

Презентация по лабораторной работе №4

Администрирование локальных сетей

Еюбоглу Тимур

4 апреля 2025 г.

Российский университет дружбы народов, Москва, Россия

- Еюбоглу Тимур
- 1032224357
- уч. группа: НПИбд-01-22
- Факультет физико-математических и естественных наук
- Российский университет дружбы народов

Провести подготовительную работу по первоначальной настройке коммутаторов сети.

Выполнение лабораторной работы

Размещение коммутаторов и оконечных устройств

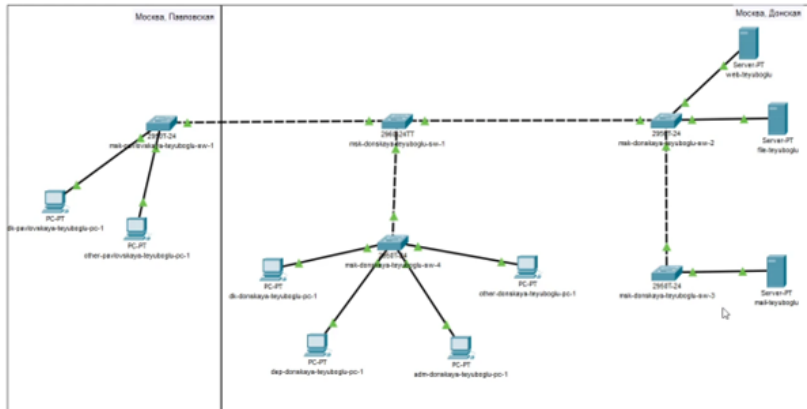
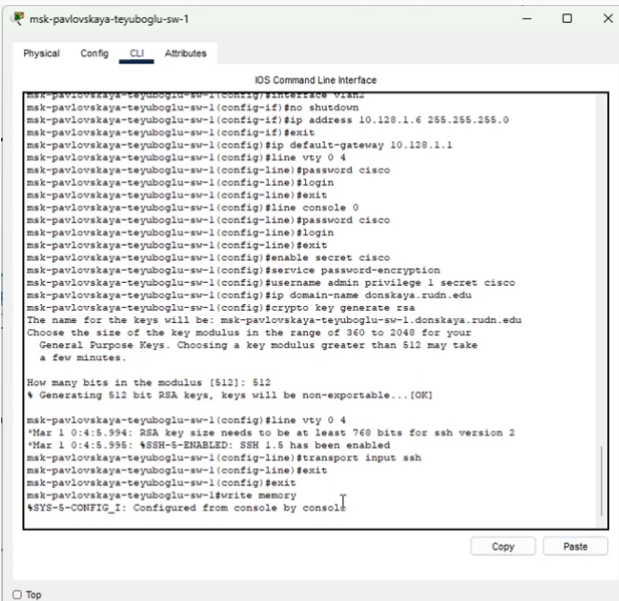


Рис. 1: Разещение коммутаторов и оконечных устройств

Конфигурирование коммутатора msk-pavlovskaya-teyuboglu-sw-1



The screenshot shows a window titled "msk-pavlovskaya-teyuboglu-sw-1" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the IOS Command Line Interface. The configuration commands entered are as follows:

