# Лабораторная работа №4

Первоначальное конфигурирование сети

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Информация

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Провести подготовительную работу по первоначальной настройке коммутаторов сети.

#### Задание

Требуется сделать первоначальную настройку коммутаторов сети, представленной на схеме L1. Под первоначальной настройкой понимается указание имени устройства, его IP-адреса, настройка доступа по паролю к виртуальным терминалам и консоли, настройка удалённого доступа к устройству по ssh. При выполнении работы необходимо учитывать соглашение об именовании.

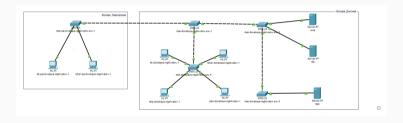


Рис. 1: Размещение коммутаторов и оконечных устройств согласно схеме сети L1

```
Switch(config) #enable
• Incomplete command
Switch(config) #hostname mskdonskava swl
% Invalid input detected at '^' marker.
Switch (config) thostname msk-donskava-sw-1
msk-donskava-sw-1(config) #interface vlan2
makedonakayasayal (configuif) too abutdown
msk-donskaya-sw-1(config-if) #ip address 10.128.1.2 255.255.255.0
msk-donskava-sw-1(config-if)fexit
msk-donskava-sw-1(config) #ip default-gateway 10.128.1.1
msk-donskava-sw-1(config)#line vtv 0 4
msk-donskava-sv-1 (config-line) #nassword cisco
msk-donskava-sw-1(config-line)flogin
msk-donskava-sw-1(config-line) #exit
msk-donskava-sw-1(config) #line console 0
msk-donskava-sv-1 (config-line) #nassword cisco
msk-donskava-sw-l(config-line) #login
msk-donskava-sw-1(config-line)fexit
msk-donskava-sw-1(config) #enable secret cisco
msk-donskava-sw-1(config)#service password-encryption
msk-donskava-sw-1(config)fusername admin privilege 1 secret cisco
msk-donskava-sw-1(config) #ip domain name donskava.rudn.edu
msk-donskava-sw-1(config)#
msk-donskaya-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-donskava-sy-1 donskava rudo 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]:
4 Generating 512 bit RSA keys, keys will be non-exportable...[OK]
mak-donakava-sy-1(config)#line vtv 0 4
*Mar 1 0:16:25.422: RSA kev size needs to be at least 768 bits for ssh version 2
*Mar 1 0:16:25.423: $SSH-5-ENABLED: SSH 1.5 has been enabled
msk-donskaya-sw-1(config-line) #transport input ssh
msk-donskava-sw-1(config-line)fexit
msk-donskava-sw-1(config) fexit
makedonakaua-au-14
$SYS-5-CONFIG I: Configured from console by console
urite memory
Building configuration ...
msk-donskava-sw-lightite memory
Building configuration...
```

Рис. 2: Конфигурация коммутатора msk-donskaya-mgkhvatov-sw-1

```
Switch(config-if) thostname msk-donskava-sw-2
nsk-donskava-sw-2 (config) finterface vlan2
nsk-donskava-sw-2(config-if)#no shutdown
nsk-donskaya-sw-2(config-if)##ip address 10.128.1.3
* Invalid input detected at '^' marker
nsk-donskaya-sw-2(config-if) #ip address 10.120.1.3
Incomplete command.
msk-donskava-sy-2 (config-if) $ in address 10 128 1 3 255 255 255 0
nsk-donskava-sw-2 (config-if) #exit
nsk-donskava-sw-2(config)fin default gateway 10.128.1.0
• Invalid input detected at '"' marker.
nsk-donskaya-sw-2(config) #ip default-gateway 10.128.1.0
nsk-donskava-sw-2(config)#line vtv 0 4
nsk-donskava-sw-1(config-line) inassword cisco
makedonakaya-ay-2 (config-line) #login
nsk-donskaya-sw-2 (config-line) #exit
nsk-donskaya-sw-2(config) #line console 0
nsk-donskaya-sw-2 (config-line) #password cisco
nsk-donskava-sw-2 (config-line) #login
nsk-donskava-sw-2 (config-line) #exit
nsk-donskava-sw-2 (config) #enable secret cisco
mak-donakava-av-2 (config) factvice password-encryption
nsk-donskaya-sw-2(config) #username admin privilege 1 secret cisco
nsk-donskava-sw-2(config) #ip domain name donskava.rudn.edu
nsk-donskaya-sw-2(config) #ip domain-name donskaya.rudn.edu
nsk-donskaya-sw-2(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-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):
• Generating 512 hit DSA keys, keys will be non-emortable...[OK]
nsk-donskava-sw-2(config)fline vtv 0 4
*Mar 1 0:31:3.240: DSA key size needs to be at least 768 bits for ash version 2
"Mar 1 0:31:3,240: $SSH-5-EMABLED: SSH 1.5 has been enabled
nsk-donskava-sw-2 (config-line) #transport input ssh
nek-donekaya-sy-2 (config-line) fauit
makedonakayasaya? (config) tawin
nsk-donskava-sw-2#
ASYS-5-CONFIG I: Configured from console by console
write memory
Building configuration ...
```

