Государственное бюджетное профессиональное образовательное учреждение
«Нижегородский радиотехнический колледж»

ОП.11 Компьютерный сети

ОТЧЁТ
по лабораторной работе № 17.8.2

Тема **«Packet Tracer. Отработка комплексных практических навыков»**

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Ход работы

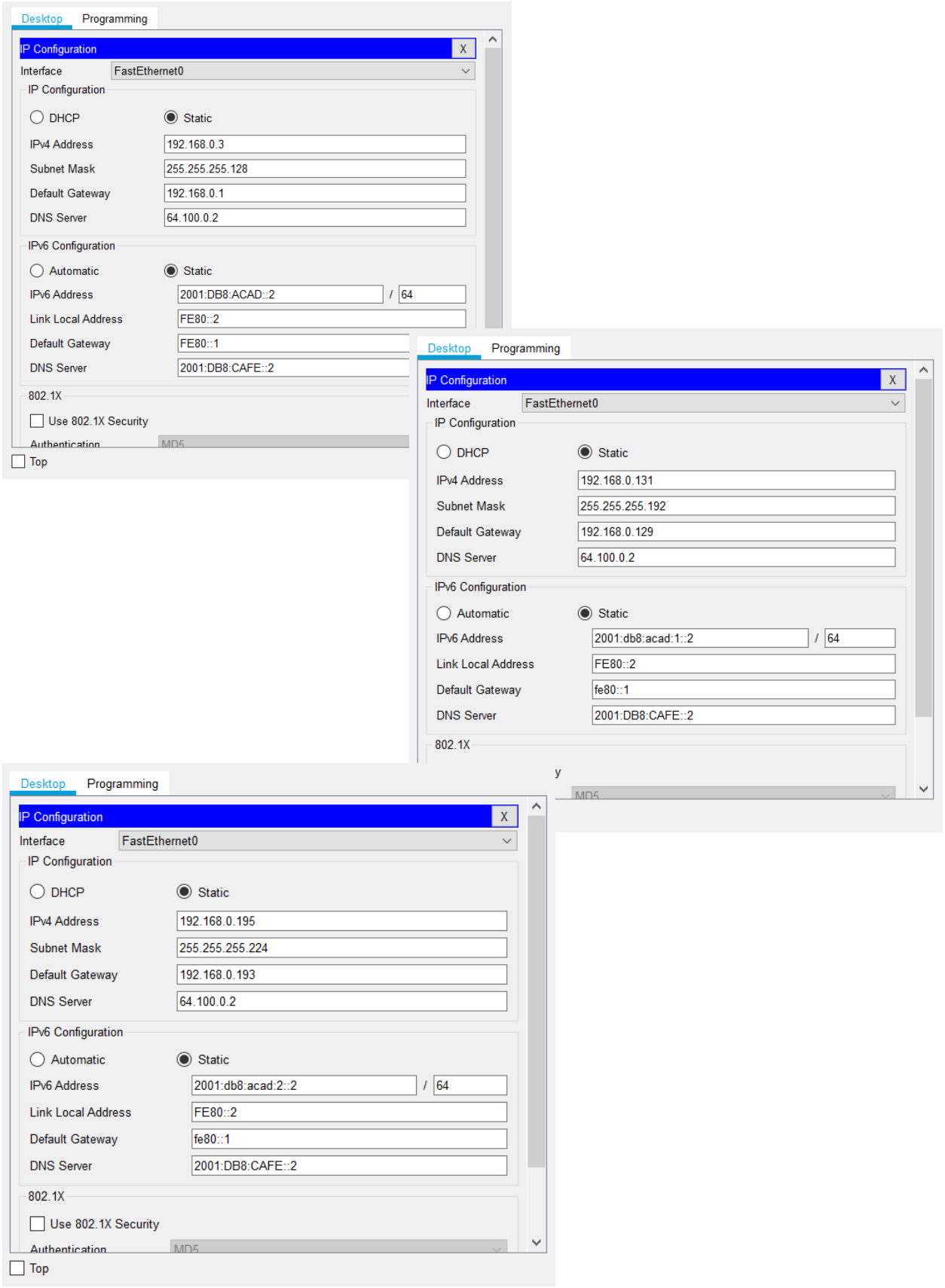
Таблица адресации

Устройство	Интерфейс	IP адрес/префикс	Шлюз по умолчанию
R1	G0/0	192.168.0.1/25	—
		2001:db8:acad:1/64	—
		fe80::1	—
	G0/1	192.168.0.129/26	—
		2001:db8:acad:1:1/64	—
		fe80::1	—
	G0/2	192.168.0.193/27	—
		2001:db8:acad:2:1/64	—
		fe80::1	—
	S0/0/1	172.16.1.2 /30	—
		2001:db8:2::1/64	—
		fe80::1	—
Central	S0/0/0	209.165.200.226 /30	—
		2001:db8:1::1/64	—
		fe80::2	—
	S0/0/1	172.16.1.1/30	—
		2001:db8:2:2/64	—
		fe80::2	—
S1	VLAN 1	192.168.0.2/25	192.168.0.1
S2	VLAN 1	192.168.0.130/26	192.168.0.129
S3	VLAN 1	192.168.0.194/27	192.168.0.193
Staff	NIC	192.168.0.3/25	192.168.0.1
		2001:db8:acad:2/64	fe80::1
		fe80::2	
Sales	NIC	192.168.0.131/26	192.168.0.129
		2001:db8:acad:1:2/64	fe80::1
		fe80::2	
IT	NIC	192.168.0.195/27	192.168.0.193
		2001:db8:acad:2:2/64	fe80::1
		fe80::2	
Web	NIC	64.100.0.3 /29	64.100.0.1
		2001:db8:cafe:3/64	fe80::1
		fe80::2	

Запишите подсеть для сети Guest:

192.168.0.224/27

Настройка компьютеров:



Настройка маршрутизатора R1:

```
Router>enable
Router#confi
Router#configure ter
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#host
Router(config)#hostname R1
R1(config)#no ip domain
R1(config)#no ip domain-l
R1(config)#no ip domain-lookup
R1(config)#enable secret Ciscoenpa55
R1(config)#line console 0
R1(config-line)#pass
R1(config-line)#password Ciscoenpa55
R1(config-line)#login
R1(config-line)#exit
R1(config)#secu
R1(config)#security passwor
R1(config)#security passwords min-
R1(config)#security passwords min-length 10
R1(config)#service pass
R1(config)#service password-encryption
R1(config)#banner motd "Warning!"
R1(config)#
R1(config)#interface gigabit
R1(config)#interface gigabitEthernet 0/0
R1(config-if)#ip ad
R1(config-if)#ip address 192.168.0.1 255.255.255.128
R1(config-if)#no shu
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
R1(config-if)#ipv6 ad
