

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 № 4

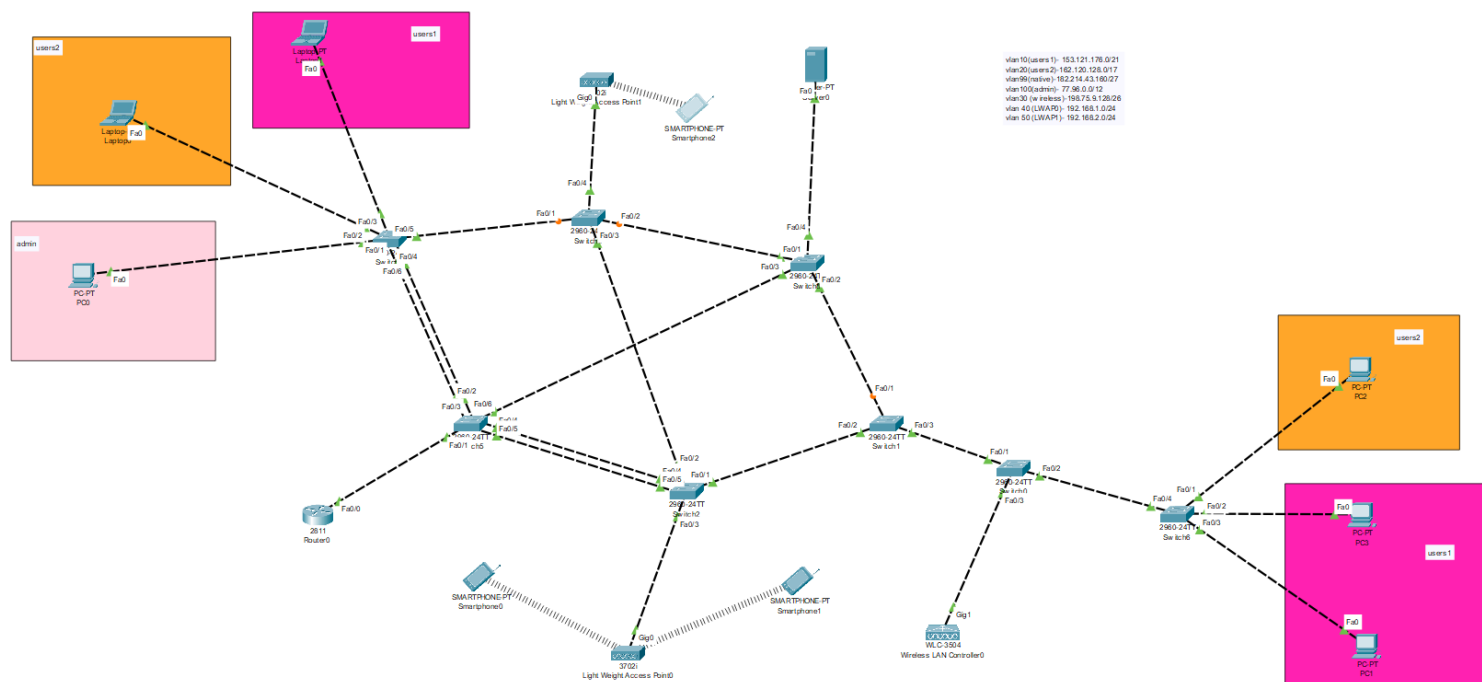
ВАРИАНТ № 112

Студент:

Преподаватель:

