

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 № 3

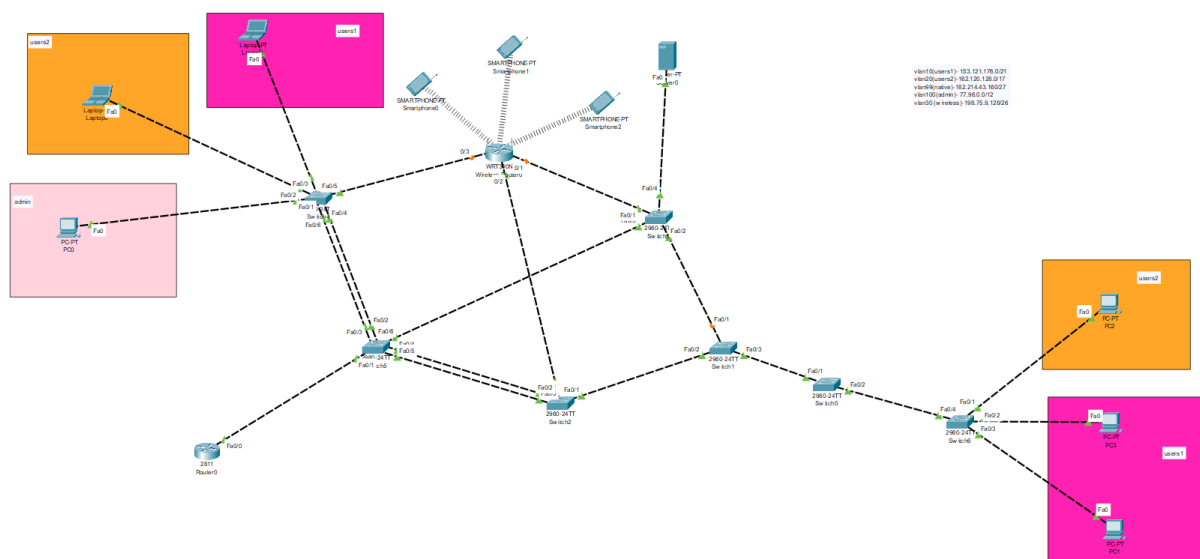
ВАРИАНТ № 112

Выполнил:

Проверил:

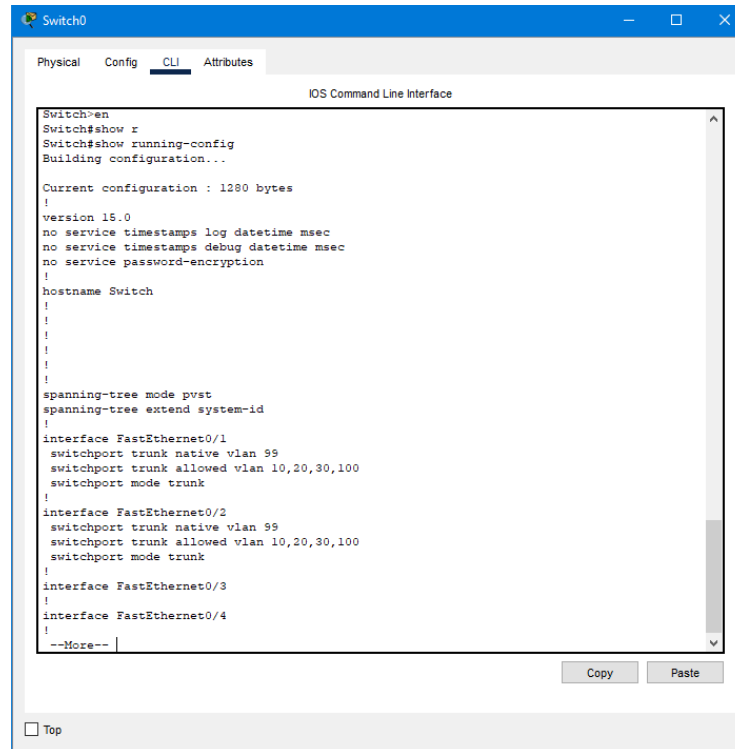
МИНСК 2024

## 1. Реализация топологии в Cisco Packet Tracer



## 2. Рабочие конфигурации

### Switch0

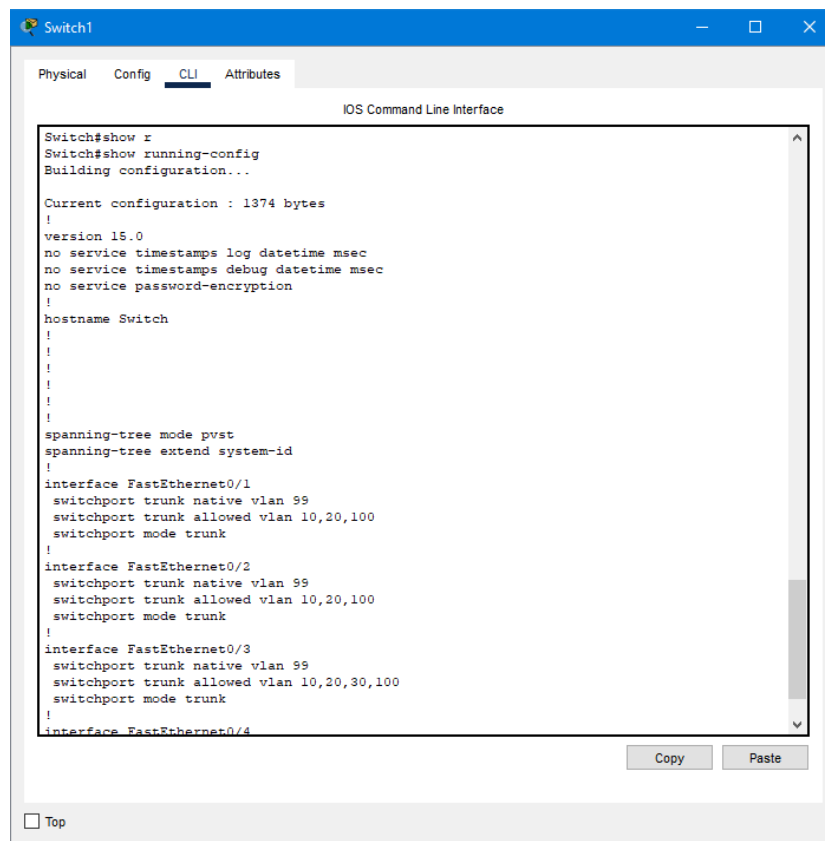


The screenshot shows a window titled "Switch0" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The command prompt is "Switch>". The user has entered "show r" and "show running-config", resulting in the output "Building configuration...". The current configuration is 1280 bytes. The configuration includes version 15.0, service timestamps, hostname Switch, spanning-tree mode pvst, and four FastEthernet interfaces (0/1 to 0/4) configured as trunks with native VLAN 99 and allowed VLANs 10, 20, 30, and 100.

```
Switch>
Switch#show r
Switch#show running-config
Building configuration...

Current configuration : 1280 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 10,20,30,100
 switchport mode trunk
!
interface FastEthernet0/2
 switchport trunk native vlan 99
 switchport trunk allowed vlan 10,20,30,100
 switchport mode trunk
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
--More--
```

