

# Презентация к лабораторной работе №4

Дисциплина: Администрирование локальных сетей

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Группа: НПИбд-02-18

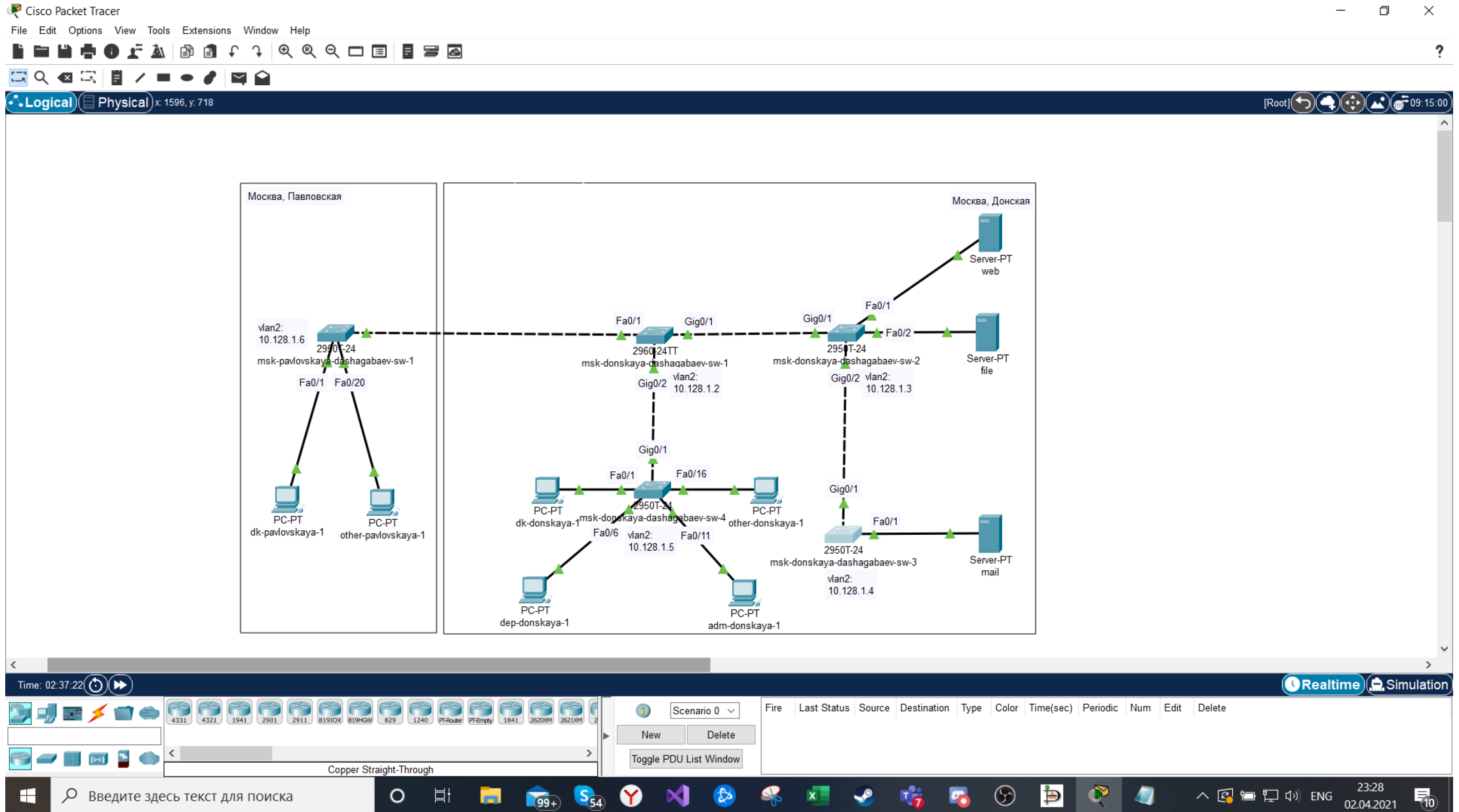
# Цель работы:

- Провести подготовительную работу по первоначальной настройке коммутаторов сети.