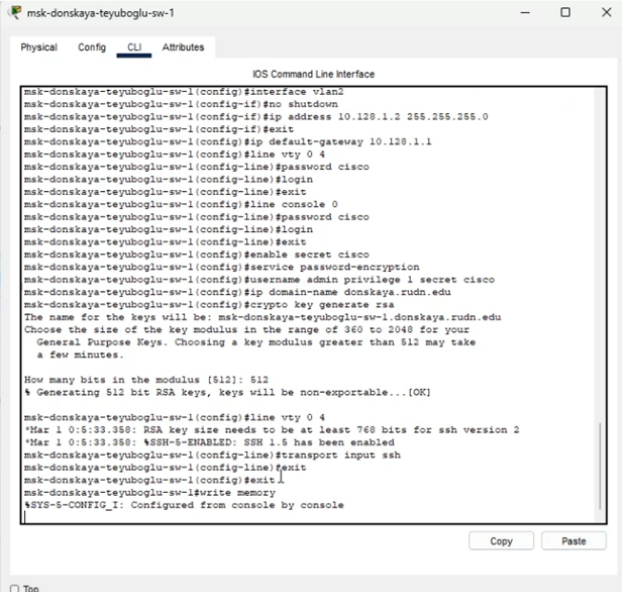
```
msk-pavlovskaya-teyuboglu-sw-1(config)#interface viana
msk-pavlovskaya-teyuboglu-sw-1(config-if)#no shutdown
msk-pavlovskaya-teyuboglu-sw-1(config-if)#ip address 10.128.1.6 255.255.255.0
msk-pavlovskaya-teyuboglu-sw-1(config-if)#exit
msk-pavlovskaya-teyuboglu-sw-1(config)#ip default-gateway 10.128.1.1
msk-pavlovskaya-teyuboglu-sw-1(config)#line vty 0 4
msk-pavlovskaya-teyuboglu-sw-1(config-line)#password cisco
msk-pavlovskaya-teyuboglu-sw-1(config-line)#login
msk-pavlovskaya-teyuboglu-sw-1(config-line)#exit
msk-pavlovskaya-teyuboglu-sw-1(config)#line console 0
msk-pavlovskaya-teyuboglu-sw-1(config-line)#password cisco
msk-pavlovskaya-teyuboglu-sw-1(config-line)#login
msk-pavlovskaya-teyuboglu-sw-1(config-line)#exit
msk-pavlovskaya-teyuboglu-sw-1(config)#enable secret cisco
msk-pavlovskaya-teyuboglu-sw-1(config)#service password-encryption
msk-pavlovskaya-teyuboglu-sw-1(config)#username admin privilege 1 secret cisco
msk-pavlovskaya-teyuboglu-sw-1(config)#ip domain-name donskaya.rudn.edu
msk-pavlovskaya-teyuboglu-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-pavlovskaya-teyuboglu-sw-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]: 512
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]

msk-pavlovskaya-teyuboglu-sw-1(config)#line vty 0 4
*Mar 1 0:4:5.994: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:4:5.995: %SSH-5-ENABLED: SSH 1.5 has been enabled
msk-pavlovskaya-teyuboglu-sw-1(config-line)#transport input ssh
msk-pavlovskaya-teyuboglu-sw-1(config-line)#exit
msk-pavlovskaya-teyuboglu-sw-1(config)#exit
msk-pavlovskaya-teyuboglu-sw-1#write memory
%SYS-5-CONFIG_I: Configured from console by console
```

At the bottom of the CLI window, there are "Copy" and "Paste" buttons. Below the window, there is a "Top" button.

Конфигурирование коммутатора msk-donskaya-teyuboglu-sw-1



The screenshot shows a network configuration window titled "msk-donskaya-teyuboglu-sw-1". It has tabs for "Physical", "Config", "CLI", and "Attributes", with "CLI" selected. The main area displays the "IOS Command Line Interface" with the following commands and output:

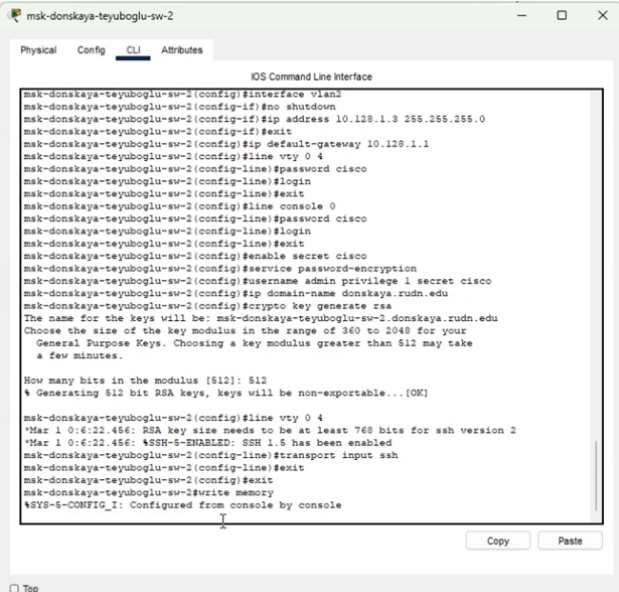
```
msk-donskaya-teyuboglu-sw-1(config)#interface vlan2
msk-donskaya-teyuboglu-sw-1(config-if)#no shutdown
msk-donskaya-teyuboglu-sw-1(config-if)#ip address 10.120.1.2 255.255.255.0
msk-donskaya-teyuboglu-sw-1(config-if)#exit
msk-donskaya-teyuboglu-sw-1(config)#ip default-gateway 10.120.1.1
msk-donskaya-teyuboglu-sw-1(config)#line vty 0 4
msk-donskaya-teyuboglu-sw-1(config-line)#password cisco
msk-donskaya-teyuboglu-sw-1(config-line)#login
msk-donskaya-teyuboglu-sw-1(config-line)#exit
msk-donskaya-teyuboglu-sw-1(config)#line console 0
msk-donskaya-teyuboglu-sw-1(config-line)#password cisco
msk-donskaya-teyuboglu-sw-1(config-line)#login
msk-donskaya-teyuboglu-sw-1(config-line)#exit
msk-donskaya-teyuboglu-sw-1(config)#enable secret cisco
msk-donskaya-teyuboglu-sw-1(config)#service password-encryption
msk-donskaya-teyuboglu-sw-1(config)#username admin privilege 1 secret cisco
msk-donskaya-teyuboglu-sw-1(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-teyuboglu-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-teyuboglu-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]: 512
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-teyuboglu-sw-1(config)#line vty 0 4
*Mar 1 0:5:33.350: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:5:33.350: %SSH-5-ENABLED: SSH 1.5 has been enabled
msk-donskaya-teyuboglu-sw-1(config-line)#transport input ssh
msk-donskaya-teyuboglu-sw-1(config-line)#exit
msk-donskaya-teyuboglu-sw-1(config)#exit
msk-donskaya-teyuboglu-sw-1#write memory
%SYS-5-CONFIG_I: Configured from console by console
```

At the bottom of the window, there are "Copy" and "Paste" buttons, and a "Top" button in the footer.

Конфигурирование коммутатора msk-donskaya-teyuboglu-sw-2



The screenshot shows a web-based configuration interface for a switch named 'msk-donskaya-teyuboglu-sw-2'. The 'CLI' tab is active, displaying a series of commands and their outputs in a terminal window. The commands configure the 'vlan2' interface, set the IP address to 10.128.1.3, enable SSH, and generate RSA keys. The output shows the successful configuration of the interface and the generation of RSA keys.

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

msk-donskaya-teyuboglu-sw-2(config)#interface vlan2
msk-donskaya-teyuboglu-sw-2(config-if)#no shutdown
msk-donskaya-teyuboglu-sw-2(config-if)#ip address 10.128.1.3 255.255.255.0
msk-donskaya-teyuboglu-sw-2(config-if)#exit
msk-donskaya-teyuboglu-sw-2(config)#ip default-gateway 10.128.1.1
msk-donskaya-teyuboglu-sw-2(config)#line vty 0 4
msk-donskaya-teyuboglu-sw-2(config-line)#password cisco
msk-donskaya-teyuboglu-sw-2(config-line)#login
msk-donskaya-teyuboglu-sw-2(config-line)#exit
msk-donskaya-teyuboglu-sw-2(config)#line console 0
msk-donskaya-teyuboglu-sw-2(config-line)#password cisco
msk-donskaya-teyuboglu-sw-2(config-line)#login
msk-donskaya-teyuboglu-sw-2(config-line)#exit
msk-donskaya-teyuboglu-sw-2(config)#enable secret cisco
msk-donskaya-teyuboglu-sw-2(config)#service password-encryption
msk-donskaya-teyuboglu-sw-2(config)#username admin privilege 1 secret cisco
msk-donskaya-teyuboglu-sw-2(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-teyuboglu-sw-2(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-teyuboglu-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.

