

Отчет по лабораторной работе 10

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1. Построил сеть:

- Добавил роутер 2811, пк и коммутатор.
- Включил порт fast ethernet на роутере.

2. Настроил ip-адрес на роутере:

- Задал IP 192.168.0.1.

3. Настроил dhcp на роутере:

- Включил консоль на роутере.
- Создал dhcp (группа).
- Определил параметры:
 - Сеть: 192.168.0.0/24
 - Шлюз: 192.168.0.1
 - Dns-сервер: 7.7.7.7
- Исключил 192.168.0.1 из раздаваемых адресов, чтобы он тупо не назначался.

4. Проверил работу dhcp:

- Переключил ip-конфигурацию на пк в режим dhcp.
- пк получил автоматический ip-адрес из заданного диапазона.

5. Проверил связь в сети:

- Отправил команду ping 192.168.0.1.
- Ответ есть, сеть работает и всё в шоколаде!

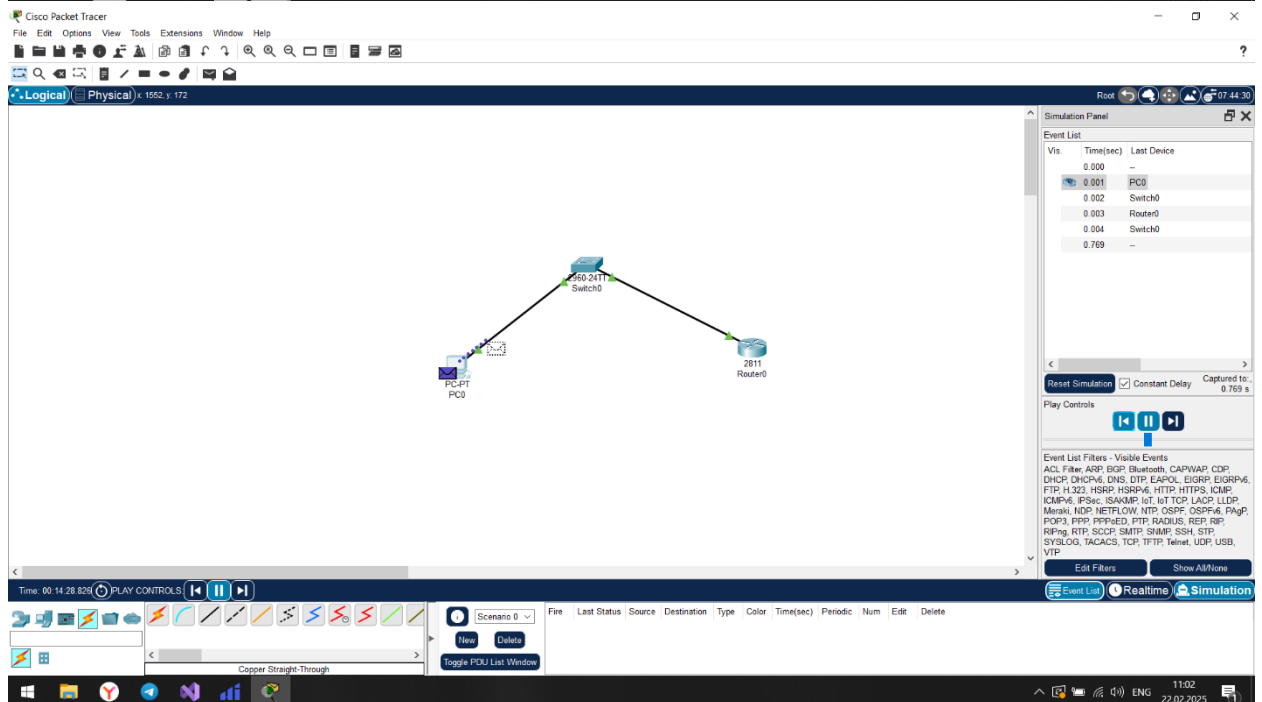
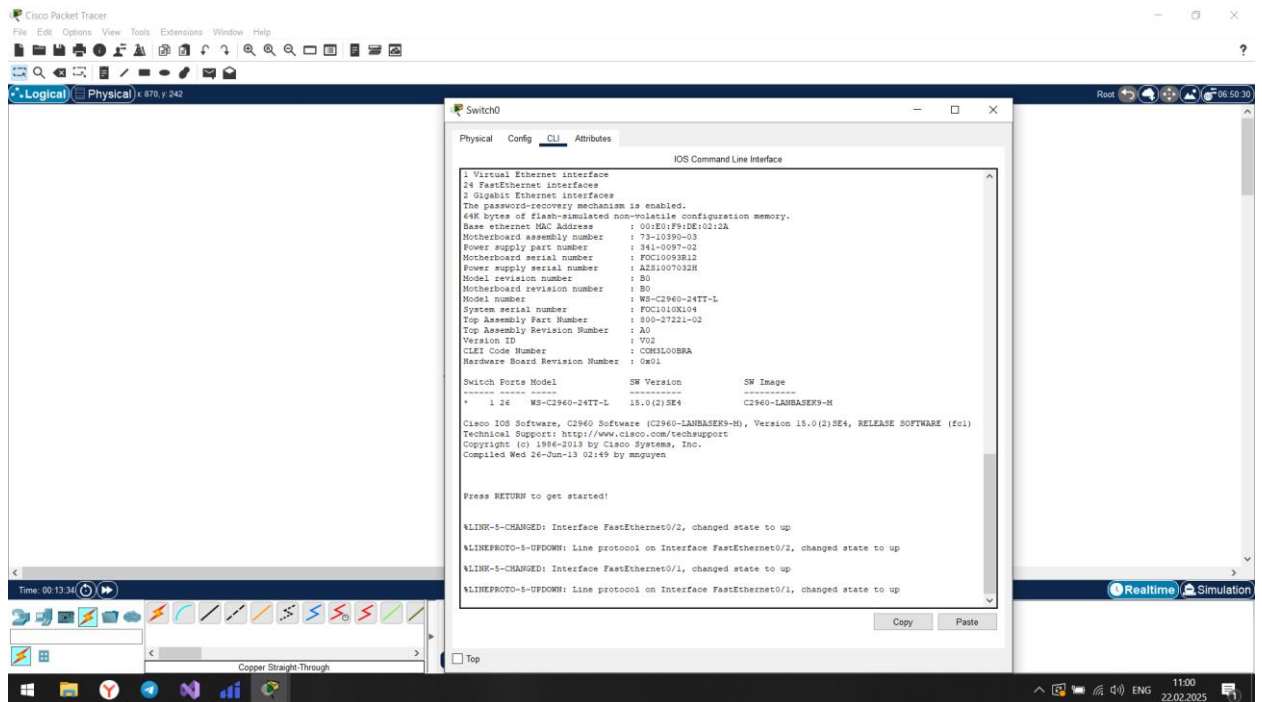
Скриншоты:

The top screenshot shows the Cisco Packet Tracer interface with a network diagram. A switch (Switch0) is connected to a PC (PC-PT PC0) and a router (Router0). The router's CLI is open, showing the following commands and output:

```
Router>no shutdown
Router>Translating "no"...domain server (255.255.255.255)
Router>
Router>enable
Router>configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.0.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router(config)#
Router>#
Router#show ip interface brief
Interface      IP-Address      OK? Method Status      Protocol
FastEthernet0/0 192.168.0.1    YES manual up          up
FastEthernet0/1 unassigned      YES unset  administratively down down
Vlan1          unassigned      YES unset  administratively down down
Router#ip dhcp excluded-address 192.168.0.1 192.168.0.10
Router#ip dhcp pool MYPOOL
Router#network 192.168.0.0 255.255.255.0
```

The bottom screenshot shows the same network diagram, but the router's CLI is open to the DHCP configuration steps:

```
Router>enable
Router>configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip dhcp excluded-address 192.168.0.1 192.168.0.10
Router(config)#ip dhcp pool MYPOOL
Router(dhcp-config)#network 192.168.0.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.0.1
Router(dhcp-config)#dns-server 8.8.8.8
Router(dhcp-config)#exit
Router>#
Router#show ip dhcp binding
IP address      Client-ID/      Lease expiration        Type
Hardware address
Router#
Router>configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
Router(config)#
```



Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 1050 y 378

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	-
	0.001	PC0
	0.002	Switch0
	0.003	Router0
	0.004	Switch0
	0.769	-

Reset Simulation Constant Delay Captured to: 0.769 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, Icmp, Icmpv6, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:14:28.829 PLAY CONTROLS

Scenario 0

File Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Copper Straight-Through

Toggle PDU List Window

11:02 22.02.2025

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x 1050 y 382

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	-
	0.001	PC0
	0.002	Switch0
	0.003	Router0
	0.004	Switch0
	0.769	-

Reset Simulation Constant Delay Captured to: 0.769 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, Icmp, Icmpv6, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:14:28.829 PLAY CONTROLS

Scenario 0

File Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Copper Straight-Through

Toggle PDU List Window

11:03 22.02.2025

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical 435 / 287

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
0.000	-	-
0.001	PC0	-
0.002	Switch0	-
0.003	Router0	-
0.004	Switch0	-
0.769	-	-

Reset Simulation Constant Delay Captured to: 0.769 s

Play Controls

Event List Filters - Visible Events

ACL, Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IRT, IRT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RIPv3, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:14:28.829 PLAY CONTROLS

Scenario 0

New Delete

Toggle PDU List Window

Copper Straight-Through

11:03 22.02.2025