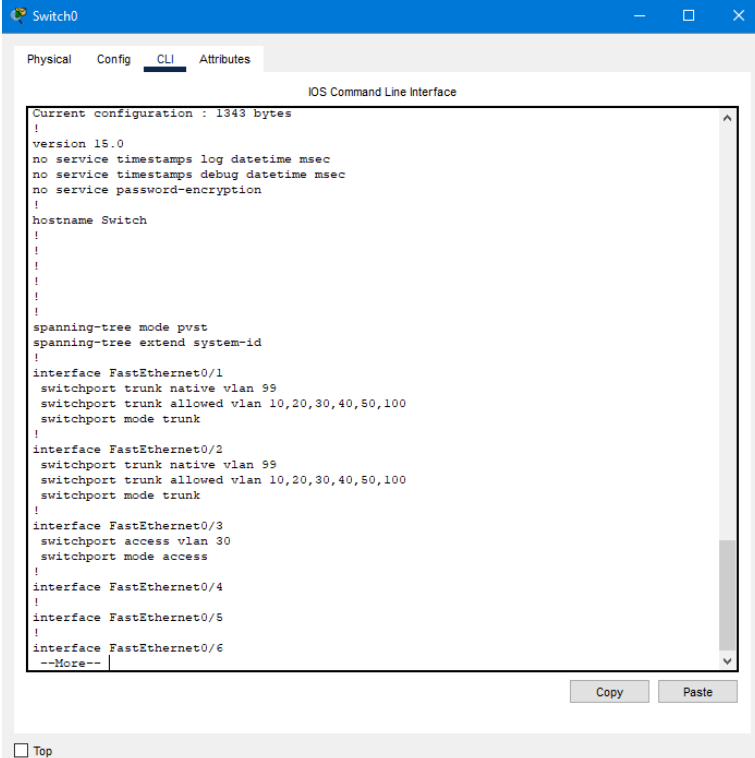
МИНСК 2024

# 1. Реализация топологии в Cisco Packet Tracer



## 2. Рабочие конфигурации

### Switch0

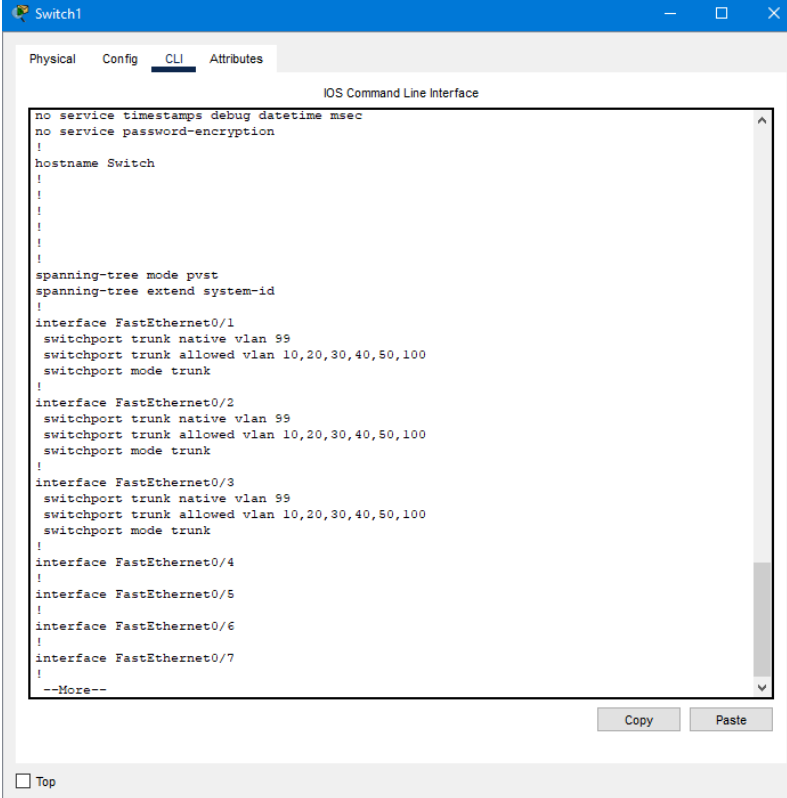


The screenshot shows a window titled "Switch0" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface" configuration. The configuration text is as follows:

```
Current configuration : 1343 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,30,40,50,100
 switchport mode trunk
!
interface FastEthernet0/2
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,30,40,50,100
 switchport mode trunk
!
interface FastEthernet0/3
 switchport access vlan 30
 switchport mode access
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
--More--
```

At the bottom of the CLI window, there are "Copy" and "Paste" buttons, and a "Top" button with a checkbox.

### Switch1

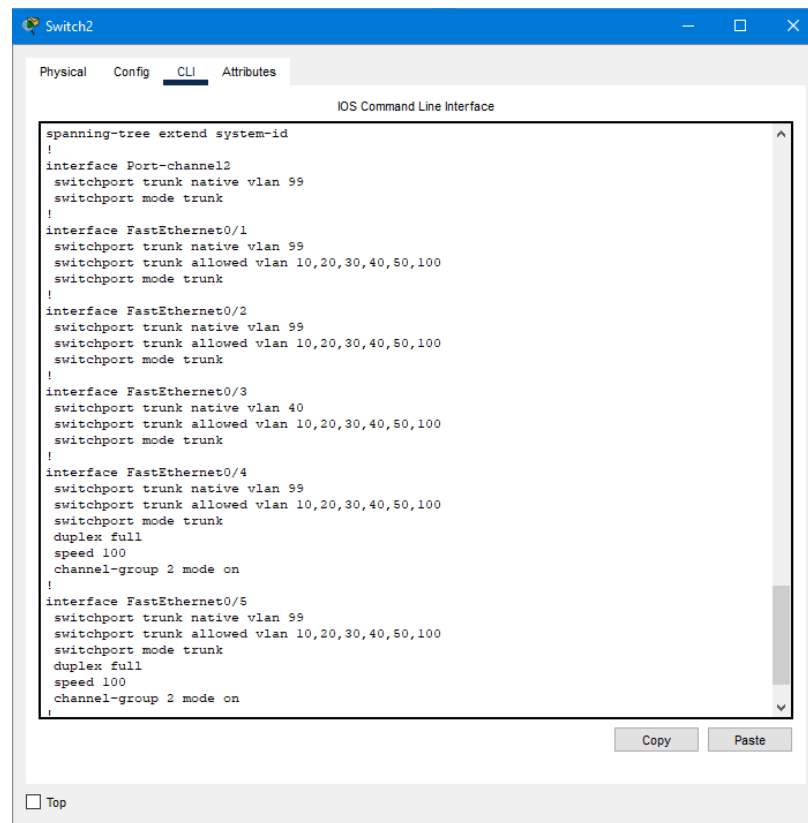


The screenshot shows a window titled "Switch1" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface" configuration. The configuration text is as follows:

