. 2: Настройка коммутатора

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname msk-donskaya-ioithenko-sw-2
msk-donskaya-ioithenko-sw-2(config)#interface vlan
% Incomplete command.
msk-donskaya-ioithenko-sw-2(config)#interface vlan2
msk-donskaya-ioithenko-sw-2(config-if)#ip address 10.128.1.3 255.255.255.0
msk-donskaya-ioithenko-sw-2(config-if)#exit
msk-donskaya-ioithenko-sw-2(config)#ip default-gateway 10.128.1.1
msk-donskaya-ioithenko-sw-2(config)#line vty 0 4
msk-donskaya-ioithenko-sw-2(config-line)#password cisco
msk-donskaya-ioithenko-sw-2(config-line)#login
msk-donskaya-ioithenko-sw-2(config-line)#exit
msk-donskaya-ioithenko-sw-2(config)#line console 0
msk-donskaya-ioithenko-sw-2(config-line)#password cisco
msk-donskaya-ioithenko-sw-2(config-line)#login
msk-donskaya-ioithenko-sw-2(config-line)#exit
msk-donskaya-ioithenko-sw-2(config)#enable secret cisco
msk-donskaya-ioithenko-sw-2(config)#service password-encryption
msk-donskaya-ioithenko-sw-2(config)#username admin privilege 1 secret cisco
msk-donskaya-ioithenko-sw-2(config)#ip domain-name donskaya.rudn.edu
msk-donskaya-ioithenko-sw-2(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ioithenko-sw-2.donskaya.rudn.edu
Choose the size of the key modulus in the range of 360 to 4096 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-ioithenko-sw-2(config)#line vty 0 4
*Mar 1 0:22:56.969: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ioithenko-sw-2(config-line)#transport input ssh
msk-donskaya-ioithenko-sw-2(config-line)#exit
msk-donskaya-ioithenko-sw-2(config)#exit
msk-donskaya-ioithenko-sw-2#write memory
%SYS-5-CONFIG_I: Configured from console by console

Building configuration...
[OK]
msk-donskaya-ioithenko-sw-2#
```

Рис. 3: Настройка коммутатора

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname msk-donskaya-ioithenko-sw-3
msk-donskaya-ioithenko-sw-3(config)#interface vlan2
msk-donskaya-ioithenko-sw-3(config-if)#no shutdown
msk-donskaya-ioithenko-sw-3(config-if)#ip address 10.128.1.4 255.255.255.0
msk-donskaya-ioithenko-sw-3(config-if)#exit
msk-donskaya-ioithenko-sw-3(config)#ip default-gateway 10.128.1.1
msk-donskaya-ioithenko-sw-3(config)#line vty 0 4
msk-donskaya-ioithenko-sw-3(config-line)#password cisco
msk-donskaya-ioithenko-sw-3(config-line)#login
msk-donskaya-ioithenko-sw-3(config-line)#exit
msk-donskaya-ioithenko-sw-3(config)#line console 0
msk-donskaya-ioithenko-sw-3(config-line)#password cisco
msk-donskaya-ioithenko-sw-3(config-line)#login
msk-donskaya-ioithenko-sw-3(config-line)#exit
msk-donskaya-ioithenko-sw-3(config)#enable secret cisco
msk-donskaya-ioithenko-sw-3(config)#service password-encryption
msk-donskaya-ioithenko-sw-3(config)#username admin privilege 1 secret cisco
msk-donskaya-ioithenko-sw-3(config)#ip domain-name donskaya.rudn.edu
msk-donskaya-ioithenko-sw-3(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ioithenko-sw-3.donskaya.rudn.edu
Choose the size of the key modulus in the range of 360 to 4096 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-ioithenko-sw-3(config)#line vty 0 4
*Mar 1 0:25:4.380: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ioithenko-sw-3(config-line)#transport input ssh
msk-donskaya-ioithenko-sw-3(config-line)#exit
msk-donskaya-ioithenko-sw-3(config)#exit
msk-donskaya-ioithenko-sw-3#write memory
%SYS-5-CONFIG_I: Configured from console by console

Building configuration...
[OK]
msk-donskaya-ioithenko-sw-3#
```