### Switch1

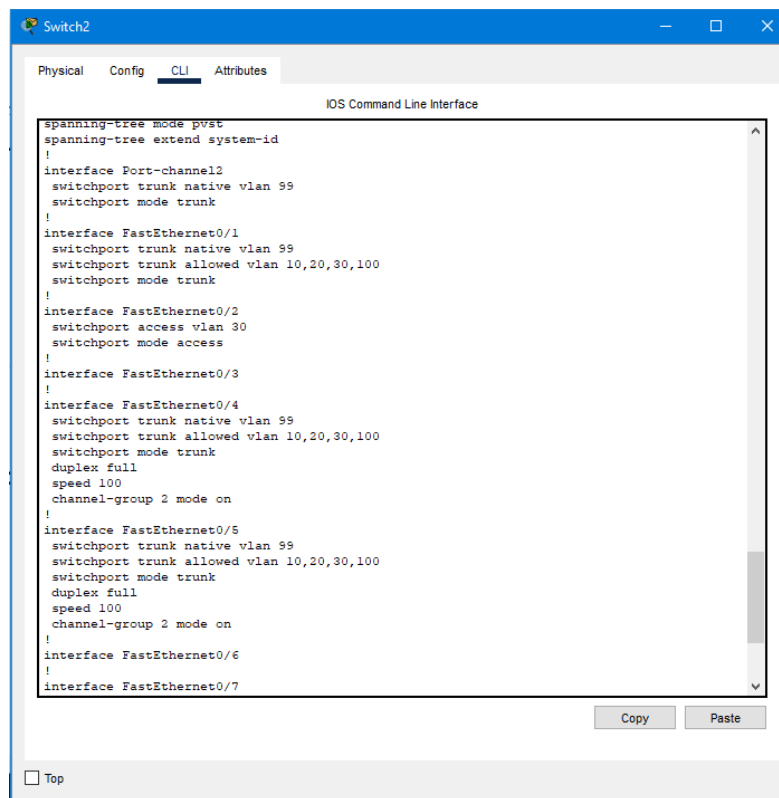


The screenshot shows a window titled "Switch1" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The command prompt is "Switch>". The user has entered "show r" and "show running-config", resulting in the output "Building configuration...". The current configuration is 1374 bytes. The configuration includes version 15.0, service timestamps, hostname Switch, spanning-tree mode pvst, and four FastEthernet interfaces (0/1 to 0/4) configured as trunks with native VLAN 99 and allowed VLANs 10, 20, and 100.

```
Switch>
Switch#show r
Switch#show running-config
Building configuration...

Current configuration : 1374 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 10,20,100
 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 10,20,30,100
 switchport mode trunk
!
interface FastEthernet0/4
```

## Switch2



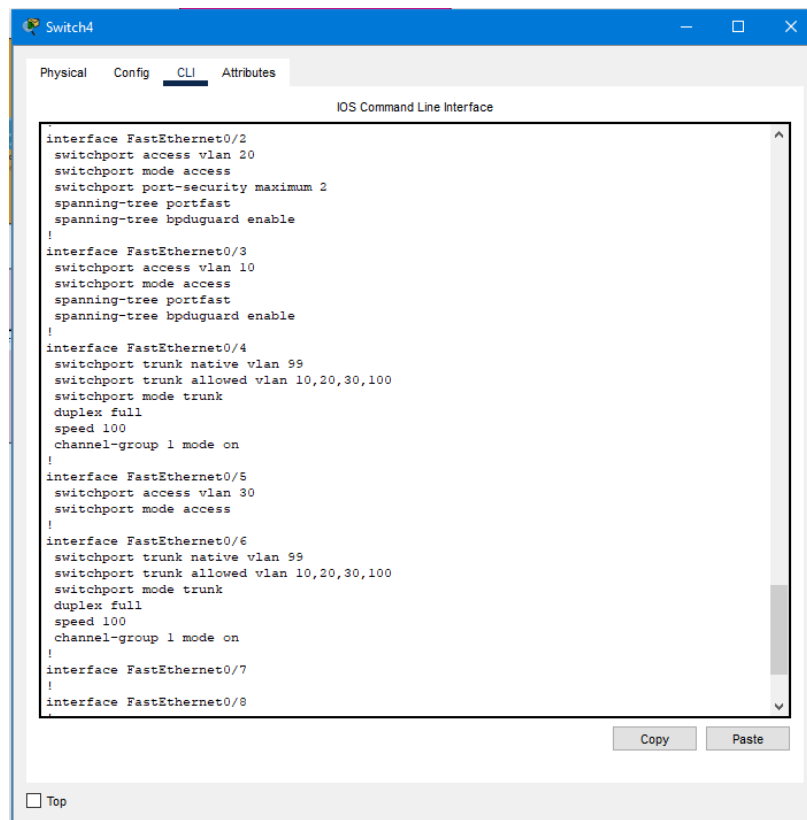
The screenshot shows the CLI configuration window for Switch2. The window has tabs for Physical, Config, CLI (selected), and Attributes. The CLI tab displays the IOS Command Line Interface configuration. The configuration includes spanning-tree settings, a port-channel interface, and several FastEthernet interfaces configured as trunks or access ports. A 'Top' button is located at the bottom left, and 'Copy' and 'Paste' buttons are at the bottom right.

```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface

spanning-tree mode pvst
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 10,20,30,100
switchport mode trunk
!
interface FastEthernet0/2
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/3
!
interface FastEthernet0/4
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,100
switchport mode trunk
duplex full
speed 100
channel-group 2 mode on
!
interface FastEthernet0/5
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,100
switchport mode trunk
duplex full
speed 100
channel-group 2 mode on
!
interface FastEthernet0/6
!
interface FastEthernet0/7

Top Copy Paste
```

