

Презентация по лабораторной работе 2

Предварительная настройка оборудования Cisco

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1 Информация

1.1 Докладчик

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2 Вводная часть

2.1 Цели и задачи

- Получить основные навыки по начальному конфигурированию оборудования Cisco.

3 Выполнение заданий

3.1 слайд 1

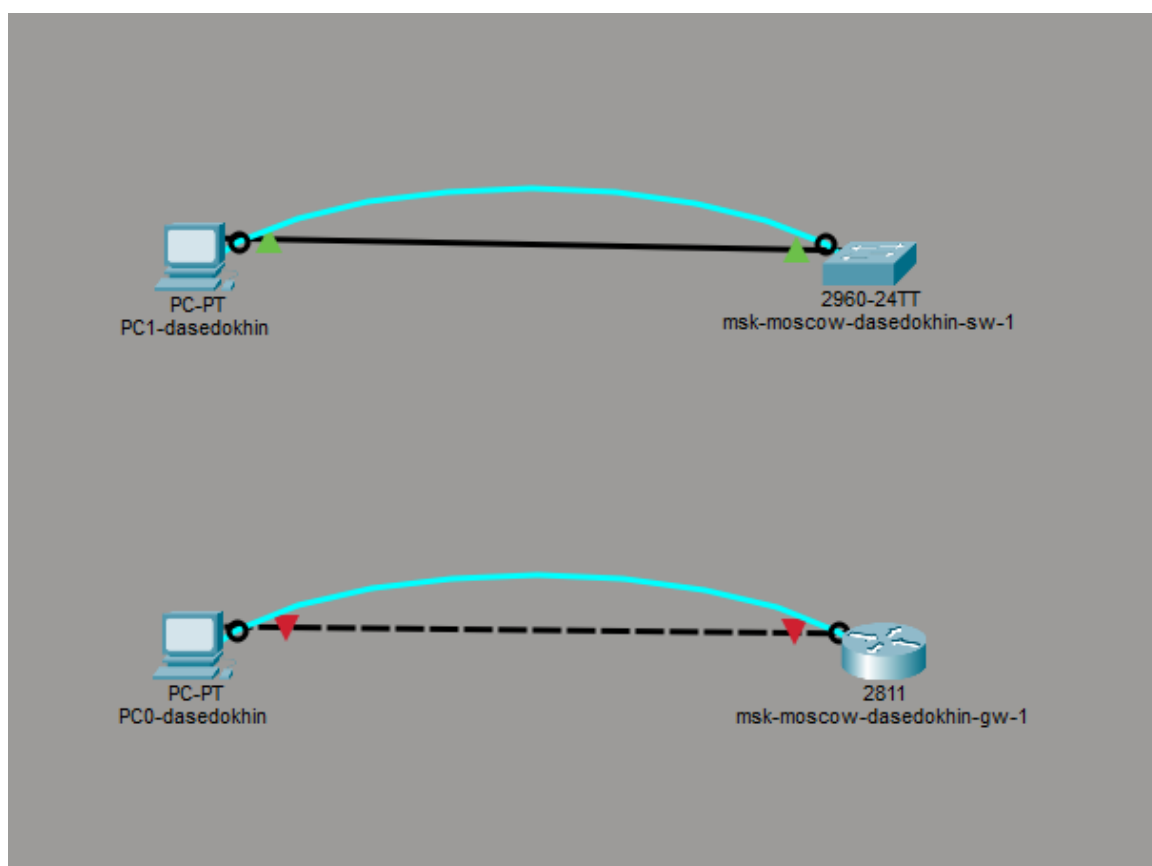


Рисунок 3.1: Воспроизведение топологии сети с двумя оконечными устройствами, маршрутизатором и коммутатором