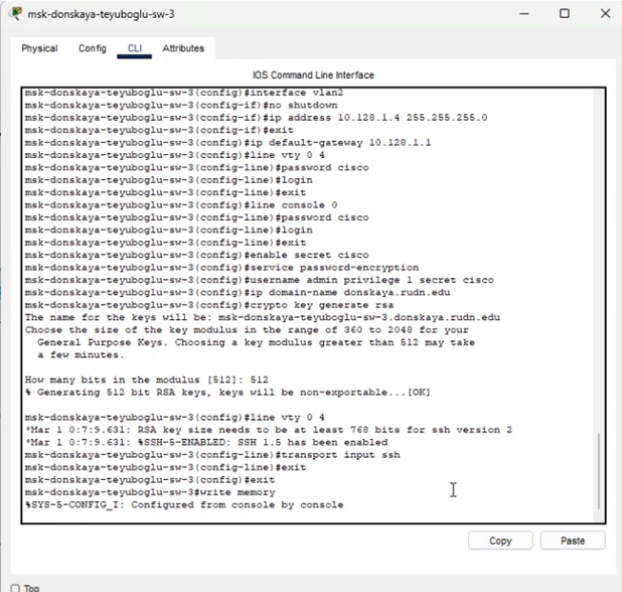
How many bits in the modulus [512]: 512
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-teyuboglu-sw-2(config)#line vty 0 4
*Mar 1 0:6:22.456: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:6:22.456: %SSH-5-ENABLED: SSH 1.5 has been enabled
msk-donskaya-teyuboglu-sw-2(config-line)#transport input ssh
msk-donskaya-teyuboglu-sw-2(config-line)#exit
msk-donskaya-teyuboglu-sw-2(config)#exit
msk-donskaya-teyuboglu-sw-2#write memory
%SYS-5-CONFIG_I: Configured from console by console
```

Copy Paste

Top

Конфигурирование коммутатора msk-donskaya-teyuboglu-sw-3



The screenshot shows a network configuration window titled "msk-donskaya-teyuboglu-sw-3". It has tabs for "Physical", "Config", "CLI", and "Attributes", with "CLI" selected. The main area displays the "IOS Command Line Interface" with the following commands and output:

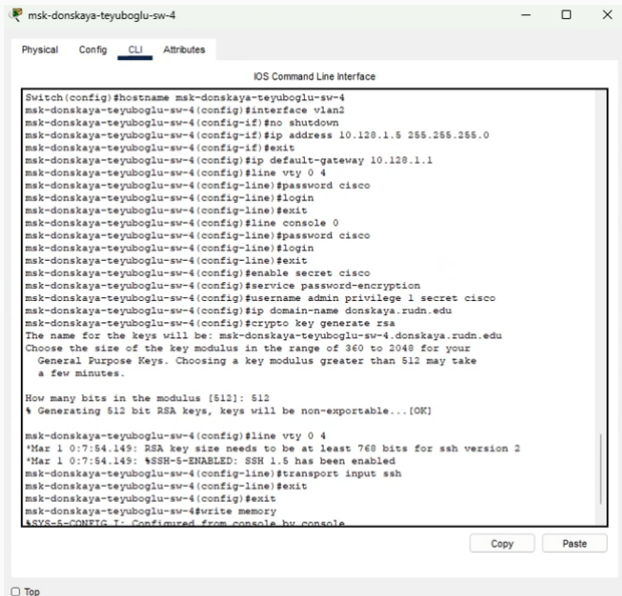
```
msk-donskaya-teyuboglu-sw-3(config)#interface vlan1
msk-donskaya-teyuboglu-sw-3(config-if)#no shutdown
msk-donskaya-teyuboglu-sw-3(config-if)#ip address 10.120.1.4 255.255.255.0
msk-donskaya-teyuboglu-sw-3(config-if)#exit
msk-donskaya-teyuboglu-sw-3(config)#ip default-gateway 10.120.1.1
msk-donskaya-teyuboglu-sw-3(config)#line vty 0 4
msk-donskaya-teyuboglu-sw-3(config-line)#password cisco
msk-donskaya-teyuboglu-sw-3(config-line)#login
msk-donskaya-teyuboglu-sw-3(config-line)#exit
msk-donskaya-teyuboglu-sw-3(config)#line console 0
msk-donskaya-teyuboglu-sw-3(config-line)#password cisco
msk-donskaya-teyuboglu-sw-3(config-line)#login
msk-donskaya-teyuboglu-sw-3(config-line)#exit
msk-donskaya-teyuboglu-sw-3(config)#enable secret cisco
msk-donskaya-teyuboglu-sw-3(config)#service password-encryption
msk-donskaya-teyuboglu-sw-3(config)#username admin privilege 1 secret cisco
msk-donskaya-teyuboglu-sw-3(config)#ip domain-name donskeya.rudn.edu
msk-donskaya-teyuboglu-sw-3(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-teyuboglu-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]: 512
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-teyuboglu-sw-3(config)#line vty 0 4
*Mar 1 0:7:9.631: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:7:9.631: %SSH-5-ENABLED: SSH 1.5 has been enabled
msk-donskaya-teyuboglu-sw-3(config-line)#transport input ssh
msk-donskaya-teyuboglu-sw-3(config-line)#exit
msk-donskaya-teyuboglu-sw-3(config)#exit
msk-donskaya-teyuboglu-sw-3#write memory
%SYS-5-CONFIG_I: Configured from console by console
```

At the bottom right of the CLI window are "Copy" and "Paste" buttons. At the bottom left of the entire window is a "Top" button.

Конфигурирование коммутатора msk-donskaya-teyuboglu-sw-4