Рис. 4: Настройка коммутатора

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname msk-donskaya-ioithenko-sw-4
msk-donskaya-ioithenko-sw-4(config)#interface vlan2
msk-donskaya-ioithenko-sw-4(config-if)#no shutdown
msk-donskaya-ioithenko-sw-4(config-if)#ip address 10.128.1.5 255.255.255.0
msk-donskaya-ioithenko-sw-4(config-if)#exit
msk-donskaya-ioithenko-sw-4(config)#ip default-gateway 10.128.1.1
msk-donskaya-ioithenko-sw-4(config)#line vty 0 4
msk-donskaya-ioithenko-sw-4(config-line)#password cisco
msk-donskaya-ioithenko-sw-4(config-line)#login
msk-donskaya-ioithenko-sw-4(config-line)#exit
msk-donskaya-ioithenko-sw-4(config)#line console 0
msk-donskaya-ioithenko-sw-4(config-line)#password cisco
msk-donskaya-ioithenko-sw-4(config-line)#login
msk-donskaya-ioithenko-sw-4(config-line)#exit
msk-donskaya-ioithenko-sw-4(config)#enable secret cisco
msk-donskaya-ioithenko-sw-4(config)#service password-encryption
msk-donskaya-ioithenko-sw-4(config)#username admin privilege 1 secret cisco
msk-donskaya-ioithenko-sw-4(config)#ip domain-name donskaya.rudn.edu
msk-donskaya-ioithenko-sw-4(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-ioithenko-sw-4.donskaya.rudn.edu
Choose the size of the key modulus in the range of 360 to 4096 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-ioithenko-sw-4(config)#line vty 0 4
*Mar 1 0:27:15.218: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-ioithenko-sw-4(config-line)#transport input ssh
msk-donskaya-ioithenko-sw-4(config-line)#exit
msk-donskaya-ioithenko-sw-4(config)#exit
msk-donskaya-ioithenko-sw-4#write memory
%SYS-5-CONFIG_I: Configured from console by console

Building configuration...
[OK]
msk-donskaya-ioithenko-sw-4#
```

Рис. 5: Настройка коммутатора

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname msk-pavlovskaya-ioithenko-sw-1
msk-pavlovskaya-ioithenko-sw-1(config)#interface vlan2
msk-pavlovskaya-ioithenko-sw-1(config-if)#no shutdown
msk-pavlovskaya-ioithenko-sw-1(config-if)#ip address 10.128.1.6 255.255.255.0
msk-pavlovskaya-ioithenko-sw-1(config-if)#exit
msk-pavlovskaya-ioithenko-sw-1(config)#ip default-gateway 10.128.1.1
msk-pavlovskaya-ioithenko-sw-1(config)#line vty 0 4
msk-pavlovskaya-ioithenko-sw-1(config-line)#password cisco
msk-pavlovskaya-ioithenko-sw-1(config-line)#login
msk-pavlovskaya-ioithenko-sw-1(config-line)#exit
msk-pavlovskaya-ioithenko-sw-1(config)#line console 0
msk-pavlovskaya-ioithenko-sw-1(config-line)#password cisco
msk-pavlovskaya-ioithenko-sw-1(config-line)#login
msk-pavlovskaya-ioithenko-sw-1(config-line)#exit
msk-pavlovskaya-ioithenko-sw-1(config)#enable secret cisco
msk-pavlovskaya-ioithenko-sw-1(config)#service password-encryption
msk-pavlovskaya-ioithenko-sw-1(config)#username admin privilege 1 secret cisco
msk-pavlovskaya-ioithenko-sw-1(config)#ip domain-name donskaya.rudn.edu
msk-pavlovskaya-ioithenko-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-pavlovskaya-ioithenko-sw-1.donskaya.rudn.edu
Choose the size of the key modulus in the range of 360 to 4096 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-ioithenko-sw-1(config)#line vty 0 4
*Mar 1 0:29:43.270: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-pavlovskaya-ioithenko-sw-1(config-line)#transport input ssh
msk-pavlovskaya-ioithenko-sw-1(config-line)#exit
msk-pavlovskaya-ioithenko-sw-1(config)#exit
msk-pavlovskaya-ioithenko-sw-1#write memory
%SYS-5-CONFIG_I: Configured from console by console

Building configuration...
[OK]
msk-pavlovskaya-ioithenko-sw-1#
```

Рис. 6: Настройка коммутатора

В ходе выполнения лабораторной работы я провела подготовительную работу по первоначальной настройке коммутаторов сети.