3.2 слайд 2



```
msk-moscow-dasedokhin-gw-1
Physical Config CLI Attributes

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname msk-moscow-dasedokhin-gw-1
msk-moscow-dasedokhin-gw-1(config)#interface f0/0
msk-moscow-dasedokhin-gw-1(config-if)#no shutdown

msk-moscow-dasedokhin-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-moscow-dasedokhin-gw-1(config-if)#ip address 192.168.1.254 255.255.255.0
msk-moscow-dasedokhin-gw-1(config-if)#line vty 0 4
msk-moscow-dasedokhin-gw-1(config-line)#password cisco
msk-moscow-dasedokhin-gw-1(config-line)#login
msk-moscow-dasedokhin-gw-1(config-line)#^Z
msk-moscow-dasedokhin-gw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-moscow-dasedokhin-gw-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-gw-1(config)#line console 0
msk-moscow-dasedokhin-gw-1(config-line)#password cisco
msk-moscow-dasedokhin-gw-1(config-line)#login
msk-moscow-dasedokhin-gw-1(config-line)#^Z
msk-moscow-dasedokhin-gw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-moscow-dasedokhin-gw-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-gw-1(config)#enable secret cisco
msk-moscow-dasedokhin-gw-1(config)#service password-encryption
msk-moscow-dasedokhin-gw-1(config)#username admin privilege 1 secret cisco
msk-moscow-dasedokhin-gw-1(config)#ip domain-name moscow.rudn.edu
msk-moscow-dasedokhin-gw-1(config)#crypto key generate rsa
The name for the keys will be: msk-moscow-dasedokhin-gw-1.moscow.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]:
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]

msk-moscow-dasedokhin-gw-1(config)#line vty 0 4
*Mar 1 0:8:45.973: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:8:45.973: %SSH-5-ENABLED: SSH 1.5 has been enabled
msk-moscow-dasedokhin-gw-1(config-line)#transport input ssh
msk-moscow-dasedokhin-gw-1(config-line)#
```

Рисунок 3.2: Настройка маршрутизатора

3.3 слайд 3



```
msk-moscow-dasedokhin-sw-1
Physical Config CLI Attributes

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname msk-moscow-dasedokhin-sw-1
msk-moscow-dasedokhin-sw-1(config)#interface vlan2
msk-moscow-dasedokhin-sw-1(config-if)#
%LINK-5-CHANGED: Interface Vlan2, changed state to up

msk-moscow-dasedokhin-sw-1(config-if)#no shutdown
msk-moscow-dasedokhin-sw-1(config-if)#ip address 192.168.2.1 255.255.255.0
msk-moscow-dasedokhin-sw-1(config-if)#^Z
msk-moscow-dasedokhin-sw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-moscow-dasedokhin-sw-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-sw-1(config)#interface f0/1
msk-moscow-dasedokhin-sw-1(config-if)#switchport mode access
msk-moscow-dasedokhin-sw-1(config-if)#switchport access vlan 2
msk-moscow-dasedokhin-sw-1(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan2, changed state to up

msk-moscow-dasedokhin-sw-1(config-if)#
msk-moscow-dasedokhin-sw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-moscow-dasedokhin-sw-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-sw-1(config)#ip default-gateway 192.168.2.254
^
% Invalid input detected at '^' marker.

msk-moscow-dasedokhin-sw-1(config)#ip default-gateway 192.168.2.254
msk-moscow-dasedokhin-sw-1(config)#line vty 0 4
msk-moscow-dasedokhin-sw-1(config-line)#password cisco
msk-moscow-dasedokhin-sw-1(config-line)#login
msk-moscow-dasedokhin-sw-1(config-line)#
msk-moscow-dasedokhin-sw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-moscow-dasedokhin-sw-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-sw-1(config)#line console 0
msk-moscow-dasedokhin-sw-1(config-line)#password cisco
msk-moscow-dasedokhin-sw-1(config-line)#login
msk-moscow-dasedokhin-sw-1(config-line)#
msk-moscow-dasedokhin-sw-1#
%SYS-5-CONFIG_I: Configured from console by console
configure termina^Z
msk-moscow-dasedokhin-sw-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-sw-1(config)#enable secret cisco
msk-moscow-dasedokhin-sw-1(config)#service password-encryption
msk-moscow-dasedokhin-sw-1(config)#username admin privilege 1 secret cisco
msk-moscow-dasedokhin-sw-1(config)#ip domain-name moscow.rudn.edu
msk-moscow-dasedokhin-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-moscow-dasedokhin-sw-1.moscow.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]:
% Generating 512 bit RSA keys, keys will be non-exportable...[OK]

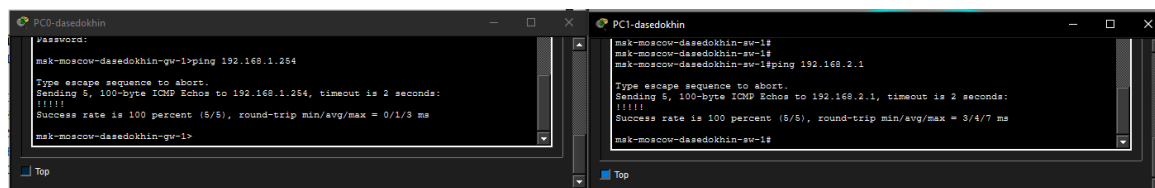
msk-moscow-dasedokhin-sw-1(config)#line vty 0 4
```

