

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

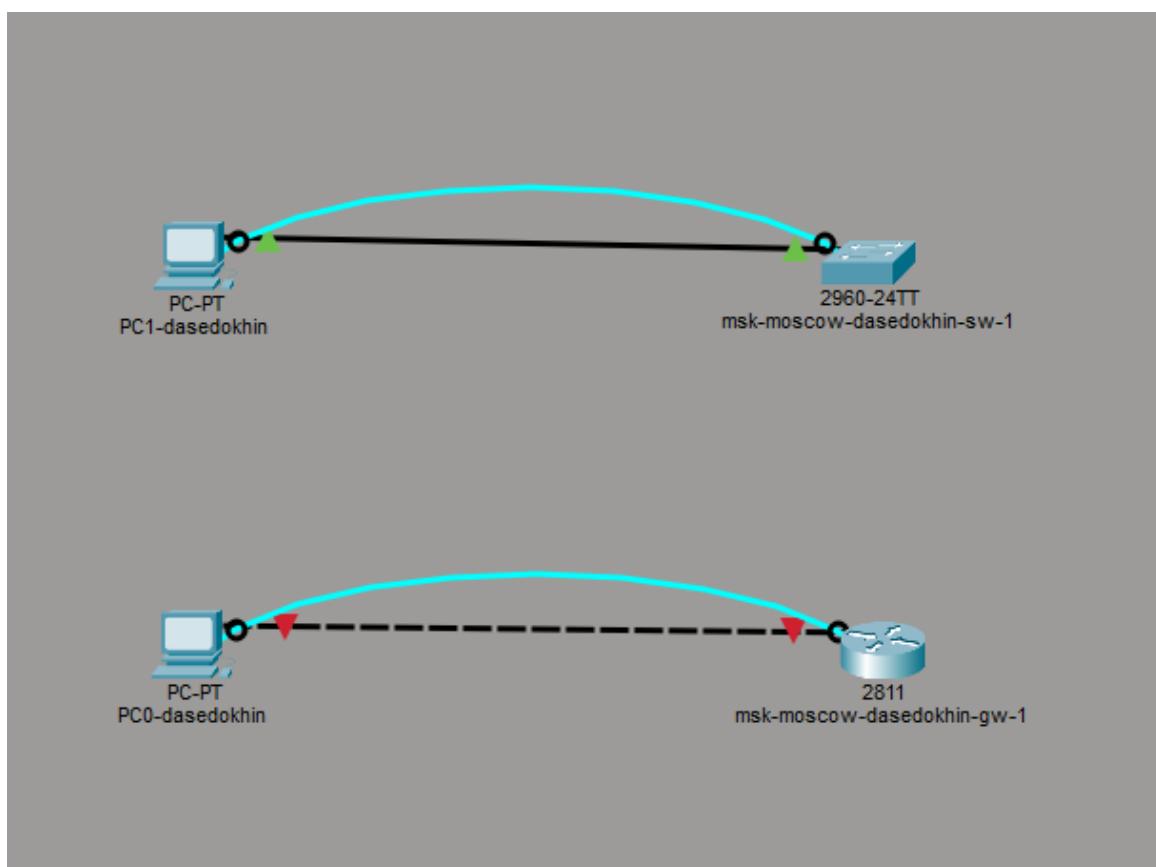


Рисунок 3.1: Воспроизведение топологии сети с двумя оконечными устройствами, маршрутизатором и коммутатором

3.2 слайд 2

The screenshot shows a terminal window titled "msk-moscow-dasedokhin-gw-1". The tab bar at the top includes "Physical", "Config", "CLI" (which is selected), and "Attributes". The main area of the window displays the following CLI session output:

```
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)#