R1(config-if)#ipv6 address 2001:db8:acad::1/64
R1(config-if)#ipv6 ad
R1(config-if)#ipv6 address  fe80::1 link-local
R1(config-if)#exit
R1(config)#interf
R1(config)#interface giga
R1(config)#interface gigabitEthernet 0/1
R1(config-if)#ip ad
R1(config-if)#ip address 192.168.0.129 255.255.255.192
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

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

R1(config-if)#ipv6 ad
R1(config-if)#ipv6 address 2001:db8:acad:1::1/64
R1(config-if)#ipv6 ad
R1(config-if)#ipv6 address fe80::1 link
R1(config-if)#ipv6 address fe80::1 link-local
R1(config-if)#
R1(config-if)#exit
R1(config)#inter
R1(config)#interface gig
R1(config)#interface gigabitEthernet 0/2
R1(config-if)#ip adr
R1(config-if)#ip add
R1(config-if)#ip address 192.168.0.193 255.255.255.224
R1(config-if)#no shu
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up
```

```
R1(config-if)#ipv6 add
R1(config-if)#ipv6 address 2001:db8:acad:2::1/64
R1(config-if)#ipv6 add
R1(config-if)#ipv6 address fe80::1 link
R1(config-if)#ipv6 address fe80::1 link-local
R1(config-if)#exit
R1(config)#

R1(config)#ip dom
R1(config)#ip domain
R1(config)#ip domain-n
R1(config)#ip domain-name CCNA-lab.com
R1(config)#creypto
R1(config)#creypto key gener
R1(config)#cry
R1(config)#crypto key generate rsa
The name for the keys will be: R1.CCNA-lab.com
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]

R1(config)#usern
*Mar 1 9:22:38.605: %SSH-5-ENABLED: SSH 1.99 has been enabled
R1(config)#username Admin1 secret 5 Admin1pa55
R1(config)#line vty 0 15
R1(config-line)#trans
R1(config-line)#transport inpu
R1(config-line)#transport input ssh

R1(config-line)#login local
R1(config-line)#
R1(config-line)#
R1(config-line)#exit
R1(config)#username Admin1 secret Admin1pa55
R1(config)#line console 0
R1(config-line)#exec
R1(config-line)#exec-timeout 5 0
R1(config-line)#exit
R1(config)#line vty 0 15
R1(config-line)#exec
R1(config-line)#exec-timeout 5 0
R1(config-line)#exit
R1(config)#login block=for 180 atte
R1(config)#login block=for 180 attem
R1(config)#login block-for 180 attempt
R1(config)#login block-for 180 attempts 4 within 10
R1(config)#login block-for 180 attempts 4 within 120
R1(config)#
```