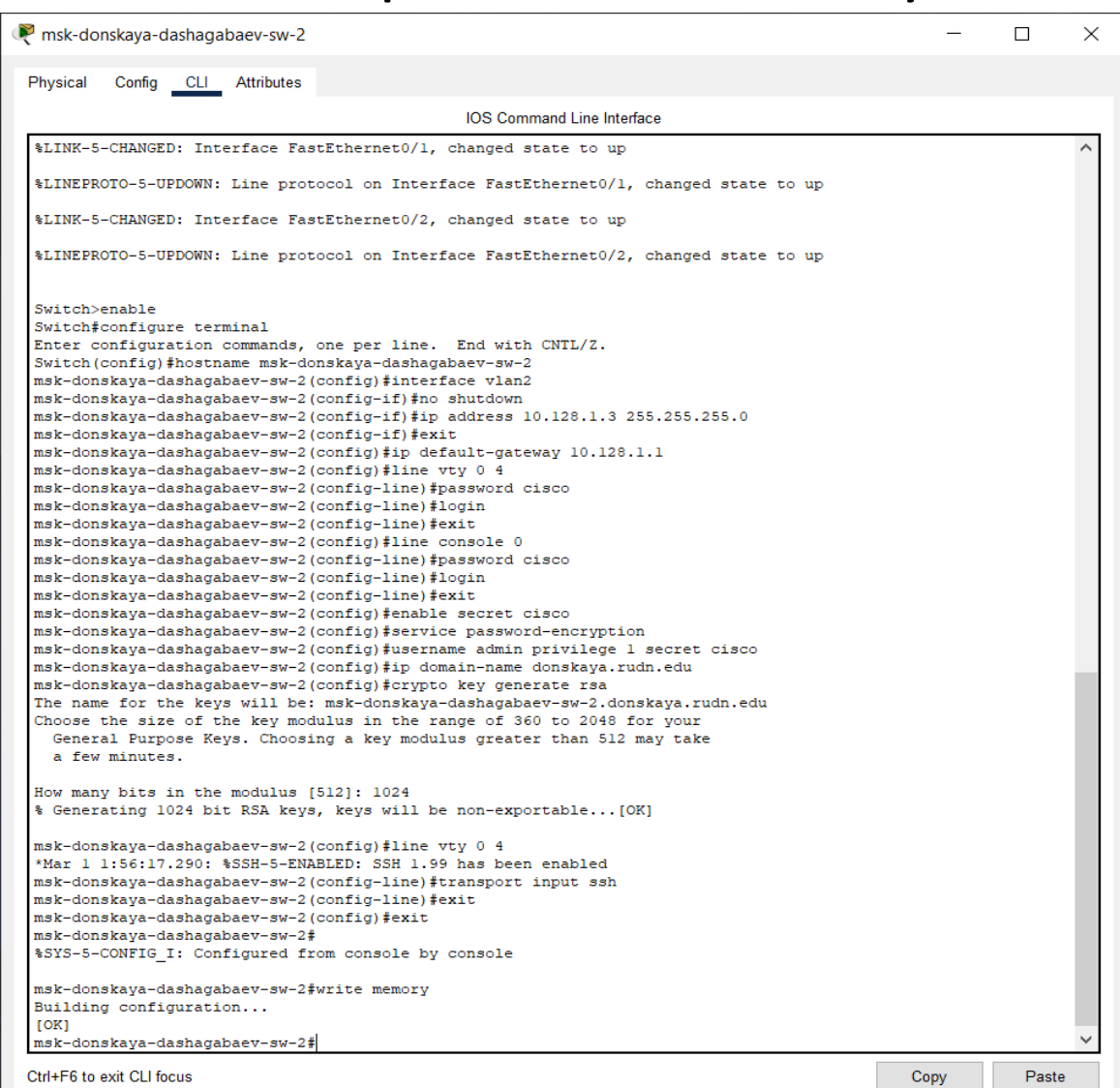
# Порядок выполнения работы:

- 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.
- Используя типовую конфигурацию коммутатора, настройте все коммутаторы, изменяя название устройства и его IP-адрес согласно плану IP.