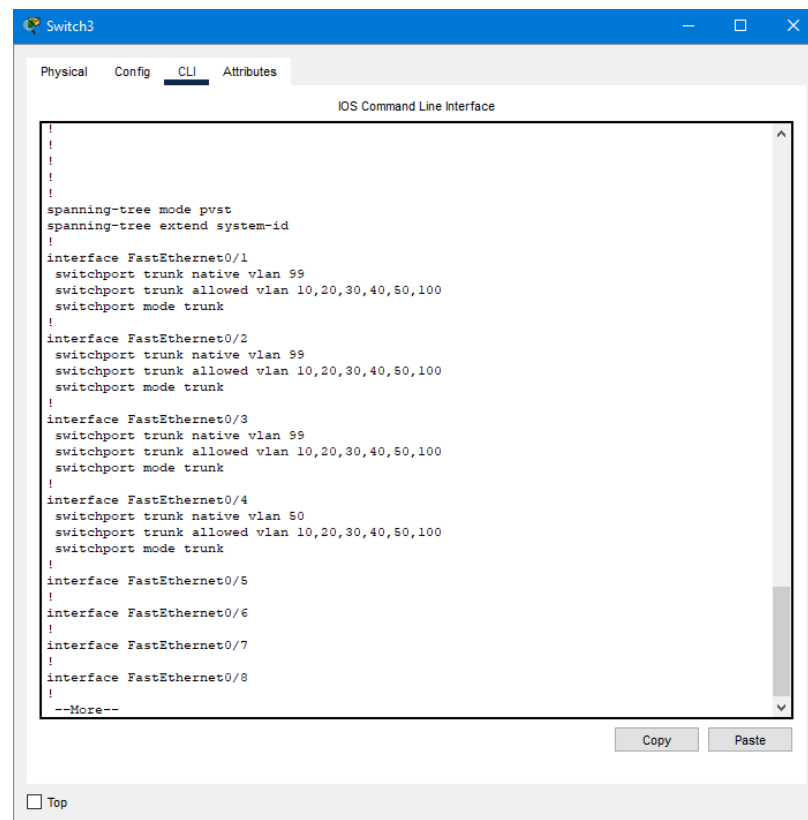
```
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,30,40,50,100
 switchport mode trunk
!
interface FastEthernet0/2
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,30,40,50,100
 switchport mode trunk
!
interface FastEthernet0/3
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,30,40,50,100
 switchport mode trunk
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
--More--
```

At the bottom of the CLI window, there are "Copy" and "Paste" buttons, and a "Top" button with a checkbox.