```

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

Рисунок 3.2: Настройка маршрутизатора

3.3 слайд 3



The screenshot shows a terminal window titled "msk-moscow-dasedokhin-sw-1". The tab bar at the top has "Physical", "Config", "CLI" (which is selected), and "Attributes". The main area of the window displays the following Cisco CLI configuration session:

```
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
^C
* 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 terminal^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.

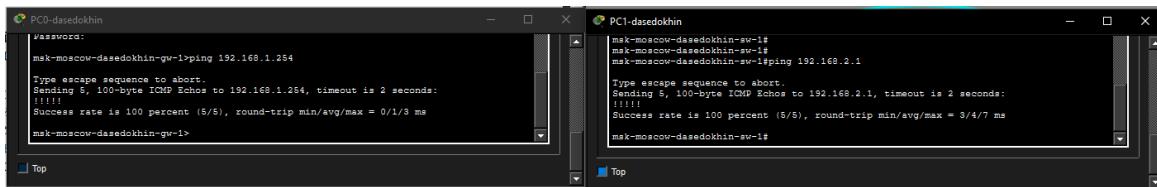
How many bits in the modulus [512]:
* Generating 512 bit RSA keys, keys will be non-exportable...[OK]

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

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

Рисунок 3.3: Настройка коммутатора

3.4 слайд 4



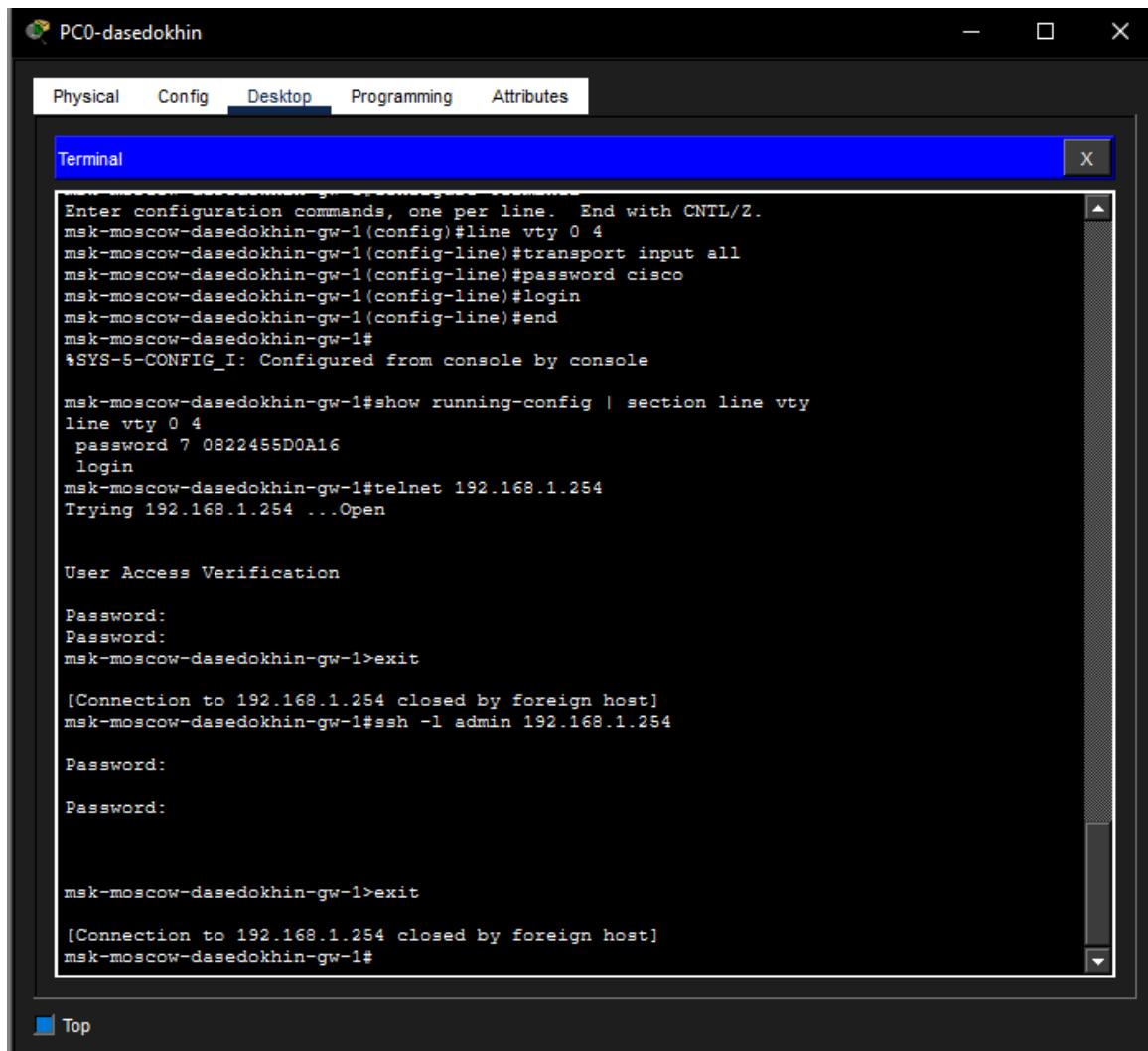
The image shows two terminal windows side-by-side. The left window is titled 'PC0-dasedokhin' and the right window is titled 'PC1-dasedokhin'. Both windows are running a 'gnome-terminal' session. In the PC0 window, the user has entered the command 'ping 192.168.1.254'. The output shows the ping process starting, sending 6 ICMP Echoes, and receiving 5 successful responses. The success rate is 100 percent. In the PC1 window, the user has entered the command 'ping 192.168.2.1'. The output shows the ping process starting, sending 6 ICMP Echoes, and receiving 5 successful responses. The success rate is 100 percent.