# Размещение коммутаторов и оконечных устройств согласно схеме сети L1.



# Последовательность команд по первоначальной настройке коммутатора.



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

%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname msk-donskaya-dashagabaev-sw-2
msk-donskaya-dashagabaev-sw-2(config)#interface vlan2
msk-donskaya-dashagabaev-sw-2(config-if)#no shutdown
msk-donskaya-dashagabaev-sw-2(config-if)#ip address 10.128.1.3 255.255.255.0
msk-donskaya-dashagabaev-sw-2(config-if)#exit
msk-donskaya-dashagabaev-sw-2(config)#ip default-gateway 10.128.1.1
msk-donskaya-dashagabaev-sw-2(config)#line vty 0 4
msk-donskaya-dashagabaev-sw-2(config-line)#password cisco
msk-donskaya-dashagabaev-sw-2(config-line)#login
msk-donskaya-dashagabaev-sw-2(config-line)#exit
msk-donskaya-dashagabaev-sw-2(config)#line console 0
msk-donskaya-dashagabaev-sw-2(config-line)#password cisco
msk-donskaya-dashagabaev-sw-2(config-line)#login
msk-donskaya-dashagabaev-sw-2(config-line)#exit
msk-donskaya-dashagabaev-sw-2(config)#enable secret cisco
msk-donskaya-dashagabaev-sw-2(config)#service password-encryption
msk-donskaya-dashagabaev-sw-2(config)#username admin privilege 1 secret cisco
msk-donskaya-dashagabaev-sw-2(config)#ip domain-name donsokaya.rudn.edu
msk-donskaya-dashagabaev-sw-2(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-dashagabaev-sw-2.donsokaya.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.

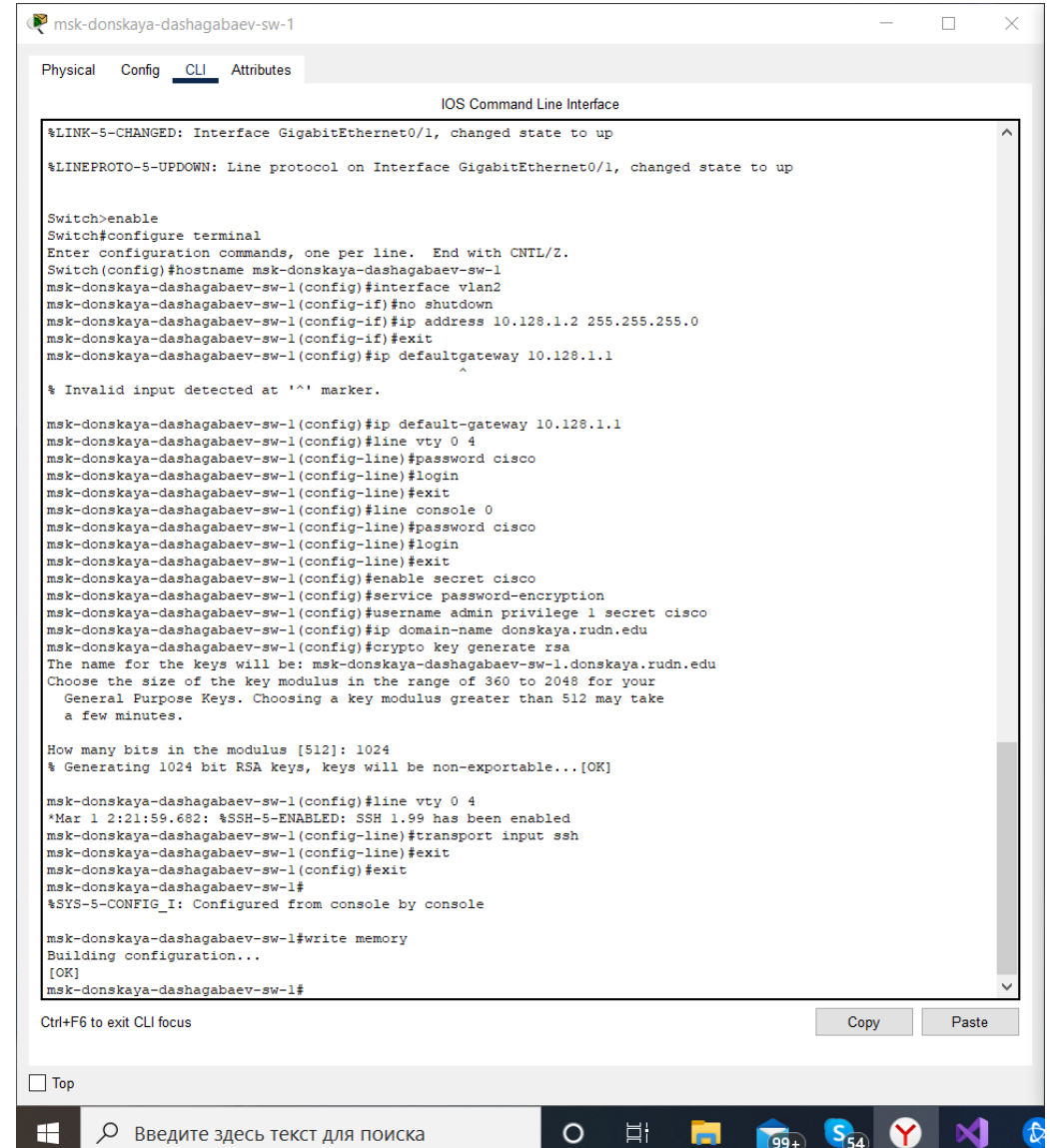
How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-dashagabaev-sw-2(config)#line vty 0 4
*Mar 1 1:56:17.290: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-dashagabaev-sw-2(config-line)#transport input ssh
msk-donskaya-dashagabaev-sw-2(config-line)#exit
msk-donskaya-dashagabaev-sw-2(config)#exit
msk-donskaya-dashagabaev-sw-2#
%SYS-5-CONFIG_I: Configured from console by console