## Switch4



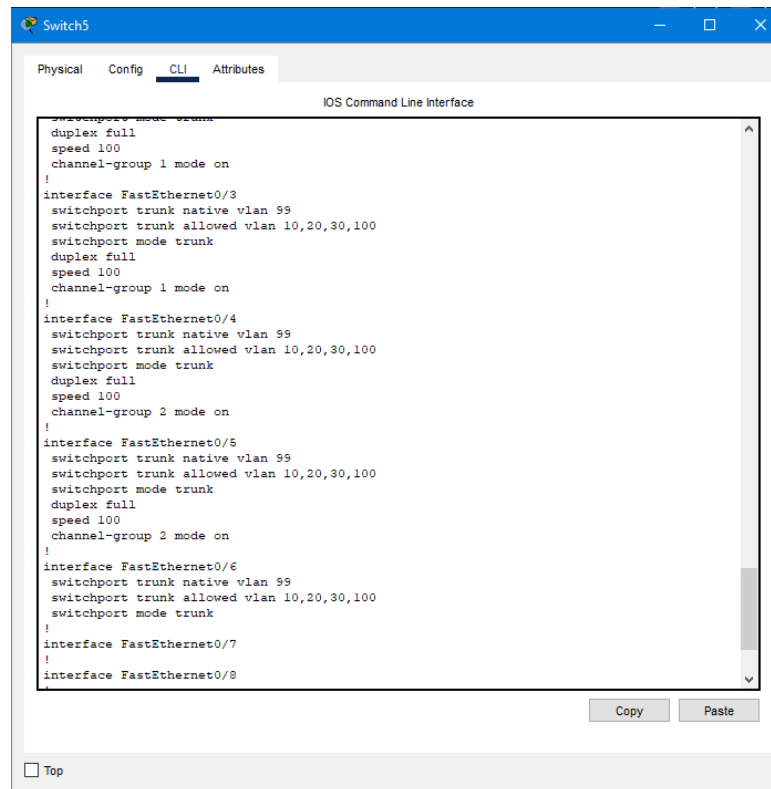
The screenshot shows the CLI configuration window for Switch4. The window has tabs for Physical, Config, CLI (selected), and Attributes. The CLI tab displays the IOS Command Line Interface configuration. The configuration includes FastEthernet interfaces configured as access or trunk ports, spanning-tree settings, and channel-group settings. A 'Top' button is located at the bottom left, and 'Copy' and 'Paste' buttons are at the bottom right.

```
Switch4
Physical Config CLI Attributes
IOS Command Line Interface

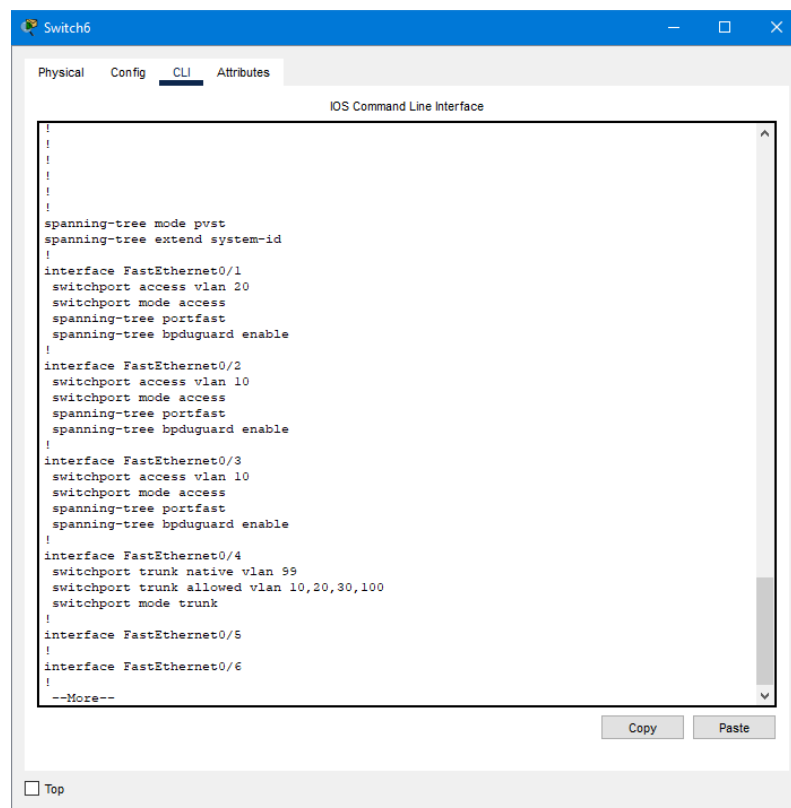
interface FastEthernet0/2
switchport access vlan 20
switchport mode access
switchport port-security maximum 2
spanning-tree portfast
spanning-tree bpduguard enable
!
interface FastEthernet0/3
switchport access vlan 10
switchport mode access
spanning-tree portfast
spanning-tree bpduguard enable
!
interface FastEthernet0/4
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,100
switchport mode trunk
duplex full
speed 100
channel-group 1 mode on
!
interface FastEthernet0/5
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/6
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,100
switchport mode trunk
duplex full
speed 100
channel-group 1 mode on
!
interface FastEthernet0/7
!
interface FastEthernet0/8

Top Copy Paste
```

