

project proposal

D&F Dental clinic

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Problem Statement:

One of the main problems that occurs are VLAN issues happen when a VLAN is not configured to the correct port, which supports its services and The second problem is Low quality wires and low security lead to poor network performance. Therefore, a network will be configured in the correct port through VLAN technology, in addition to creating a high-security network, and use high-quality wires that facilitate the transmission of data from one local network to another.

Project goals :

The goal of this project is to design a local network for a hospital to address the VLAN problem, which occurs when a local network is not formed in the correct port ,In addition to the design of a high-security network, which ensures the safety of data transmission, and low-quality wires will be replaced with a cheaper and more efficient alternative.

- Requirements :

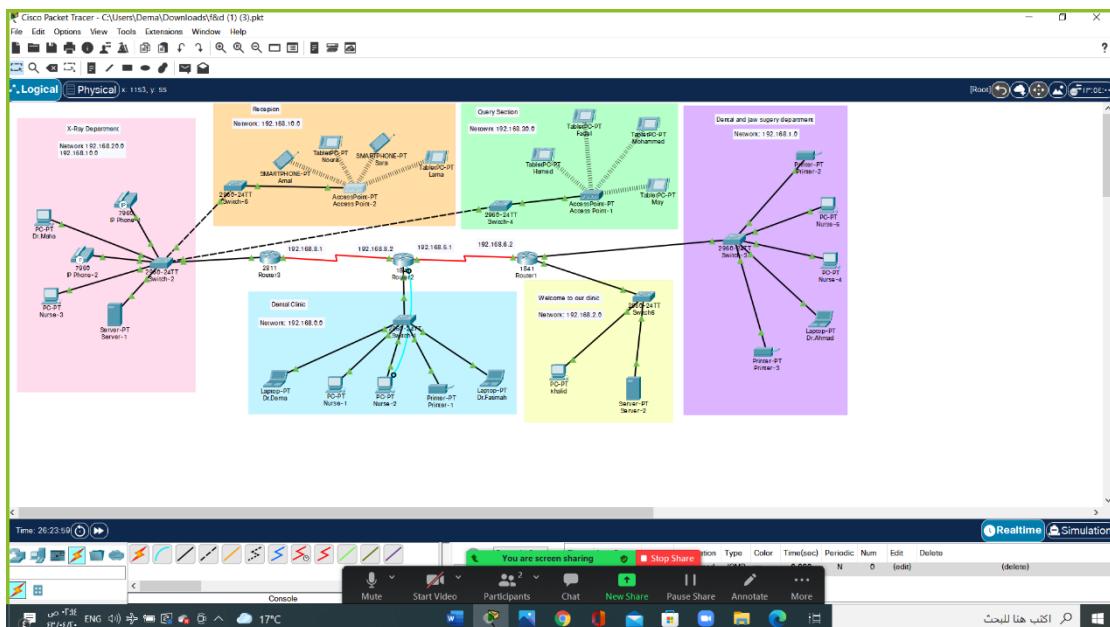
- 7 PC
- 3 laptop
- 3 printer IP
- 6 switch
- 3 router
- 2 access point
- 2 server
- 2 IP phone
- Cable: serial DCE, straight ,cross-over,console
- 6tablel pc and 2 smartphone

Addressing Table:

Device	Interface	IP Address	Subnet Mask	Default Gateway
IP Phone-1 (Line Number:123450)	Fast Ethernet	192.168.10.11	255.255.255.0	192.168.10.1
IP Phone-2 (Line Number:543210)	Fast Ethernet	192.168.10.12	255.255.255.0	192.168.10.1
PC (Dr.Maha)	NIC	192.168.20.15	255.255.255.0	192.168.20.1
PC (Nurse-3)	NIC	192.168.20.107	255.255.255.0	192.168.20.1
PC (Nurse-1)	NIC	192.168.0.3	255.255.255.0	192.168.0.1
PC (Nurse-2)	NIC	192.168.0.9	255.255.255.0	192.168.0.1
PC (khalid)	NIC	192.168.2.2	255.255.255.0	192.168.2.1
PC (Nurse-4)	NIC	192.168.1.4	255.255.255.0	192.168.1.1
PC (Nurse-5)	NIC	192.168.1.8	255.255.255.0	192.168.1.1
Laptop (Dr.Dema)	NIC	192.168.0.2	255.255.255.0	192.168.0.1
Laptop (Dr.Fatimah)	NIC	192.168.0.5	255.255.255.0	192.168.0.1
Laptop (Dr.Ahmad)	NIC	192.168.1.2	255.255.255.0	192.168.1.1
Tablet PC (Nora)	Wireless	192.168.10.7	255.255.255.0	192.168.10.1
Tablet PC (Lama)	Wireless	192.168.10.10	255.255.255.0	192.168.10.1
Tablet PC (Hamed)	Wireless	192.168.0.100	255.255.255.0	192.168.30.1
Tablet PC (Fadel)	Wireless	192.168.30.104	255.255.255.0	192.168.30.1
Tablet PC (Mohammed)	Wireless	192.168.30.103	255.255.255.0	192.168.30.1
Tablet PC (May)	Wireless	192.168.30.101	255.255.255.0	192.168.30.1
Switch-1 (Password:Hospital)	VLAN1	N/A	N/A	N/A
Switch-2(Password:Hospital)	VLAN20	N/A	N/A	N/A
Switch-3(Password:Hospital)	VLAN1	N/A	N/A	N/A
Switch-4(Password:Hospital) Console password:cisco	VLAN30	N/A	N/A	N/A
Switch-5(Password:Hospital)	VLAN2	N/A	N/A	N/A
Switch-6(Password:Hospital)	VLAN10	N/A	N/A	N/A
Printer-1	Fa0	192.168.0.10	255.255.255.0	192.168.0.1
Printer-2	Fa0	192.168.1.9	255.255.255.0	192.168.1.1
Printer-3	Fa0	192.168.1.10	255.255.255.0	192.168.1.1
Server-1	Fa0	192.168.20.12	255.255.255.0	192.168.20.1
Server-2	Fa0	192.168.2.3	255.255.255.0	192.168.2.1
Router1	Ser0/0/0	192.168.6.2	255.255.255.0	N/A
	Fa0/1.2	192.168.2.1	255.255.255.0	N/A
	Fa0/0.1	192.168.1.1	255.255.255.0	N/A
Router2	Ser0/0/0	192.168.8.2	255.255.255.0	N/A
	Ser0/0/1	192.168.6.1	255.255.255.0	N/A
	Fa0/0	192.168.0.1	255.255.255.0	N/A
Router3	Fa0/0.10	192.168.10.1	255.255.255.0	N/A
	Ser0/2/0	192.168.8.1	255.255.255.0	N/A
	Fa0/0.20	192.168.20.1	255.255.255.0	N/A
	Fa0/0.30	192.168.30.1	255.255.255.0	N/A
	F0/1	192.168.4.1	255.255.255.0	N/A
Smartphone(Amal)	Wireless	192.168.10.102	255.255.255.0	192.168.10.1
Smartphone(Sara)	Wireless	192.168.10.106	255.255.255.0	192.168.10.1

Topology:

The shape of the topology in our project is star topology.



Configuring details:

configuring Router:

Router3:

Router

Physical Config CLI Attributes

IOS Command Line Interface

```
--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? (yes/no): n
Press RETURN to get started!
Router>enable
Router#conf t
* Invalid input detected at '^' marker.

Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int f0/0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#%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-if)#int ser0/2/0
Router(config-if)#ip address 191.168.0.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#%LINK-5-CHANGED: Interface Serial0/2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/2/0, changed state to up
Router(config-if)#exit
Router(config)#ip dhcp excluded-address 192.168.10.1 192.168.10.9
* Invalid input detected at '^' marker.

Router(config)#ip dhcp excluded-address 192.168.10.1 192.168.10.9
Router(config)#ip dhcp pool VOICE
Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.10.1
Router(dhcp-config)#option 150 ip 192.168.10.1
Router(dhcp-config)#exit
Router(config)#telephony-service
Router(config-telephony)#max-dn 5
Router(config-telephony)#max-phones 5
Router(config-telephony)#ip source-address 192.168.10.1 port 2000

Ctrl+F6 to exit CLI focus
```

Router9

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router(config-telephony)#
Router(config-telephony)#ip source-address 192.168.10.1 port 2000
Router(config-telephony)#+atc assign 4 to 6
Router(config-telephony)#+
% Invalid input detected at '^' marker.