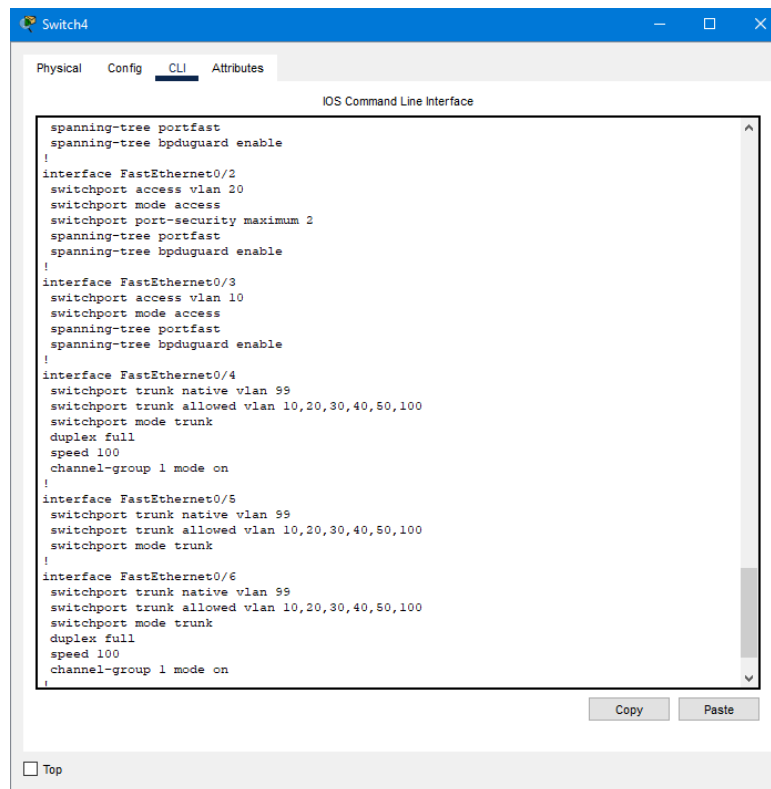
## Switch2



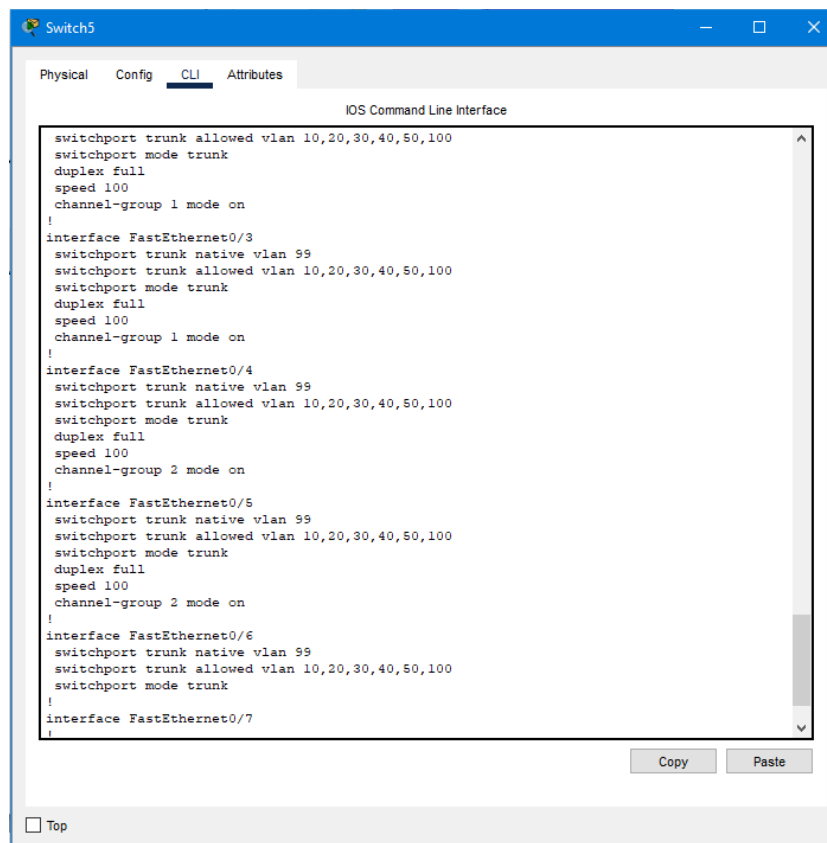
## Switch3



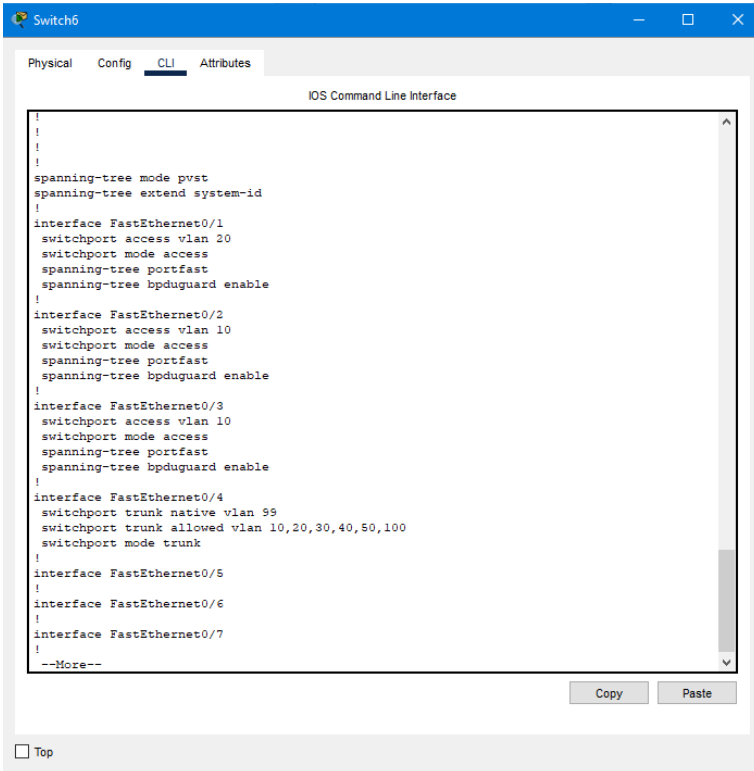
## Switch4



## Switch5



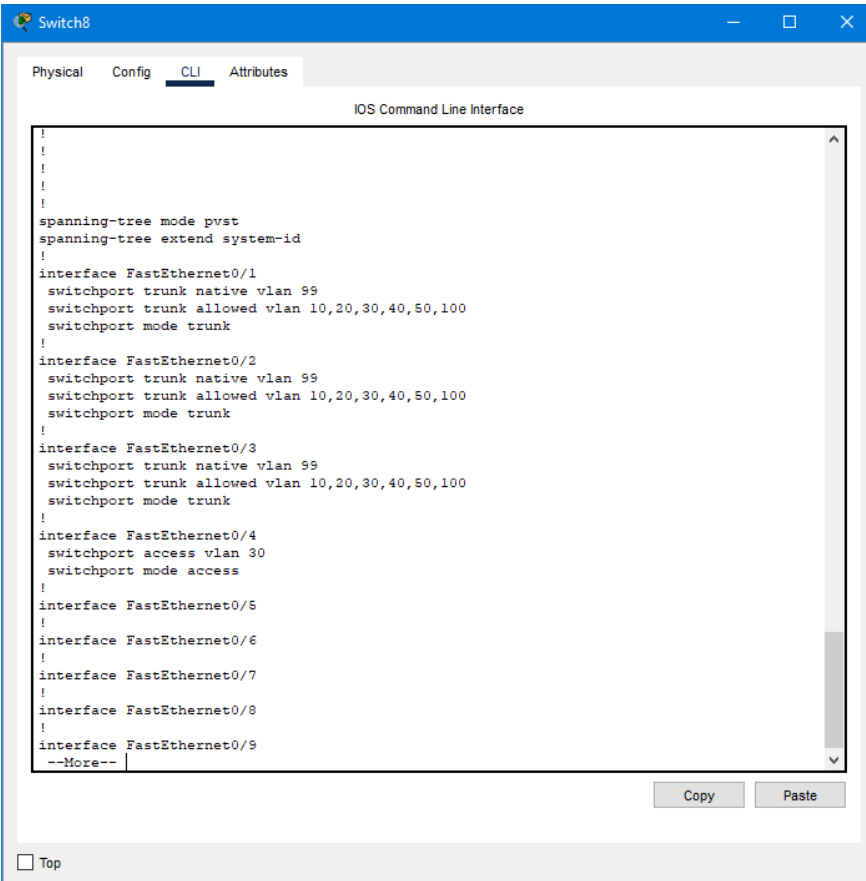
## Switch6



The screenshot shows the CLI configuration for Switch6. The configuration includes spanning-tree settings and configurations for interfaces FastEthernet0/1 through FastEthernet0/7. Interfaces 0/1, 0/2, and 0/3 are configured as access ports in VLANs 20, 10, and 10 respectively. Interfaces 0/4, 0/5, 0/6, and 0/7 are configured as trunk ports with native VLAN 99 and allowed VLANs 10, 20, 30, 40, 50, and 100.

```
!
!
!
!
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 10,20,30,40,50,100
switchport mode trunk
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
--More--
```

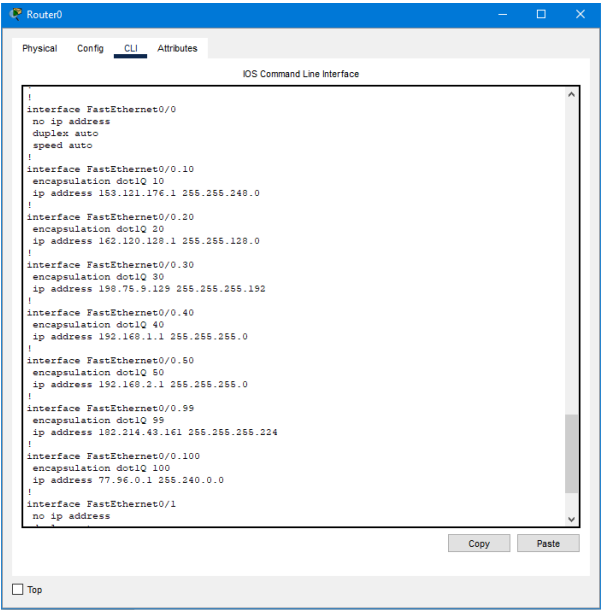
## Switch8



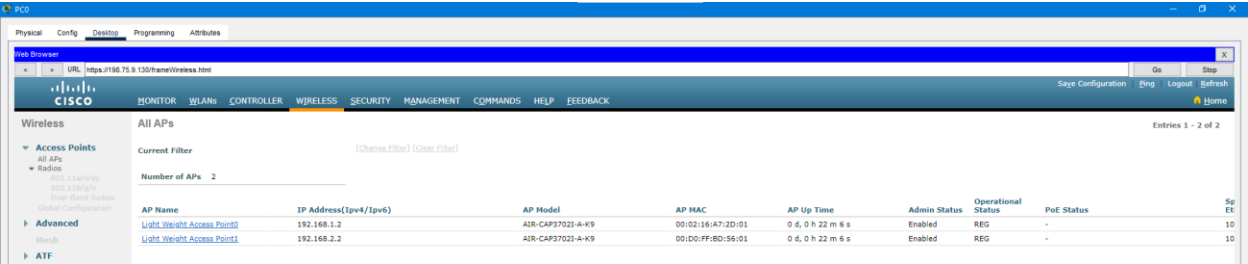