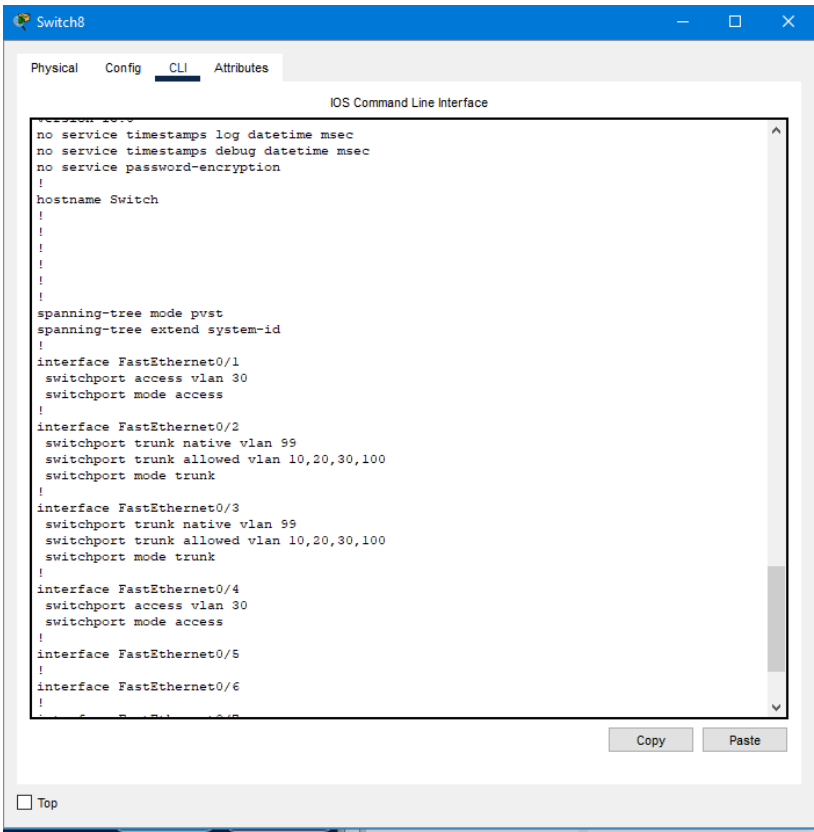
## Switch5



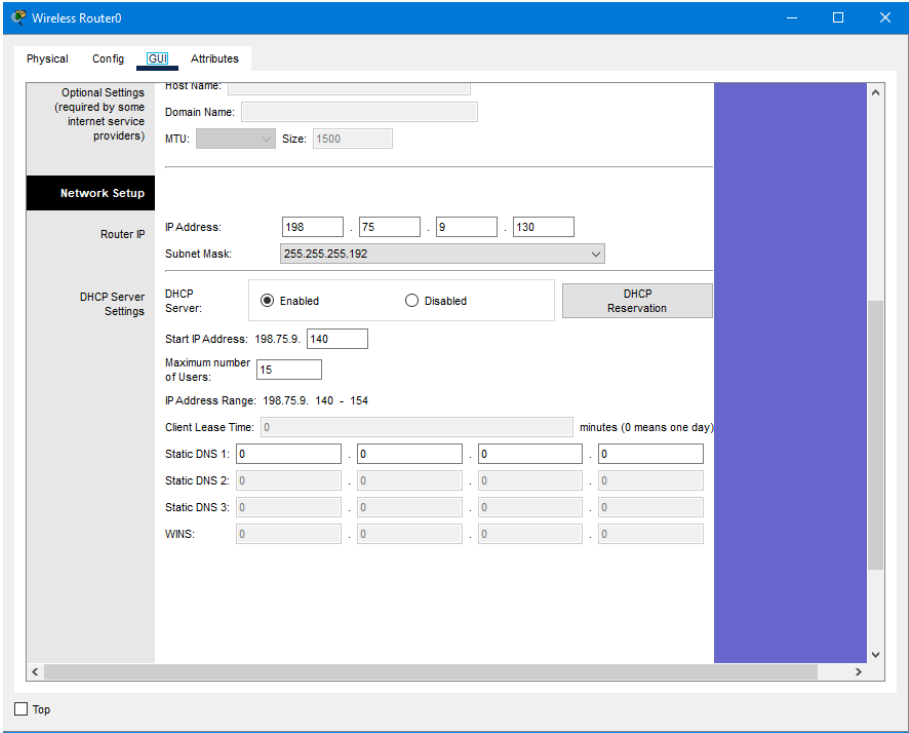