Copy Paste

Top

Рисунок 3.3: Настройка коммутатора

3.4 слайд 4



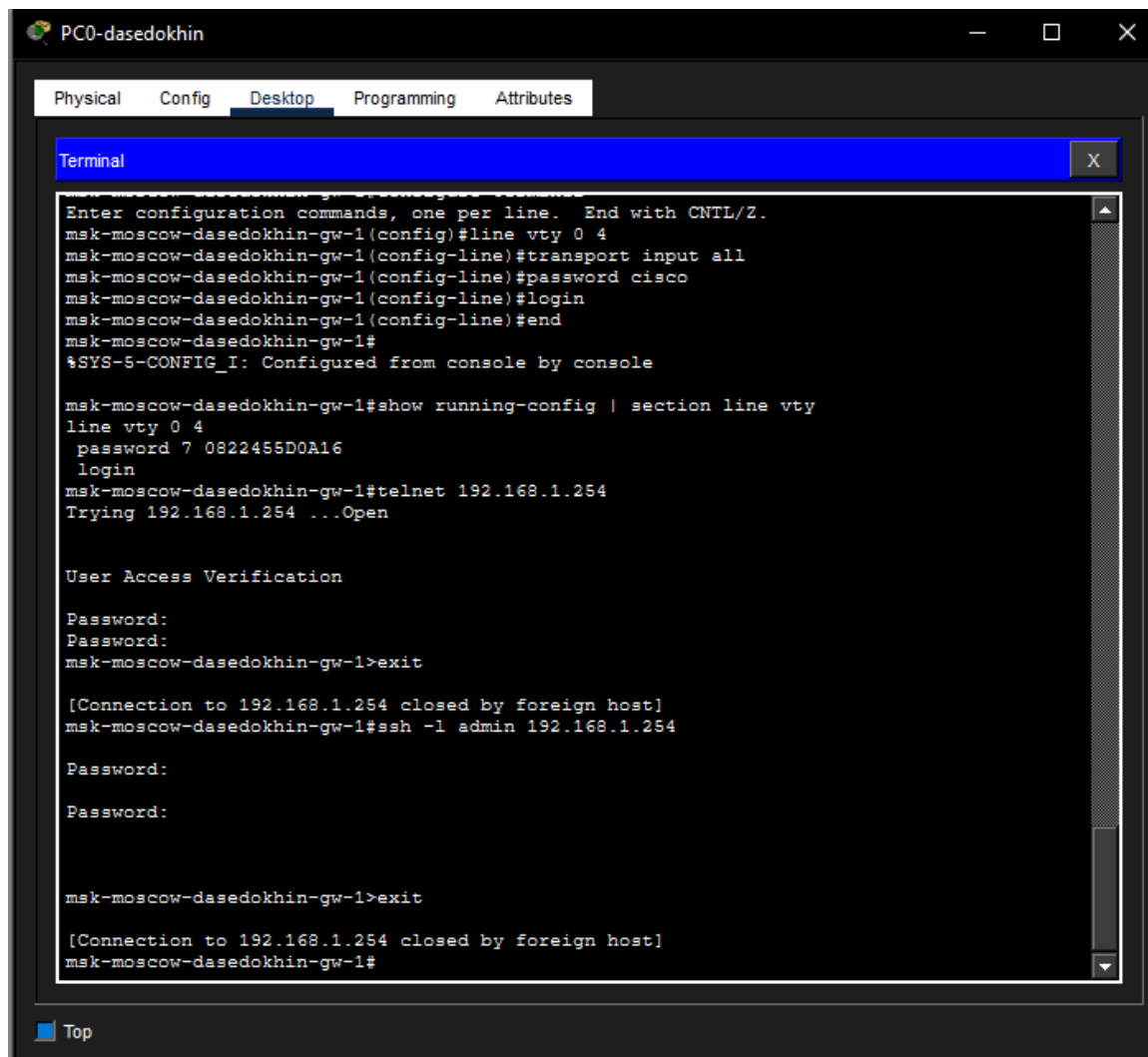
The image shows two terminal windows side-by-side. The left window is titled 'PC0-dasedokhin' and shows a user prompt 'password:' followed by the command 'mak-moscow-dasedokhin-gw-1>ping 192.168.1.254'. The output shows a successful ping with a 100% success rate and 0/1/3 ms round-trip times. The right window is titled 'PC1-dasedokhin' and shows the user prompt 'mak-moscow-dasedokhin-gw-1#' followed by the command 'mak-moscow-dasedokhin-gw-1#ping 192.168.2.1'. The output shows a successful ping with a 100% success rate and 3/4/7 ms round-trip times.

```
PC0-dasedokhin
password:
mak-moscow-dasedokhin-gw-1>ping 192.168.1.254
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echoes to 192.168.1.254, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/1/3 ms
mak-moscow-dasedokhin-gw-1>

PC1-dasedokhin
mak-moscow-dasedokhin-gw-1#
mak-moscow-dasedokhin-gw-1#
mak-moscow-dasedokhin-gw-1#ping 192.168.2.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echoes to 192.168.2.1, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 3/4/7 ms
mak-moscow-dasedokhin-gw-1#
```