msk-donskaya-dashagabaev-sw-2#write memory
Building configuration...
[OK]
msk-donskaya-dashagabaev-sw-2#
```

Ctrl+F6 to exit CLI focus

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```
msk-donskaya-dashagabaev-sw-1
Physical Config CLI Attributes
IOS Command Line Interface

%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname msk-donskaya-dashagabaev-sw-1
msk-donskaya-dashagabaev-sw-1(config)#interface vlan2
msk-donskaya-dashagabaev-sw-1(config-if)#no shutdown
msk-donskaya-dashagabaev-sw-1(config-if)#ip address 10.128.1.2 255.255.255.0
msk-donskaya-dashagabaev-sw-1(config-if)#exit
msk-donskaya-dashagabaev-sw-1(config)#ip defaultgateway 10.128.1.1
msk-donskaya-dashagabaev-sw-1(config)#ip default-gateway 10.128.1.1

% Invalid input detected at '^' marker.

msk-donskaya-dashagabaev-sw-1(config)#ip default-gateway 10.128.1.1
msk-donskaya-dashagabaev-sw-1(config)#line vty 0 4
msk-donskaya-dashagabaev-sw-1(config-line)#password cisco
msk-donskaya-dashagabaev-sw-1(config-line)#login
msk-donskaya-dashagabaev-sw-1(config-line)#exit
msk-donskaya-dashagabaev-sw-1(config)#line console 0
msk-donskaya-dashagabaev-sw-1(config-line)#password cisco
msk-donskaya-dashagabaev-sw-1(config-line)#login
msk-donskaya-dashagabaev-sw-1(config-line)#exit
msk-donskaya-dashagabaev-sw-1(config)#enable secret cisco
msk-donskaya-dashagabaev-sw-1(config)#service password-encryption
msk-donskaya-dashagabaev-sw-1(config)#username admin privilege 1 secret cisco
msk-donskaya-dashagabaev-sw-1(config)#ip domain-name donsokaya.rudn.edu
msk-donskaya-dashagabaev-sw-1(config)#crypto key generate rsa
The name for the keys will be: msk-donskaya-dashagabaev-sw-1.donsokaya.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]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-dashagabaev-sw-1(config)#line vty 0 4
*Mar 1 2:21:59.682: %SSH-5-ENABLED: SSH 1.99 has been enabled
msk-donskaya-dashagabaev-sw-1(config-line)#transport input ssh
msk-donskaya-dashagabaev-sw-1(config-line)#exit
msk-donskaya-dashagabaev-sw-1(config)#exit
msk-donskaya-dashagabaev-sw-1#
%SYS-5-CONFIG_I: Configured from console by console

msk-donskaya-dashagabaev-sw-1#write memory
Building configuration...
[OK]
msk-donskaya-dashagabaev-sw-1#
```

Ctrl+F6 to exit CLI focus

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Введите здесь текст для поиска

msk-donskaya-dashagabaev-sw-4

PhysicalConfigCLIAttributes

IOS Command Line Interface

%LINK-5-CHANGED: Interface FastEthernet0/11, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, changed state to up

%LINK-5-CHANGED: Interface FastEthernet0/16, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/16, changed state to up