## Switch6

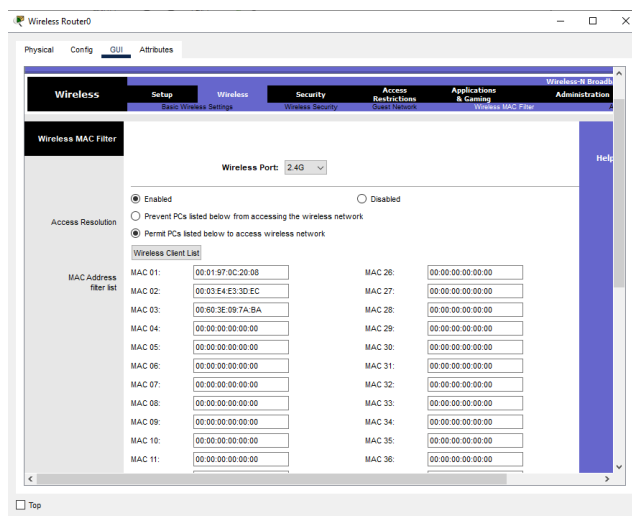
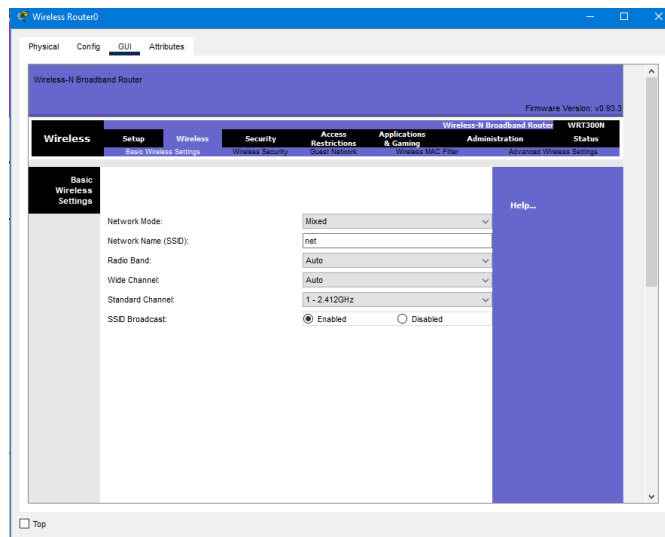