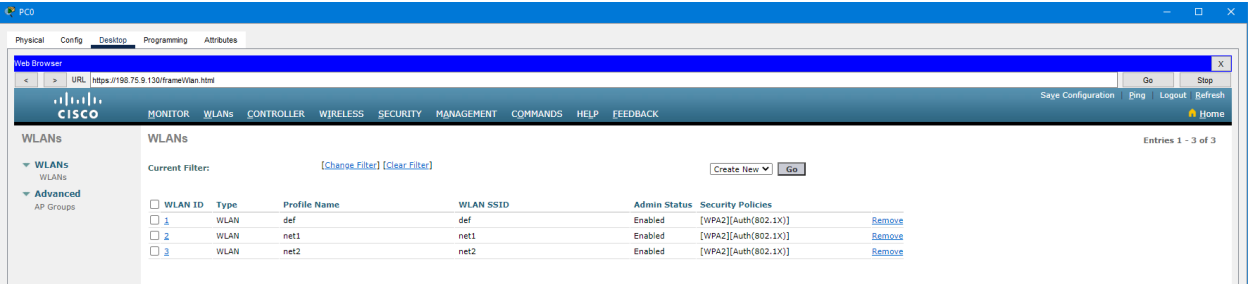
The screenshot shows the CLI configuration for Switch8. The configuration includes spanning-tree settings and configurations for interfaces FastEthernet0/1 through FastEthernet0/9. Interfaces 0/1, 0/2, and 0/3 are configured as trunk ports with native VLAN 99 and allowed VLANs 10, 20, 30, 40, 50, and 100. Interfaces 0/4, 0/5, 0/6, 0/7, 0/8, and 0/9 are configured as access ports in VLANs 30, 30, 30, 30, 30, and 30 respectively.

```
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,40,50,100
switchport mode trunk
!
interface FastEthernet0/2
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,40,50,100
switchport mode trunk
!
interface FastEthernet0/3
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,40,50,100
switchport mode trunk
!
interface FastEthernet0/4
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
--More--
```