```
PC0-dasedokhin
Password:
msk-moscow-dasedokhin-gv-1>ping 192.168.1.254
Type escape sequence to abort.
Sending 6, 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
msk-moscow-dasedokhin-gv-1>

PC1-dasedokhin
msk-moscow-dasedokhin-gv-1>
msk-moscow-dasedokhin-gv-1>ping 192.168.2.1
Type escape sequence to abort.
Sending 6, 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 = 0/4/7 ms
msk-moscow-dasedokhin-gv-1>
```

Рисунок 3.4: Проверка работоспособности соединений с помощью команды ping

3.5 слайд 5

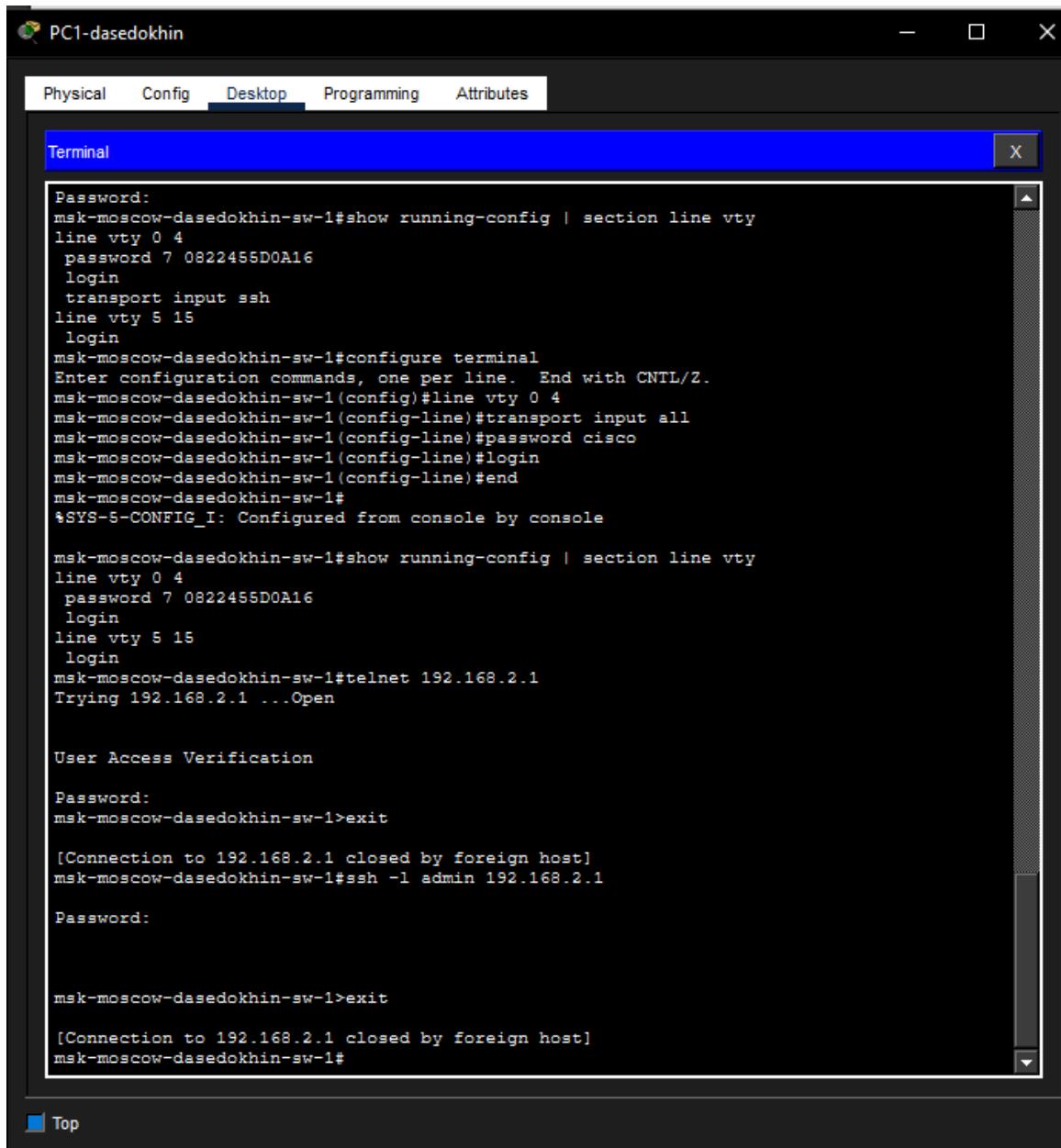


The screenshot shows a Cisco configuration terminal window titled "Terminal". The window has tabs at the top: Physical, Config, Desktop, Programming, and Attributes. The "Config" tab is selected. The terminal window displays the following configuration commands:

```
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 "Terminal" within a software interface titled "PC1-dasedokhin". The window has tabs: Physical, Config, Desktop, Programming, and Attributes. The "Config" tab is selected. The terminal content displays the following sequence of commands:

```
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#
```

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.