Рисунок 3.4: Проверка работоспособности соединений с помощью команды ping

3.5 слайд 5



The screenshot shows a terminal window titled "PC0-dasedokhin" with tabs for Physical, Config, Desktop, Programming, and Attributes. The Desktop tab is active, showing a terminal window titled "Terminal". The terminal displays the following commands and output:

```
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-gw-1(config)#line vty 0 4
msk-moscow-dasedokhin-gw-1(config-line)#transport input all
msk-moscow-dasedokhin-gw-1(config-line)#password cisco
msk-moscow-dasedokhin-gw-1(config-line)#login
msk-moscow-dasedokhin-gw-1(config-line)#end
msk-moscow-dasedokhin-gw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-moscow-dasedokhin-gw-1#show running-config | section line vty
line vty 0 4
  password 7 0822455D0A16
  login
msk-moscow-dasedokhin-gw-1#telnet 192.168.1.254
Trying 192.168.1.254 ...Open

User Access Verification

Password:
Password:
msk-moscow-dasedokhin-gw-1>exit

[Connection to 192.168.1.254 closed by foreign host]
msk-moscow-dasedokhin-gw-1#ssh -l admin 192.168.1.254

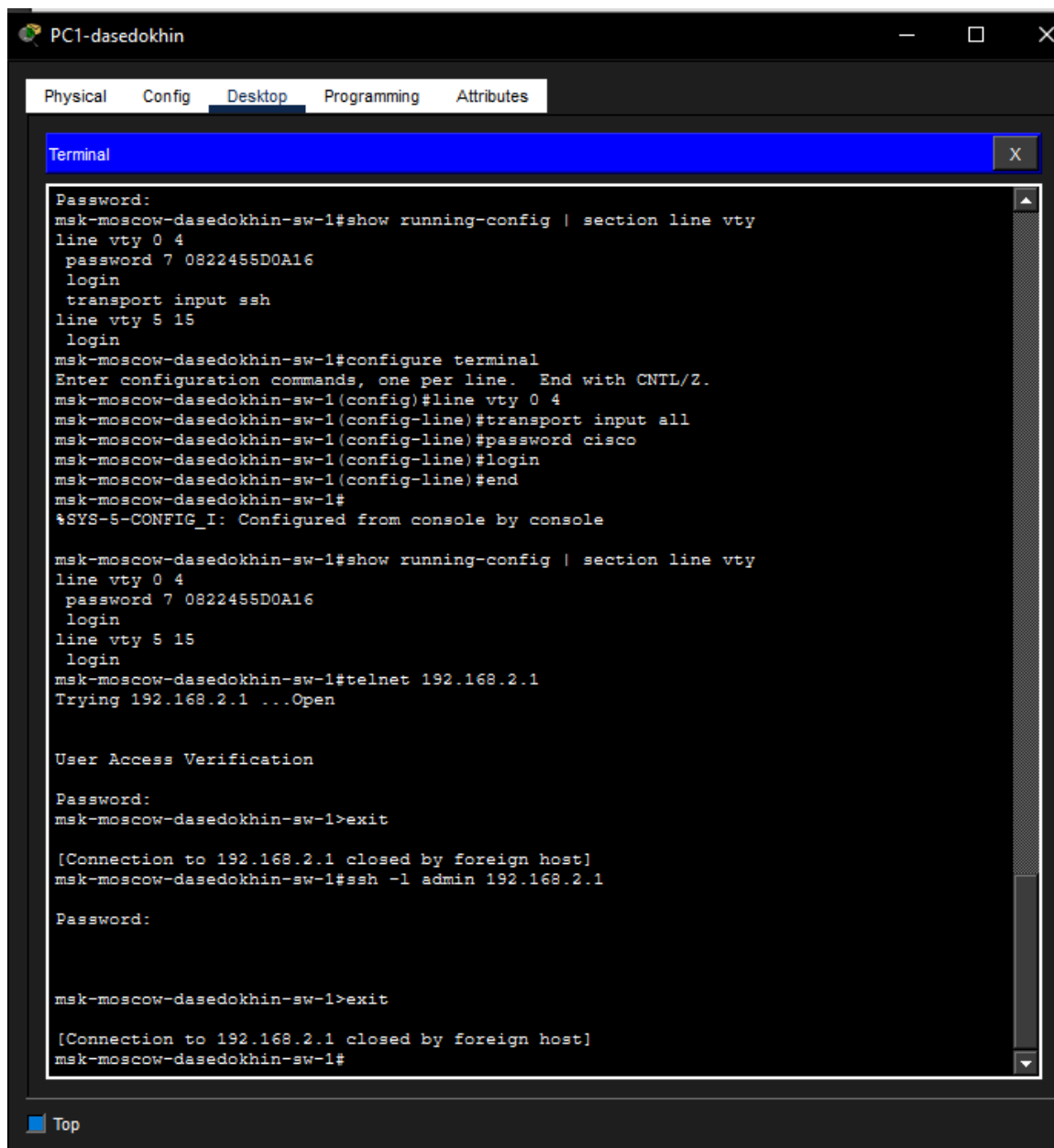
Password:
Password:

msk-moscow-dasedokhin-gw-1>exit

[Connection to 192.168.1.254 closed by foreign host]
msk-moscow-dasedokhin-gw-1#
```