# Router0



# WLC



Wireless LAN Controller0

Physical Config Attributes

GLOBAL

Settings

INTERFACE

GigabitEthernet1

GigabitEthernet2

GigabitEthernet3

GigabitEthernet4

GigabitEthernet5

Management

Management

IP Configuration

IPv4 Address 198.75.9.130

Subnet Mask 255.255.255.192

Default Gateway 198.75.9.129

DNS Server

Top

# Server0

Server0

Physical Config Services Desktop Programming Attributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

DHCP

Interface FastEthernet0 Service ☐ On ☒ Off

Pool Name serverPool

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

Start IP Address : 198 75 9 128

Subnet Mask: 255 255 255 192

Maximum Number of Users : 512

TFTP Server: 0.0.0.0

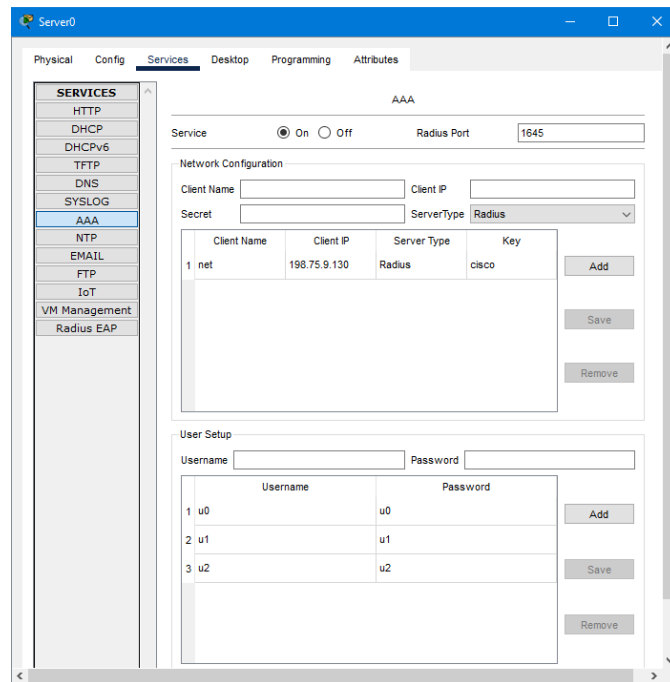
WLC Address: 0.0.0.0

Add Save Remove

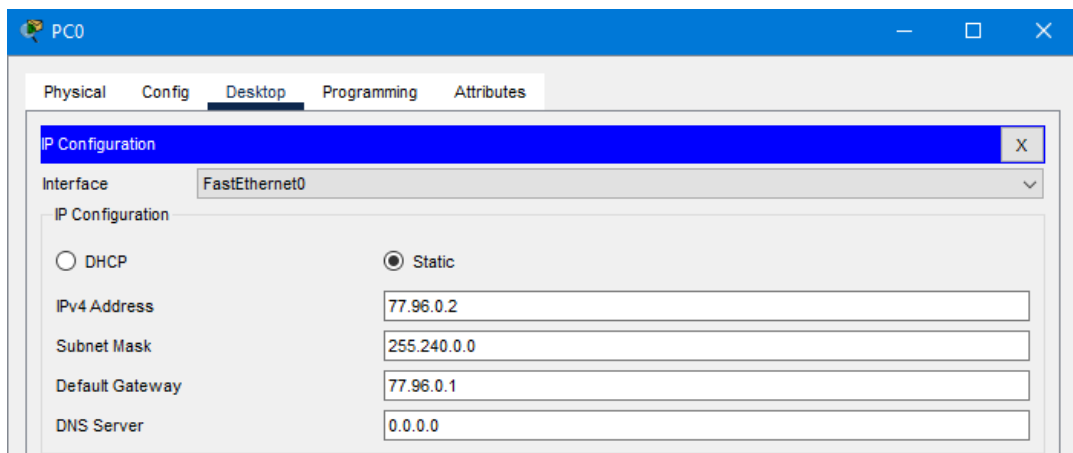
Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	0.0.0.0	0.0.0.0	198.75.9...	255.255....	512	0.0.0.0	0.0.0.0

