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.

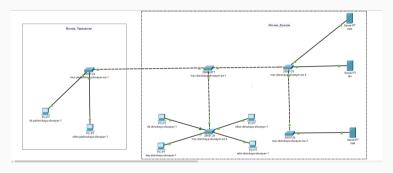


Figure 1: Размещение коммутаторов и оконечных устройств согласно схеме сети L1

```
mac_donekaya_ehuyayay_ey_1henah1e
msc-donskava-shuvavev-sw-l#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
msc-donskaya-shuvayev-sw-1(config) #hostname msc-donskaya-shuvayev-sw-1
mag-donakaya-abuyayey-aw-1 (config) finterface vlan2
msc-donskaya-shuvayev-sw-l(config-if) #no shutdown
msc-donskava-shuvavev-sw-1(config-if) $ip address 10.128.1.2 255.255.255.0
msc-donskaya-shuvayev-sw-l(config-if) #exit
msc-donskaya-shuvayev-sw-1(config) #ip default-gatewav 10.128.1.1
msc-donskava-shuvavev-sw-1(config)#line vtv 0 4
msc-donskaya-shuvayev-sw-1(config-line) #password cisco
mac-donekaya-shuyayay-sw-l/config-line)#login
msc-donskaya-shuvayev-sw-1(config-line) #exit
msc-donskava-shuvavev-sw-l(config)#line console 0
msc-donskava-shuvavev-sw-1(config-line)#password cisco
msc-donskaya-shuvayev-sw-l(config-line) #login
msc-donskava-shuvavev-sw-1(config-line) #exit
msc-donskava-shuvavev-sw-l(config) #enable secret cisco
msc-donskava-shuvavev-sw-1(config) #service password-encryption
msc-donskaya-shuvayev-sw-l(config) #username admin privilege l secret cisco
mag-donakaya-abuyayey-ay-1 (config) tin domain name donakaya-ruda-edu
msc-donskava-shuvavev-sw-1/config) #crvpto kev generate rsa
The name for the keys will be: msc-donskaya-shuvayev-sw-l.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 bit BSA keys, keys will be non-exportable... [OK1
mac-donakaya-shuyayey-sw-1(confid)#line vtv 0 4
*Nar 1 0;21;26,972; RSA key size needs to be at least 768 bits for ssh version 2
than 1 0:21:26.972: BSSH-S-FNABLED: SSH 1.5 has been enabled
msc-donskava-shuvavev-sw-1/config-line) #transport input ssh
mac-donakaya-shuyayey-sw-1(config-line)fexit
msc-donskava-shuvavev-sw-l(config) #exit
mac-donakaya-abuyayay-ay-14
$SYS-5-CONFIG I: Configured from console by console
msc-donskava-shuvavev-sw-l#write memory
Building configuration ...
mac-donakava-abuvavev-aw-1#
```

Figure 2: Конфигурация коммутатора msc-donskaya-shuvayev-sw-1

```
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/2.
Switch (config) #hostname msc-donskava-shuvavev-sw-2
msc-donskava-shuvavev-sw-2(config) #interface vlan2
msc-donskaya-shuvayev-sw-2(config-if) #no shutdown
msc-donskava-shuvavev-sw-2 (config-1f) tip address 10.128.1.3 255.255.255.0
mac-donakaya-shuyayey-sw-2(config-if) texit
msc-donskava-shuvayev-sw-2(config) #ip default gateway 10.128.1.1
& Invalid input detected at '^' marker.
msc-donskava-shuvavev-sw-2(config) #ip default-gatewav 10.128.1.1
msc-donskava-shuvavev-sw-2(config)#line vtv 0 4
msc-donskava-shuvavev-sw-2(config-line) #password cisco
msc-donskava-shuvavev-sw-2(config-line)#login
msc-donskava-shuvavev-sw-2(config-line) #exit
msc-donskaya-shuvayev-sw-2(config) #line console 0
msc-donskava-shuvavev-sw-2(config-line) #password cisco
msc-donskaya-shuvayev-sw-2(config-line) #login
msc-donskaya-shuvayev-sw-2 (config-line) #exit
mac-donakaya-ahuyayey-ay-2 (config fenable secret cisco
mac-donakaya-shuyayey-su-2 (config) Eservice passyord-encryption
mac-donakaya-abuyayey-ay-2 (config) Ausername admin privilege 1 secret ciaco
mac-donskava-shuvavev-sy-2(config) #in_domain-name_donskava.rudn.edu
msc-donskava-shuvavev-sv-2 (config) #crvnto kev generate rsa
The name for the keys will be: msc-donskava-shuvavev-sw-2.donskava.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]
msc-donskava-shuvavev-sw-2(config)#line vtv 0 4
"Mar 1 0:39:42.544: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:39:42.544: $SSN-5-ENABLED: SSN 1.5 has been enabled
msc-donskaya-shuvayev-sw-2(config-line) #transport input ssh
mac_donskava_shuvavev_sv_2 (config_line) fewit
msc-donskava-shuvavev-sw-2 (config) #exit
mec-donekava-shuvavev-sv-2#
$SYS-5-CONFIG I: Configured from console by console
msc-donskava-shuvavev-sw-2#write memory
Building configuration ...
msc-donskava-shuvavev-sw-2#
```