Рисунок 3.5: Подключение к маршрутизатору по протоколу удаленного доступа telnet и ssh

3.6 слайд 6



The screenshot shows a terminal window titled "PC1-dasedokhin" with tabs for Physical, Config, Desktop, Programming, and Attributes. The Desktop tab is active, showing a terminal window with the following text:

```

Password:
msk-moscow-dasedokhin-sw-1#show running-config | section line vty
line vty 0 4
  password 7 0822455D0A16
  login
  transport input ssh
line vty 5 15
  login
msk-moscow-dasedokhin-sw-1#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msk-moscow-dasedokhin-sw-1(config)#line vty 0 4
msk-moscow-dasedokhin-sw-1(config-line)#transport input all
msk-moscow-dasedokhin-sw-1(config-line)#password cisco
msk-moscow-dasedokhin-sw-1(config-line)#login
msk-moscow-dasedokhin-sw-1(config-line)#end
msk-moscow-dasedokhin-sw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-moscow-dasedokhin-sw-1#show running-config | section line vty
line vty 0 4
  password 7 0822455D0A16
  login
line vty 5 15
  login
msk-moscow-dasedokhin-sw-1#telnet 192.168.2.1
Trying 192.168.2.1 ...Open

User Access Verification

Password:
msk-moscow-dasedokhin-sw-1>exit

[Connection to 192.168.2.1 closed by foreign host]
msk-moscow-dasedokhin-sw-1#ssh -l admin 192.168.2.1

Password:

msk-moscow-dasedokhin-sw-1>exit

[Connection to 192.168.2.1 closed by foreign host]
msk-moscow-dasedokhin-sw-1#

```

At the bottom of the terminal window, there is a "Top" button.

Рисунок 3.6: Подключение к коммутатору по протоколу удаленного доступа telnet и ssh

4 Выводы

4.1 слайд 1

Я получил основные навыки по начальному конфигурированию оборудования Cisco.