Top

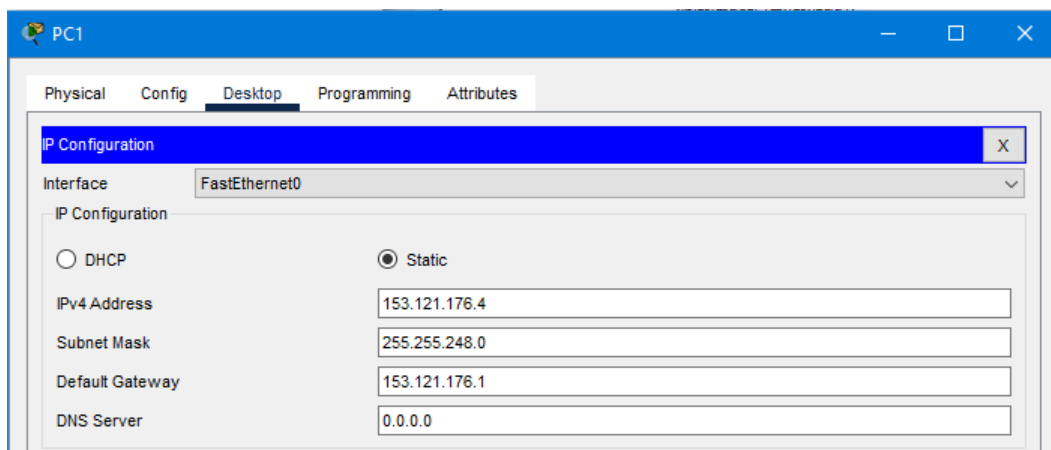




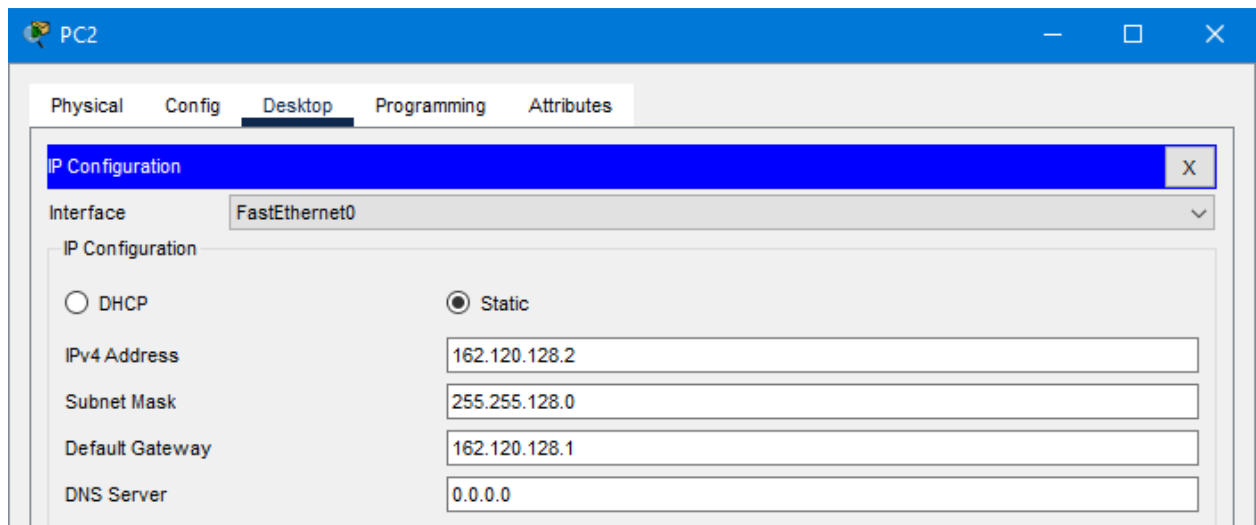
## PC0 (Admin)



## PC1



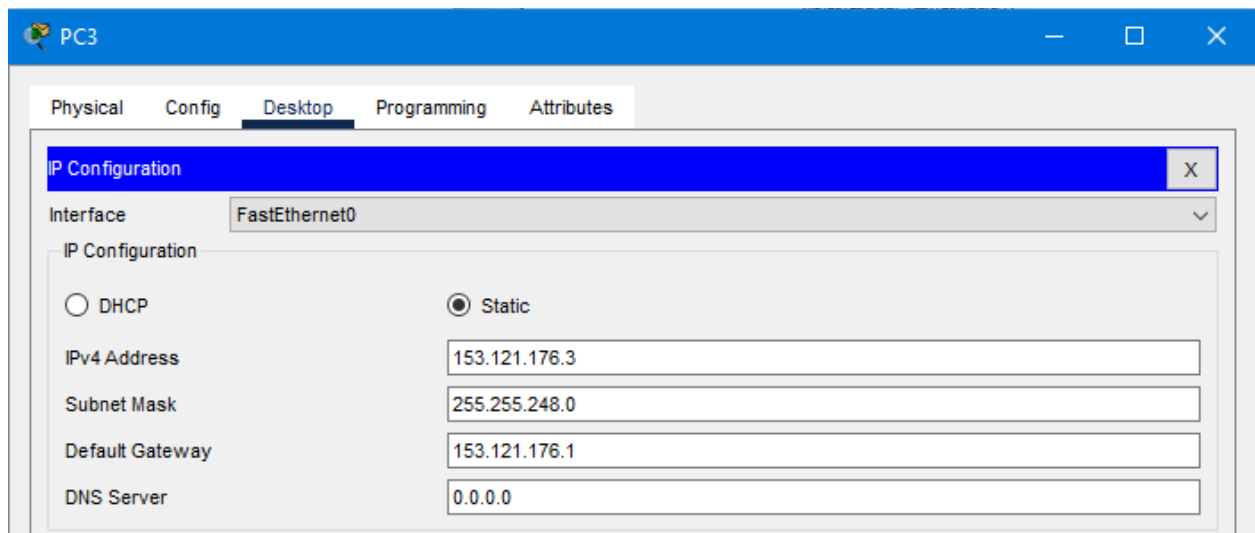
## PC2



The screenshot shows the configuration window for PC2. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected. The IP address is 162.120.128.2, the subnet mask is 255.255.128.0, the default gateway is 162.120.128.1, and the DNS server is 0.0.0.0.