Рис. 3: Конфигурация коммутатора msk-donskaya-mgkhvatov-sw-2

```
Switch(config-if) $hostname msk-donskava-mgkhvatov-sw-3
mekudonekavaumakhvatovusuul(confic)tinterface vlan?
msk-donskava-mokhvatov-sv-3(config-if)#no_shutdown
msk-donskava-mokhvatov-sw-3(config-if) #ip address 10.128.1.4
* Incomplete command.
msk-donskava-mgkhvatov-sv-3(config-if) in address 10 128 1 4 255 255 255 0
msk-donskava-mgkhvatov-sw-3(config-if) fexit
msk-donskaya-mgkhvatov-sw-3(config) #ip default gateway 10.128.1.1
* Invalid input detected at 'a' marker.
msk-donskava-mskhvatov-sv-3(config)tin default-gatevav 10 128 1 1
msk-donskava-mgkhvatov-sv-3(config)#line vtv 0 4
msk-donskava-mgkhvatov-sw-3(config-line) #password cisco
msk-donskava-mgkhvatov-sv-3(config-line)#login
msk-donskava-mgkhvatov-sw-3(config-line) fexit
msk-donskava-mgkhvatov-sw-3(config) #line console 0
msk-donskava-mokhvatov-sv-3 (config-1ine) #password cisco
msk-donskaya-mgkhvatov-sw-3(config-line) #login
makedonakaya-makhyatoy-ay-1/conficulinelfayit
msk-donskava-mokhvatov-sv-3(config) tenable secret cisco
msk-donskaya-mgkhvatov-sw-3(config)#service password-encryption
msk-donskava-mgkhvatov-sv-3(config) fusername admin privilege 1 secret cisco
msk-donskaya-mgkhvatov-sw-3(config)#ip domain name donskaya.rudn.edu
msk-donskaya-mgkhvatov-sw-3(config) #ip domain-name donskaya.rudn.edu
msk-donskava-mgkhvatov-sw-3(config) #crvpto kev generate rsa
The name for the keys will be: msk-donskaya-mg/byatoy-sy-3 donskaya yudn 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-donskava-mgkhvatov-sw-3(config) #line vtv 0 4
TMay 1 0:29:10 309: BEE key size needs to be at least 760 bits for seb version 2
*Mar 1 0:29:10.389: $SSH-5-ENARLED: SSH 1.5 has been enabled
mak-donskava-mokhvatov-sw-3(config-line)ftransport input ash
msk-donskava-mgkhvatov-sw-3(config-line)fexit
mak-donakaya-makhyatov-sy-3 (confid) fexit
mak-donskava-mgkhvatov-sw-3#
$SYS-5-CONFIG_I: Configured from console by console
urite memory
Building configuration ...
mek-donekava-makhvanov-su-3#
```

Рис. 4: Конфигурация коммутатора msk-donskaya-mgkhvatov-sw-3

```
Switch (config-if) #hostname msk-donskava-mskhvatov-sw-4
msk-donskava-mgkhvatov-sw-4(config)#interface vlan2
msk-donskava-mgkhvatov-sw-4(config-if) fno shutdown
msk-donskaya-mgkhvatov-sw-4(config-if) #ip address 10.120.1.5 255.255.255.0
msk-donskava-mgkhvatov-sw-4(config-if)#exit
msk-donskava-mokhvatov-su-4 (configuation default-mateuau 10 128 1 1
msk-donskava-mgkhvatov-sw-4(config) #line vtv 0 4
msk-donskaya-mgkhvatov-sw-4(config-line)#password cisco
msk-donskava-mgkhvatov-sv-4(config-line)#login
msk-donskava-mgkhvatov-sw-4(config-line)#exit
msk-donskava-makhvanov-su-4(config)fline console 0
msk-donskava-mgkhvatov-sv-4(config-line) #password cisco
mek-donekaya-makhyatov-su-4 (config-line) flogin
msk-donskava-mokhvatov-su-4(config-line) fevit
msk-donskava-mgkhvatov-sw-4(config) #enable secret cisco
msk-donskaya-mgkhvatov-sw-4(config)#service password encryption
• Invalid input detected at '-' marker.
msk-donskava-mgkhvatov-sv-4(config)fservice password-encryption
msk-donskaya-mgkhvatov-sw-4(config) #username admin privilege 1 secret cisco
msk-donskaya-mgkhvatov-sw-4(config) #ip domain name donskaya.rudn.edu
msk-donskava-mgkhvatov-sw-4(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-mgkhvatov-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):
& Generating 512 his DES here here will be non-exportable. [OF]
msk-donskava-mgkhvatov-sw-4(config)#line vtv 0 4
"Mar 1 0:36:13.236: RSA key size needs to be at least 768 bits for sah version 2
"Mar 1 0:36:13.236: $SSH-S-ENABLED: SSH 1.5 has been enabled
msk-donskaya-mgkhvatov-sw-4(config-line) #transport input ssh
msk-donskava-mokhvatov-su-4(config-line) fexit
mak-donskava-mgkhvatov-aw-4 (config) fexit
msk-donskava-mgkhvatov-sw-42
$SYS-5-CONFIG I: Configured from console by console
urite memoru
Building configuration ...
msk-donskava-mokhvatov-sv-48
```

