

Министерство образования Республики Беларусь

Учреждение образования
БЕЛОРУССКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
ИНФОРМАТИКИ И РАДИОЭЛЕКТРОНИКИ

Факультет компьютерных систем и сетей

Кафедра электронных вычислительных машин

Дисциплина: Оборудование компьютерных сетей

ОТЧЕТ
по лабораторной работе № 2

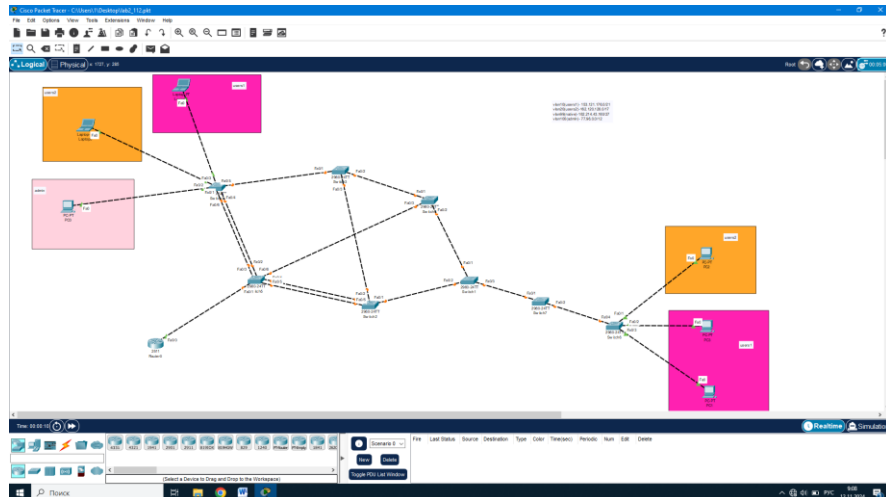
ВАРИАНТ № 112

Студент:

Преподаватель:

МИНСК 2024

1. Реализация топологии в Cisco Packet Tracer



2. Рабочие конфигурации

Switch1

```
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/2
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/3
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
--More--
```

Switch2

```
IOS Command Line Interface

spanning-tree extend system-id
!
interface Port-channel2
switchport trunk native vlan 99
switchport mode trunk
!
interface FastEthernet0/1
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/2
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/3
!
interface FastEthernet0/4
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
duplex full
speed 100
channel-group 2 mode on
!
interface FastEthernet0/5
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
duplex full
speed 100
channel-group 2 mode on
!
interface FastEthernet0/6
!
--More--
```

Switch3

```
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
!
interface FastEthernet0/2
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
!
interface FastEthernet0/3
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
--More--
```

Switch4

```
spanning-tree bpduguard enable
!
interface FastEthernet0/2
 switchport access vlan 20
 switchport mode access
 switchport port-security maximum 2
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface FastEthernet0/3
 switchport access vlan 10
 switchport mode access
 spanning-tree portfast
 spanning-tree bpduguard enable
!
interface FastEthernet0/4
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
 duplex full
 speed 100
 channel-group 1 mode on
!
interface FastEthernet0/5
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
!
interface FastEthernet0/6
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
 duplex full
 speed 100
 channel-group 1 mode on
!
interface FastEthernet0/7
```

Switch5

IOS Command Line Interface

```
duplex full
speed 100
channel-group 1 mode on
!
interface FastEthernet0/3
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
 duplex full
 speed 100
 channel-group 1 mode on
!
interface FastEthernet0/4
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
 duplex full
 speed 100
 channel-group 2 mode on
!
interface FastEthernet0/5
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
 duplex full
 speed 100
 channel-group 2 mode on
!
interface FastEthernet0/6
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,100
 switchport mode trunk
!
interface FastEthernet0/7
!
interface FastEthernet0/8
--More--
```

Switch6

```
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport access vlan 20
switchport mode access
spanning-tree portfast
spanning-tree bpduguard enable
!
interface FastEthernet0/2
switchport access vlan 10
switchport mode access
spanning-tree portfast
spanning-tree bpduguard enable
!
interface FastEthernet0/3
switchport access vlan 10
switchport mode access
spanning-tree portfast
spanning-tree bpduguard enable
!
interface FastEthernet0/4
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
--More--
```

Switch7

```
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/2
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
interface FastEthernet0/5
--More--
```

Switch8

```
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/2
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/3
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,100
switchport mode trunk
!
interface FastEthernet0/4
!
interface FastEthernet0/5
--More--
```