Router(config-telephony)#+auto assign 4 to 6
Router(config-telephony)#+auto assign 1 to 5
Router(config-telephony)#+end
Router#
$SYS-5-CONFIG_I: Configured from console by console

Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#phone-dn 1
Router(config-phone-dn)#+LINK-3-UPDOWN: Interface ephone_dsp DN 1.1, changed state to up

Router(config-phone-dn)#+number 543210
Router(config-phone-dn)#+phone-dn 2
Router(config-phone-dn)#+LINK-3-UPDOWN: Interface ephone_dsp DN 2.1, changed state to up

Router(config-phone-dn)#+number 123450
Router(config-phone-dn)#+end
Router#
$SYS-5-CONFIG_I: Configured from console by console

Router#cop run star
Destination filename [startup-config]?
Building configuration...
[OK]
Router#enable
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip dhcp excluded-address 192.168.20.1 192.168.20.9
Router(config)#+dhcp pool DATA
Router(dhcp-config)#+network 192.168.20.0 255.255.255.0
Router(dhcp-config)#+default-router 192.168.20.1
Router(dhcp-config)#+exit
Router(config)#+int F0/0
Router(config-if)#+no ip add
Router(config-if)#+int F0/0.10
Router(config-subif)#
$LINK-5-CHANGED: Interface FastEthernet0/0.10, changed state to up

$LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.10, changed state to up

Router(config-subif)#+encapsulation dot1Q 10
Router(config-subif)#+ip add 192.168.10.1 255.255.255.0