Рис. 5: Конфигурация коммутатора msk-donskaya-mgkhvatov-sw-4

```
Enter configuration commands, one per line. End with CMTL/Z.
Switch(config) #interface FastEthernet0/1
Switch(config-if) thostname msk-paylovskaya-mokhyatov-sw-1
msk-pavlovskava-mgkhvatov-sw-1(config) #interface vlan2
msk-pavlovskava-mgkhvatov-sw-l(config-if)#no shutdown
msk-navlovskava-mnkhvatov-sw-1(config-if) #ip address 10.128.1.6 255.255.255.0
msk-pavlovskava-mgkhvatov-sw-1(config-if) #exit
msk-pavlovskava-mgkhvatov-sw-1(config)##ip default gatewav 10.128.1.1
• Invalid input detected at '"' marker
msk-pavlovskava-mgkhvatov-sw-1(config)##ip default-gatewav 10.128.1.1
• Invalid input detected at '"' marker
msk-paylovskava-mgkhvatov-sw-1(config)#ip default-gateway 10.128.1.1
msk-paylovskava-mokhvatov-sy-1 (config) #line vtv 0 4
msk-pavlovskava-mgkhvatov-sw-1 (config-line) #password cisco
msk-pavlovskaya-mgkhvatov-sw-1(config-line) #login
msk-pavlovskaya-mgkhvatov-sw-1(config-line)#exit
msk-paylouskaya-mokhyatoy-sy-l(config)#line_console_0
msk-pavlovskava-mgkhvatov-sw-1(config-line)#password cisco
msk-paylovskava-mgkhvatov-sw-1(config-line)#login
msk-paylovskava-mgkhvatov-sw-1(config-line) #exit
msk-pavlovskaya-mgkhvatov-sw-l(config) #enable secret cisco
msk-paylovskaya-mgkhyatov-sw-1(config)#service password-encryption
msk-pavlovskaya-mgkhvatov-sw-1(config) #username admin privilege 1 secret ciscousername
admin privilege 1 secret cisco"2
msk-pavlovskaya-mgkhvatov-sw-18
4SYS-5-CONFIG_I: Configured from console by console
msk-pavlovskaya-mgkhvatov-sw-l#username admin privilege 1 secret cisco
4 Invalid input detected at 'c' marker.
msk-paylovskava-mokhvatov-sy-l#configure terminal
Fotor configuration commands, one per line. End with CMTL/2
msk-navlovskava-mokhvatov-sv-1(confid) fusername admin privilege 1 secret cisco
msk-pavlovskava-mgkhvatov-sw-l(config) #ip domain name donskava.rudn.edu
msk-navlovskava-mokhvatov-sv-1 (config) forvoto kev generate rsa
The name for the keys will be: msk-paylovskaya-mgkhyatov-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 hims in the modulus (5121:
• Generating 512 bit RSA keys, keys will be non-exportable...(OK)
msk-pavlovskaya-mgkhvatov-sw-1(config) #line vty 0 4
"Mar 1 0:52:39.307: RSA key size needs to be at least 760 bits for ssh version 2
*Mar 1 0:52:39.307: $SSH-5-ENABLED: SSH 1.5 has been enabled
msk-paylovskaya-mgkhyatov-sw-1(config-line)ftransport input ssh
msk-paylovskava-mgkhvatov-sw-1(config-line)fexit
makunaylovakayaumekhyatovusyul (confict fayit
msk-paylovskava-mgkhyatov-sw-1#
ASYS-5-CONFIG I: Configured from console by console
write memory
Building configuration
[08]
makunavi ovekavaumokhvatovusvu i t
```

Вывод



В результате выполнения данной лабораторной работы я провел подготовительную работу по первоначальной настройке коммутаторов сети.