# Switch8

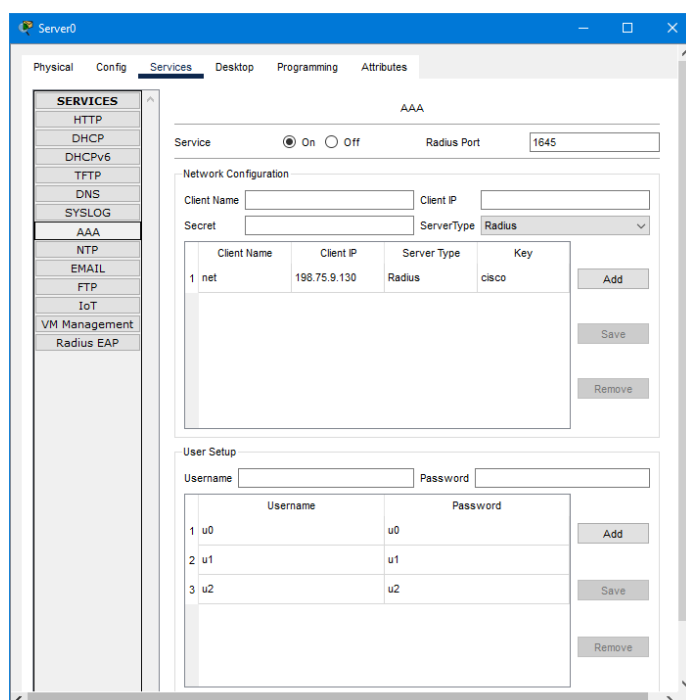


# Wireless router0





## Server0



# Laptop0

Laptop0

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

DHCP

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

IPv6 Configuration

Automatic

Static

IPv6 Address

/

Link Local Address

FE80::2D0:97FF:FE1E:3C25

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

Username

Password

Top

# Laptop1

Laptop1

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

DHCP

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

IPv6 Configuration

Automatic

Static

IPv6 Address

/

Link Local Address

FE80::20B:BEFF:FE91:1512

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

Username

Password

Top



PC0

PC0

Physical

Config

Desktop

Programming

Attributes

IP Configuration

InterfaceFastEthernet0

IP Configuration

DHCP

Static

IPv4 Address77.96.0.2

Subnet Mask255.240.0.0

Default Gateway77.96.0.1

DNS Server0.0.0.0

IPv6 Configuration

Automatic

Static

IPv6 Address

Link Local AddressFE80::230:F2FF:FEDB:6CCC

Default Gateway

DNS Server

802.1X

Use 802.1X Security

AuthenticationMD5

Username

Password

Top

PC1

PC1

Physical

Config

Desktop

Programming

Attributes

IP Configuration

InterfaceFastEthernet0

IP Configuration

DHCP

Static

IPv4 Address153.121.176.4

Subnet Mask255.255.248.0

Default Gateway153.121.176.1

DNS Server0.0.0.0

IPv6 Configuration

Automatic

Static

IPv6 Address

Link Local AddressFE80::202:17FF:FED7:846E

Default Gateway

DNS Server

802.1X

Use 802.1X Security

AuthenticationMD5

Username

Password

Top

9

PC2

PC2

Physical

Config

Desktop

Programming

Attributes

P Configuration

X

Interface

FastEthernet0

IP Configuration

DHCP

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

IPv6 Configuration

Automatic

Static

IPv6 Address /

Link Local Address

FE80::201:97FF:FE48:AA15

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

Username

Password

Top

PC3

PC3

Physical

Config

Desktop

Programming

Attributes

P Configuration

X

Interface

FastEthernet0

IP Configuration

DHCP

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

IPv6 Configuration

Automatic

Static

IPv6 Address /

Link Local Address

FE80::260:5CFF:FEE1:757B

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

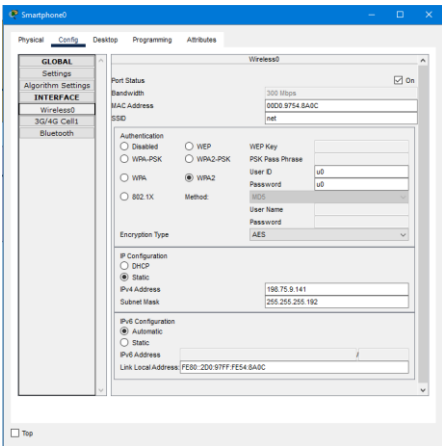
MD5

Username

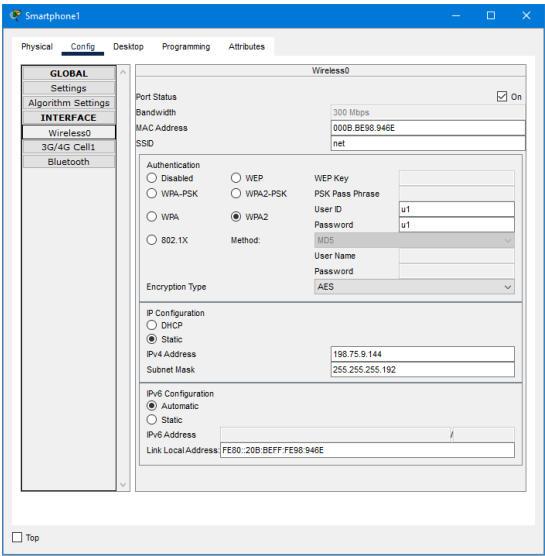
Password

Top

Smartphone0



Smartphone1



Smartphone2