Figure 3: Конфигурация коммутатора msc-donskaya-shuvayev-sw-2

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/2.
Switch(config) #hostname msc-donskava-shuvavev-sw-3
msc-donskava-shuvavev-sw-3(config)#interface vlan2
msc-donskava-shuvavev-sw-3(config-if)#no shutdown
msc-donskava-shuvavev-sw-3 (config-if) #ip address 10.128.1.4 255.255.255.0
msc-donskava-shuvavev-sw-3(config-if)#exit
msc-donskaya-shuvayev-sw-3(config) #ip default-gateway 10.128.1.1
msc-donskava-shuvavev-sw-3(config) #line vtv 0 4
msc-donskava-shuvavev-sw-3(config-line)*password cisco
msc-donskava-shuvavev-sw-3(config-line) #login
msc-donskava-shuvavev-sw-3(config-line)#exit
msc-donskava-shuvavev-sw-3(config) #line console 0
msc-donskava-shuvavev-sw-3(config-line)*password cisco
msc-donskava-shuvavev-sw-3(config-line)#login
msc-donskaya-shuvayev-sw-3(config-line) #exit
msc-donskava-shuvavev-sw-3(config)#enable secret cisco
msc-donskava-shuvavev-sw-3(config) #service password-encryption
msc-donskaya-shuvayev-sw-3(config) #username admin privilege 1 secret cisco
msc-donskava-shuvavev-sw-3(config)#ip domain-name donskava.rudn.edu
msc-donskava-shuvavev-sw-3(config)#crvpto kev generate rsa
The name for the keys will be: msc-donskaya-shuvayev-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 hirs in the modulus [5121:
* Generating 512 bit RSA keys, keys will be non-exportable...[OK]
msc-donskaya-shuvayev-sw-3(config)#line vty 0 4
*Mar 1 0:46:16.511: RSA key size needs to be at least 768 bits for ssh version 2
*Mar 1 0:46:16.511: BSSH-S-FNABLED: SSH 1.5 has been enabled
msc-donskaya-shuvayev-sw-3(config-line) #transport input ssh
mac_donakava_abuvavev_av_3(config_line)fevia
mec_donekaya_shuyayay_sy_3(config)favit
mec_donekava_shuvavev_sv_3#
$SYS-5-CONFIG I: Configured from console by console
msc-donskava-shuvavev-sw-3fwrite memory
Building configuration ...
msc-donskava-shuvavev-sw-3#
```

Figure 4: Конфигурация коммутатора msc-donskaya-shuvayev-sw-3

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/2.
Switch(config) #hostname msc-donskava-shuvavev-sw-4
msc-donskava-shuvavev-sw-4(config)#interface vlan2
msc-donskava-shuvavev-sw-4(config-if)#no shutdown
msc-donskava-shuvavev-sw-4 (config-if) #ip address 10.128.1.5 255.255.255.0
msc-donskaya-shuvayev-sw-4(config-if) #exit
msc-donskava-shuvavev-sw-4(config) #ip default gateway 10.128.1.1
• Invalid input detected at '^' marker.
msc-donskava-shuvavev-sw-4(config) #ip default-gateway 10.128.1.1
msc-donskava-shuvavev-sw-4(config)#line vtv 0 4
msc-donskava-shuvavev-sw-4(config-line) #password cisco
msc-donskava-shuvavev-sw-4(config-line)#login
msc-donskaya-shuvayev-sw-4(config-line) #exit
msc-donskava-shuvavev-sw-4(config) #line console 0
msc-donskava-shuvavev-sw-4(config-line) #password cisco
msc-donskaya-shuvayev-sw-4(config-line) #login
msc-donskava-shuvavev-sw-4(config-line) #exit
msc-donskava-shuvavev-sw-4(config) #enable secret cisco
msc-donskava-shuvavev-sw-4(config) #service password-encryption
msc-donskava-shuvavev-sw-4(config) fusername admin privilege 1 secret cisco
msc-donskava-shuvavev-sw-4(config) #ip domain-name donskava.rudn.edu
msc-donskava-shuvavev-sw-4(config) #crvpto kev generate rsa
The name for the keys will be: msc-donskaya-shuvayev-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 bit RSA keys, keys will be non-exportable...[OK]
mac-donskava-shuvavev-sw-4(config) #line vtv 0 4
*Mar 1 0:55:1.532: RSA key size needs to be at least 768 bits for ash version 2
*Mar 1 0:55:1.532: %SSH-5-ENABLED: SSH 1.5 has been enabled
msc-donskava-shuvavey-sw-4(config-line) #transport input ssh
mac-donskava-shuvavey-sw-4(config-line)fexit
msc-donskava-shuvavev-sw-4(config)fexit
msc-donskava-shuvavev-sw-4#
$SYS-5-CONFIG I: Configured from console by console
msc-donskava-shuvavev-sw-4#write memory
Building configuration ...
msc-donskava-shuvavev-sw-4#
```