Switch>enable

Switch#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname msk-donskaya-dashagabaev-sw-4

msk-donskaya-dashagabaev-sw-4(config)#interface vlan2

msk-donskaya-dashagabaev-sw-4(config-if)#no shutdown

msk-donskaya-dashagabaev-sw-4(config-if)#ip address 10.128.1.5 255.255.255.0

msk-donskaya-dashagabaev-sw-4(config-if)#exit

msk-donskaya-dashagabaev-sw-4(config)#ip default-gateway 10.128.1.1

msk-donskaya-dashagabaev-sw-4(config)#line vty 0 4

msk-donskaya-dashagabaev-sw-4(config-line)#password cisco

msk-donskaya-dashagabaev-sw-4(config-line)#login

msk-donskaya-dashagabaev-sw-4(config-line)#exit

msk-donskaya-dashagabaev-sw-4(config)#line console 0

msk-donskaya-dashagabaev-sw-4(config-line)#password cisco

msk-donskaya-dashagabaev-sw-4(config-line)#login

msk-donskaya-dashagabaev-sw-4(config-line)#exit

msk-donskaya-dashagabaev-sw-4(config)#enable secret cisco

msk-donskaya-dashagabaev-sw-4(config)#service password-encryption

msk-donskaya-dashagabaev-sw-4(config)#username admin privilege 1 secret cisco

msk-donskaya-dashagabaev-sw-4(config)#ip domain-name donskeya.rudn.edu

msk-donskaya-dashagabaev-sw-4(config)#crypto key generate rsa

The name for the keys will be: msk-donskaya-dashagabaev-sw-4.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]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-dashagabaev-sw-4(config)#line vty 0 4

\*Mar 1 1:54:50.310: %SSH-5-ENABLED: SSH 1.99 has been enabled

msk-donskaya-dashagabaev-sw-4(config-line)#transport input ssh

msk-donskaya-dashagabaev-sw-4(config-line)#exit

msk-donskaya-dashagabaev-sw-4(config)#exit

msk-donskaya-dashagabaev-sw-4#

%SYS-5-CONFIG\_I: Configured from console by console

msk-donskaya-dashagabaev-sw-4#write memory

Building configuration...

[OK]

msk-donskaya-dashagabaev-sw-4#

Ctrl+F6 to exit CLI focus

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msk-donskaya-dashagabaev-sw-3

PhysicalConfigCLIAttributes

IOS Command Line Interface

%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch>enable

Switch#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname msk-donskaya-dashagabaev-sw-3

msk-donskaya-dashagabaev-sw-3(config)#interface vlan2

msk-donskaya-dashagabaev-sw-3(config-if)#no shutdown

msk-donskaya-dashagabaev-sw-3(config-if)#ip address 10.128.1.4 255.255.255.0

msk-donskaya-dashagabaev-sw-3(config-if)#exit

msk-donskaya-dashagabaev-sw-3(config)#ip default-gateway 10.128.1.1

msk-donskaya-dashagabaev-sw-3(config)#line vty 0 4

msk-donskaya-dashagabaev-sw-3(config-line)#password cisco

msk-donskaya-dashagabaev-sw-3(config-line)#login

msk-donskaya-dashagabaev-sw-3(config-line)#exit

msk-donskaya-dashagabaev-sw-3(config)#line console 0

msk-donskaya-dashagabaev-sw-3(config-line)#password cisco

msk-donskaya-dashagabaev-sw-3(config-line)#login

msk-donskaya-dashagabaev-sw-3(config-line)#exit

msk-donskaya-dashagabaev-sw-3(config)#enable secret cisco

msk-donskaya-dashagabaev-sw-3(config)#service password-encryption

msk-donskaya-dashagabaev-sw-3(config)#username admin privilege 1 secret cisco

msk-donskaya-dashagabaev-sw-3(config)#ip domain-name donskeya.rudn.edu

msk-donskaya-dashagabaev-sw-3(config)#crypto key generate rsa

The name for the keys will be: msk-donskaya-dashagabaev-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]: 1024

% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

msk-donskaya-dashagabaev-sw-3(config)#line vty 0 4

\*Mar 1 1:59:17.275: %SSH-5-ENABLED: SSH 1.99 has been enabled

msk-donskaya-dashagabaev-sw-3(config-line)#transport input ssh

msk-donskaya-dashagabaev-sw-3(config-line)#exit

msk-donskaya-dashagabaev-sw-3(config)#exit

msk-donskaya-dashagabaev-sw-3#

%SYS-5-CONFIG\_I: Configured from console by console

msk-donskaya-dashagabaev-sw-3#write memory

Building configuration...

[OK]

msk-donskaya-dashagabaev-sw-3#

Ctrl+F6 to exit CLI focus

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# Вывод:

- Провели подготовительную работу по первоначальной настройке коммутаторов сети.