Router0

```
!
spanning-tree mode pvst
!
!
!
!
interface FastEthernet0/0
no ip address
duplex auto
speed auto
!
interface FastEthernet0/0.10
encapsulation dot1Q 10
ip address 153.121.176.1 255.255.248.0
!
interface FastEthernet0/0.20
encapsulation dot1Q 20
ip address 162.120.128.1 255.255.128.0
!
interface FastEthernet0/0.99
encapsulation dot1Q 99
ip address 182.214.43.161 255.255.255.224
!
interface FastEthernet0/0.100
encapsulation dot1Q 100
ip address 77.96.0.1 255.240.0.0
!
interface FastEthernet0/1
no ip address
duplex auto
speed auto
shutdown
!
--More--
```

PC0 (Admin)

The screenshot shows the 'PC0' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded, showing the configuration for the 'FastEthernet0' interface. The 'Static' radio button is selected under 'IP Configuration'. The fields are filled with the following values:

Field	Value
IPv4 Address	77.96.0.2
Subnet Mask	255.240.0.0
Default Gateway	77.96.0.1
DNS Server	0.0.0.0

PC1

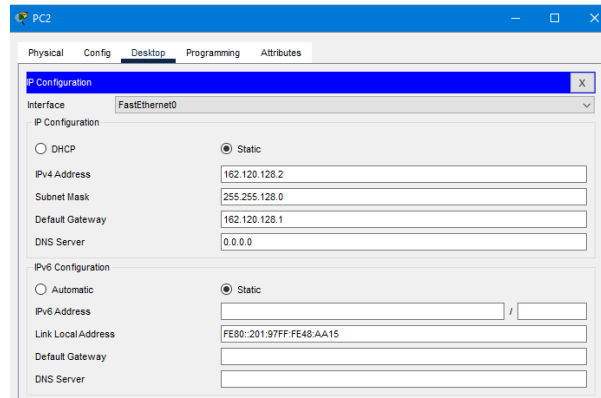
The screenshot shows the 'PC1' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded, showing the configuration for the 'FastEthernet0' interface. The 'Static' radio button is selected under 'IP Configuration'. The fields are filled with the following values:

Field	Value
IPv4 Address	153.121.176.4
Subnet Mask	255.255.248.0
Default Gateway	153.121.176.1
DNS Server	0.0.0.0

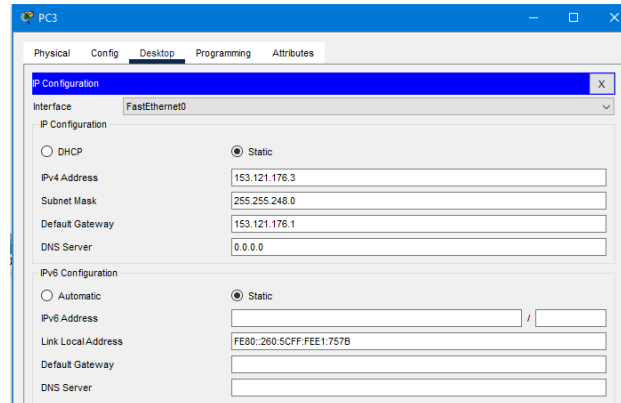
Below the IPv4 configuration, the 'IPv6 Configuration' section is also visible, with the 'Static' radio button selected. The fields are filled with the following values:

Field	Value
IPv6 Address	
Link Local Address	FE80::202:17FF:FED7:846E
Default Gateway	
DNS Server	

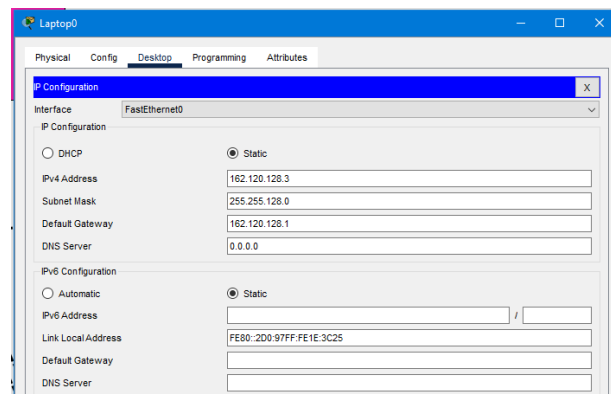
PC2



PC3



Laptop0



Laptop1