Figure 5: Конфигурация коммутатора msc-donskaya-shuvayev-sw-4

```
Switchhanable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/2.
Switch (config) shostname msc-pavlovskaya-shuvayev-swl
msc-paylovskaya-shuyayey-syl(confin)finterface vlan2
mso-navlovskava-shuvavev-svl(config-if) inc shurdown
mac-paylorskava-shuravay-syl/config.ifikin address 10 128 1 6 255 255 255 0
msc-pavlovskaya-shuvayev-swl(config-if)#exit
msc-pavlovskava-shuvavev-swl(config) #ip default gateway 10,128,1,1
& Invalid input detected at 'A' marker.
mec-paylovekaya_ebuyayev_eyl/config1#in_default_gareyay_10.128.1.1
msc-pavlovskaya-shuvayev-swl(config) #line vty 0 4
msc-pavlovskaya-shuvayev-swl(config-line) #password cisco
msc-paylovskava-shuvavev-swl(config-line) #login
mec-paylovskava-shuvavev-swl(config-line) fexit
msc-paylovskaya-shuvayev-swl(config) #line console 0
man-paylovakaya-shuyayey-syl (config-line) fnassyord cisco
mac-paylovakaya-shuyayay-syl/config-line\#login
mac-part combara-shuraner-mul (config-line) fewit
msc-pavlovskaya-shuvayev-swl(config)#enable secret cisco
msc-paylovskava-shuvavev-swl(config) #service password-encryption
mac-paylovskava-shuvavey-syl(config) fusername admin privilege 1 secret cisco
man-paylovskaya-shuyayey-syl (confin) $in domain-paye donskaya-rudo-edu
msc-pavlovskaya-shuvayev-swl(config) #crypto key generate rsa
The name for the barr will be man-part-ordere who cannot said donuters such adu
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.
Now many hire in the modulus ($121)
& Generating 512 bit RSA keys, keys will be non-exportable...[OK]
msc-paylovskava-shuvavev-swl(config) #line vtv 0 4
"Mar 1 1:1:30,130: BSA key size needs to be at least 768 bits for seh version 2
'May 1 1:1:30,130: $558-5-EMARLED: 558 1.5 haw been enabled
msc-pavlovskava-shuvayev-swl(config-line) #transport input ssh
mec-navlovskava-shuvavav-sul(config-line)fewir
msc-paylovskava-shuvayev-swl(config) #exit
$SYS-S-CONFIG I: Configured from console by console
msc-paylovskaya-shuvayey-swl#write memory
Building configuration ...
msc-paylovskaya-shuvayev-swl#
```

Figure 6: Конфигурация коммутатора msc-pavlovskaya-shuvayev-sw-1



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