```
msk-donskaya-teyuboglu-sw-4
Physical Config CLI Attributes
IOS Command Line Interface
Switch(config)#hostname msk-donskaya-teyuboglu-sw-4
msk-donskaya-teyuboglu-sw-4(config)#interface vlan2
msk-donskaya-teyuboglu-sw-4(config-if)#no shutdown
msk-donskaya-teyuboglu-sw-4(config-if)#ip address 10.128.1.5 255.255.255.0
msk-donskaya-teyuboglu-sw-4(config-if)#exit
msk-donskaya-teyuboglu-sw-4(config)#ip default-gateway 10.128.1.1
msk-donskaya-teyuboglu-sw-4(config)#line vty 0 4
msk-donskaya-teyuboglu-sw-4(config-line)#password cisco
msk-donskaya-teyuboglu-sw-4(config-line)#login
msk-donskaya-teyuboglu-sw-4(config-line)#exit
msk-donskaya-teyuboglu-sw-4(config)#line console 0
msk-donskaya-teyuboglu-sw-4(config-line)#password cisco
msk-donskaya-teyuboglu-sw-4(config-line)#login
msk-donskaya-teyuboglu-sw-4(config-line)#exit
msk-donskaya-teyuboglu-sw-4(config)#enable secret cisco
msk-donskaya-teyuboglu-sw-4(config)#service password-encryption
msk-donskaya-teyuboglu-sw-4(config)#username admin privilege 1 secret cisco
msk-donskaya-teyuboglu-sw-4(config)#ip domain-name donsкаya.rudn.edu
msk-donskaya-teyuboglu-sw-4(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-teyuboglu-sw-4.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]: 512
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-teyuboglu-sw-4(config)#line vty 0 4
*Mar 1 0:7:54.149: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:7:54.149: %SSH-5-ENABLED: SSH 1.5 has been enabled
msk-donskaya-teyuboglu-sw-4(config-line)#transport input ssh
msk-donskaya-teyuboglu-sw-4(config-line)#exit
msk-donskaya-teyuboglu-sw-4(config)#exit
msk-donskaya-teyuboglu-sw-4#write memory
%SYS-5-CONF:1-: Configured from console by console
```

Top Copy Paste

Выводы по проделанной работе

Благодаря выполнению данной лабораторной работы, мы провели подготовительную работу по первоначальной настройке коммутаторов сети.