Interface	FastEthernet0
IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IPv4 Address	162.120.128.2
Subnet Mask	255.255.128.0
Default Gateway	162.120.128.1
DNS Server	0.0.0.0

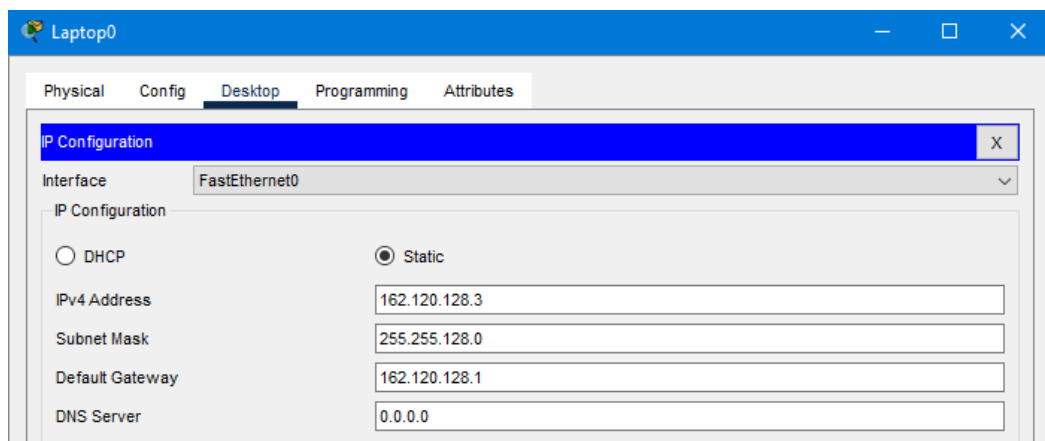
## PC3



The screenshot shows the configuration window for PC3. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected. The IP address is 153.121.176.3, the subnet mask is 255.255.248.0, the default gateway is 153.121.176.1, and the DNS server is 0.0.0.0.

Interface	FastEthernet0
IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IPv4 Address	153.121.176.3
Subnet Mask	255.255.248.0
Default Gateway	153.121.176.1
DNS Server	0.0.0.0

## Laptop0



The screenshot shows the configuration window for Laptop0. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected. The IP address is 162.120.128.3, the subnet mask is 255.255.128.0, the default gateway is 162.120.128.1, and the DNS server is 0.0.0.0.

Interface	FastEthernet0
IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IPv4 Address	162.120.128.3
Subnet Mask	255.255.128.0
Default Gateway	162.120.128.1
DNS Server	0.0.0.0

## Laptop1

The screenshot shows the 'Laptop1' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is expanded, showing settings for the 'FastEthernet0' interface. The 'Static' radio button is selected for IP configuration.

Interface	FastEthernet0
IP Configuration	<input checked="" type="radio"/> Static
IPv4 Address	153.121.176.2
Subnet Mask	255.255.248.0
Default Gateway	153.121.176.1
DNS Server	0.0.0.0

## Smartphone0

The screenshot shows the 'Smartphone0' configuration window with the 'Config' tab selected. The 'Wireless0' interface is configured with various settings, including authentication and encryption. The 'IP Configuration' section shows DHCP selected.

Interface	Wireless0
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	300 Mbps
MAC Address	00D0.9754.8A0C
SSID	net1
Authentication	<input checked="" type="radio"/> WPA2
WEP Key	
PSK Pass Phrase	
User ID	u0
Password	u0
Method	MD5
User Name	
Password	
Encryption Type	AES
IP Configuration	<input checked="" type="radio"/> DHCP
Static	<input type="radio"/>
IPv4 Address	192.168.1.5
Subnet Mask	255.255.255.0
IPv6 Configuration	<input checked="" type="radio"/> Automatic
Static	<input type="radio"/>
IPv6 Address	
Link Local Address	FE80::2D0:97FF:FE54:8A0C

☐ Top

# Smartphone1

Smartphone1

PhysicalConfigDesktopProgrammingAttributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

Wireless0

3G/4G Cell1

Bluetooth

Wireless0

Port Status

On

Bandwidth

300 Mbps

MAC Address

000B.BE98.946E

SSID

net1

Authentication

Disabled

WPA-PSK

WPA

802.1X

WEP

WPA2-PSK

WPA2

Method:

WEP Key

PSK Pass Phrase

User ID

u1

Password

u1

Method

MDS

Encryption Type

AES

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.3

Subnet Mask

255.255.255.0

IPv6 Configuration

Automatic

Static

IPv6 Address

Link Local Address

FE80::20B:BEFF:FE98:946E

Top

# Smartphone2

Smartphone2

PhysicalConfigDesktopProgrammingAttributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

Wireless0

3G/4G Cell1

Bluetooth

Wireless0

Port Status

On

Bandwidth

300 Mbps

MAC Address

0004.9AD4.625B

SSID

net2

Authentication

Disabled

WPA-PSK

WPA

802.1X

WEP

WPA2-PSK

WPA2

Method:

WEP Key

PSK Pass Phrase

User ID

u2

Password

u2

Method

MDS

Encryption Type

AES

IP Configuration

DHCP

Static

IPv4 Address

192.168.2.3

Subnet Mask

255.255.255.0

IPv6 Configuration

Automatic

Static

IPv6 Address

Link Local Address

FE80::204:9AFF:FED4:625B

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