Настройка конфигурации коммутатора:

```
Switch>enable
Switch#configure ter
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#host
Switch(config)#hostname S1
S1(config)#interf
S1(config)#interface gig
S1(config)#interface vlan 1
S1(config-if)#ip add
S1(config-if)#ip address 192.168.0.2 255.255.255.128
S1(config-if)#no shu
S1(config-if)#no shutdown

S1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S1(config-if)#exit
S1(config)#ip defa
S1(config)#ip default-gateway 192.168.0.1
S1(config)#no ip doma
S1(config)#no ip domain-l
S1(config)#no ip domain-lookup
S1(config)#enable secret Ciscoenpa55
S1(config)#line console 0
S1(config-line)#pass
S1(config-line)#password Ciscoenpa55
S1(config-line)#login
S1(config-line)#exec-t
S1(config-line)#exec-timeout 5 0
S1(config-line)#exit
S1(config)#line vty 0 15
S1(config-line)#exec-t
S1(config-line)#exec-timeout
% Incomplete command.
S1(config-line)#exec-timeout 5 0
S1(config-line)#exit
S1(config)#service pass
S1(config)#service password-encryption
S1(config)#enable secret Ciscoconpa55
S1(config)#enable secret Ciscoenpa55
S1(config)#line console 0
S1(config-line)#pass
S1(config-line)#password Ciscoconpa55
S1(config-line)#
```

```
Switch>enable
Switch#confi
Switch#configure ter
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#host
Switch(config)#hostname S2
S2(config)#inter
S2(config)#interface vlan 1
S2(config-if)#ip add
S2(config-if)#ip address 192.168.0.130 255.255.255.192
S2(config-if)#no shut
S2(config-if)#no shutdown

S2(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S2(config-if)#exit
S2(config)#ip defa
S2(config)#ip default-gateway 192.168.0.129
S2(config)#no ip domain-l
S2(config)#no ip domain-lookup
S2(config)#enable secret Ciscoenpa55
S2(config)#line console 0
S2(config-line)#pass
S2(config-line)#password Ciscoenpa55
S2(config-line)#login
S2(config-line)#exe
S2(config-line)#exec-timeout 5 0
S2(config-line)#exit
S2(config)#line vty 0 15
```

```
S2(config-line)#exe
S2(config-line)#exec-timeout 5 0
S2(config-line)#exit
S2(config)#serv
S2(config)#service pass
S2(config)#service password-encryption
S2(config)#enable secret Ciscoconpa55
S2(config)#enable secret Ciscoenpa55
S2(config)#line console 0
S2(config-line)#pass
S2(config-line)#password Ciscoconpa55
S2(config-line)#
```

```
Switch>enable
Switch#confi
Switch#configure term
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#host
Switch(config)#hostname S3
S3(config)#inte
S3(config)#interface vlan 1
S3(config-if)#ip add
S3(config-if)#ip address 192.168.0.194 255.255.255.224
S3(config-if)#no shu
S3(config-if)#no shutdown

S3(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S3(config-if)#exit
S3(config)#ip de
S3(config)#ip default-gateway 192.168.0.193
S3(config)#no ip domain-l
S3(config)#no ip domain-lookup
S3(config)#enable secret Ciscoenpa55
S3(config)#line console 0
S3(config-line)#pass
S3(config-line)#password Ciscoenpa55
S3(config-line)#login
S3(config-line)#exe
S3(config-line)#exec-timeout 5 0
S3(config-line)#exit
S3(config)#line vty 0 15
```

```
S3(config-line)#exec-timeout 5 0
S3(config-line)#exit
S3(config)#servi
S3(config)#service pass
S3(config)#service password-encryption
S3(config)#enable secret Ciscoconpa55
S3(config)#enable secret Ciscoenpa55
S3(config)#line console 0
S3(config-line)#pass
S3(config-line)#password Ciscoconpa55
S3(config-line)#
```

Вывод: Я настроил адреса компьютеров, маршрутизатор и 3 коммутатора.