Ctrl+F6 to exit CLI focus
```

Top

Router9

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Router#config terminal
Router(config)#+set router 192.168.20.1
Router(dhcp-config)#+exit
Router(config)#+int F0/0
Router(config-if)#+no ip add
Router(config-if)#+int F0/0.10
Router(config-subif)#
$LINK-5-CHANGED: Interface FastEthernet0/0.10, changed state to up

$LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.10, changed state to up

Router(config-subif)#+encapsulation dot1Q 10
Router(config-subif)#+ip add 192.168.10.1 255.255.255.0
Router(config-subif)#+int F0/0.20
Router(config-subif)#
$LINK-5-CHANGED: Interface FastEthernet0/0.20, changed state to up

$LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.20, changed state to up

Router(config-subif)#+encapsulation dot1Q 20
Router(config-subif)#+ip add 192.168.20.1 255.255.255.0
Router(config-subif)#+no shutdown
Router(config-subif)#+exit
Router(config)#+telephony-service
Router(config-telephony)#+create cnf-files
Creating CNF files
CNF FILES: Clock is not set or synchronized, retaining old versionStamp
Router(config-telephony)#+exit
Router(config)#+end
Router#
$SYS-5-CONFIG_I: Configured from console by console

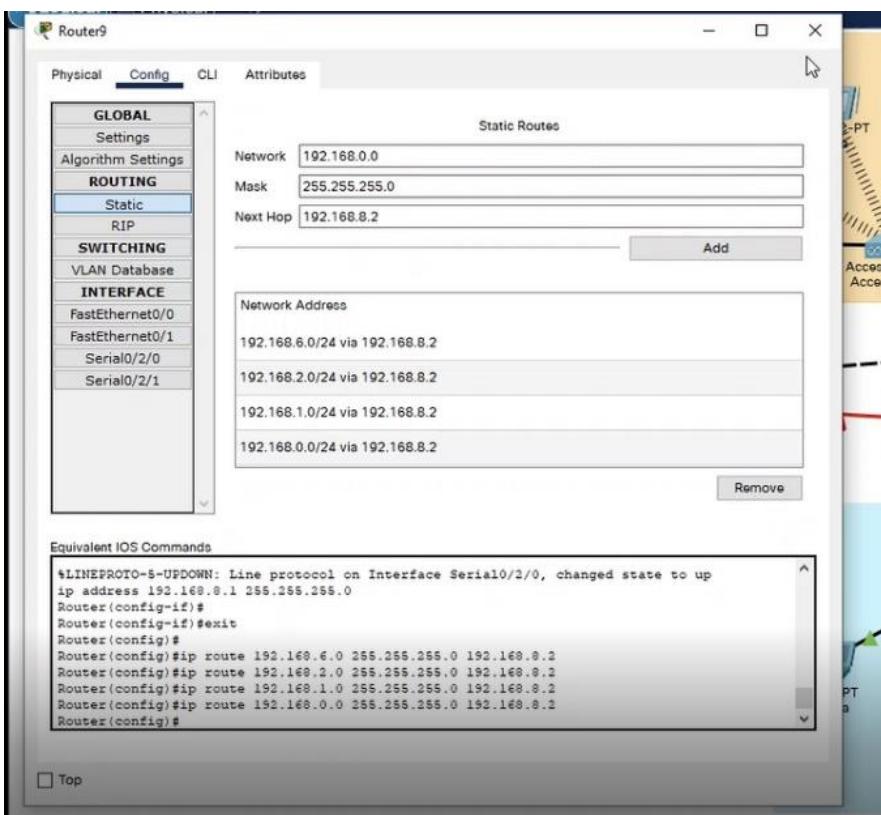
Router#
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#+ntp server 2
A.B.C.D IP address of peer
Router(config)#+ntp server 192.168.10.2
Router(config)#+exit
Router#
$SYS-5-CONFIG_I: Configured from console by console

Router#show clock
*0:31:53.771 UTC Mon Mar 1 1993
Router#cop run star
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

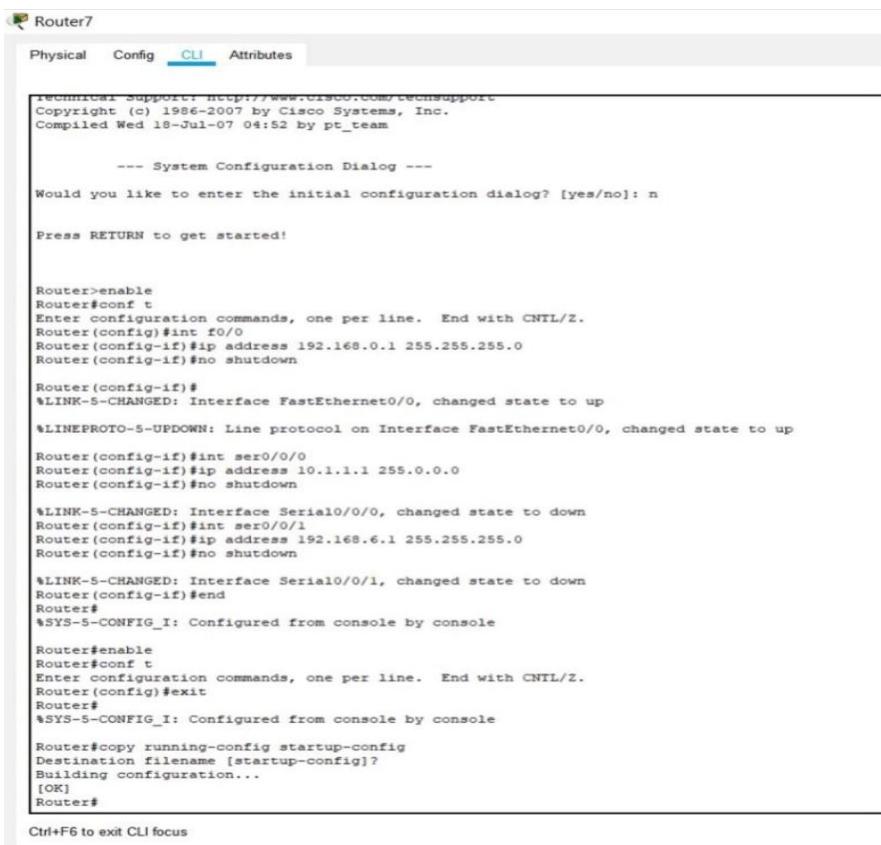
Ctrl+F6 to exit CLI focus

Top

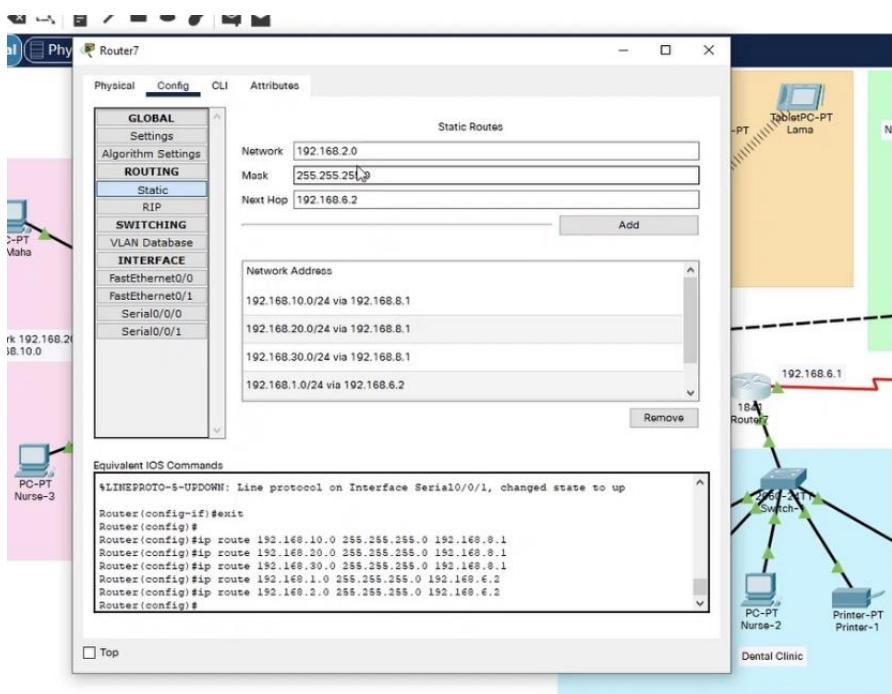
IP route Router3:



Router 2:



IP route in router2:



Router 1:

The screenshot shows the Cisco Network Simulator interface for Router1. The main window has tabs 'Physical', 'Config' (selected), 'CLI', and 'Attributes'. The 'CLI' tab displays the following configuration and startup information:

```

PROCESSOR board ID FA0947E9
M960 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version 12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: n

Press RETURN to get started!

Router>enable
Router>conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router>int f0/0
Router>ip address 192.168.1.1 255.255.255.0
Router>no shutdown

Router>int ser0/0/0
Router>ip address 10.1.1.2 255.0.0.0
Router>no shutdown

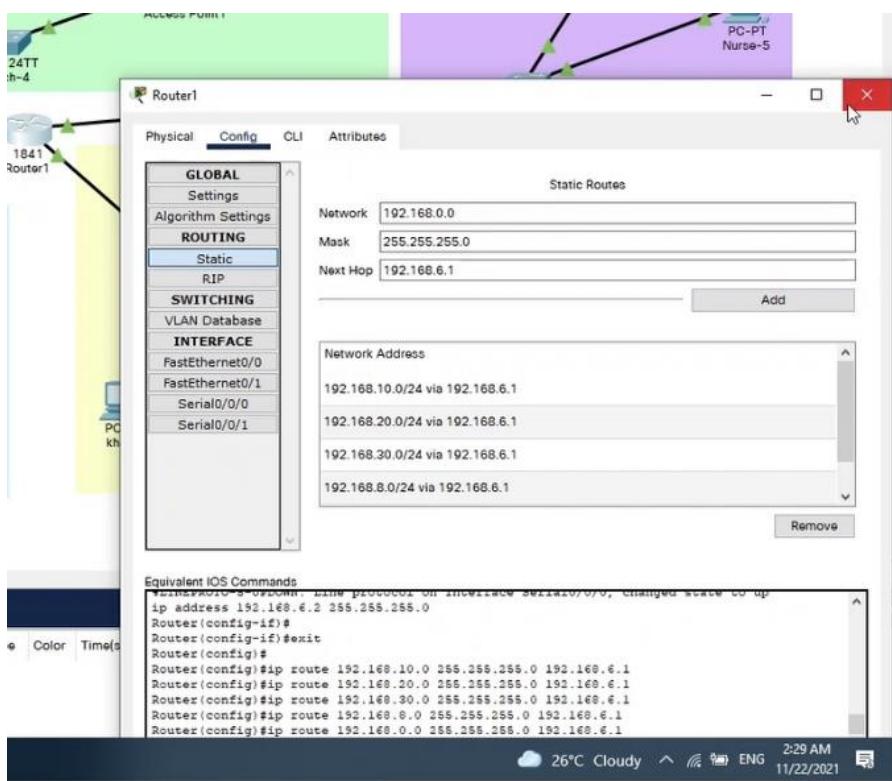
Router>int Serial0/0/0
Router>ip address 192.168.1.2 255.255.255.0
Router>no shutdown

Router>copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router>

```

A status bar at the bottom says 'Ctrl+F6 to exit CLI focus' and 'Top'.

IP router in router 1:



Switch2:

The screenshot shows the configuration interface for Switch2. The left pane displays a network diagram with nodes: SWA, SWB, and SWC. The right pane shows the 'CLI' tab of the configuration window. The terminal window displays the IOS Command Line Interface (CLI) session. The user is configuring VLANs on the switch. Errors related to 'Native VLAN mismatch' are visible, particularly on interface FastEthernet0/4. The session ends with a warning about invalid input detected at '^' marker. The status bar at the bottom indicates it's 2:29 AM on 11/22/2021, with a temperature of 26°C and cloudy weather.

```
Switch>enable
Switch>conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SWA
SWA(config)#
SWA(config)#int range F0/1-15
SWA(config-if-range)#switchport mode access
SWA(config-if-range)#switchport access vlan 20
SWA(config-if-range)#switchport
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).
%
SWA(config-if-range)#switchport voice vlan 10
SWA(config-if-range)#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).
x
SWA(config)#
SWA#exit
SWA#
%SYS-5-CONFIG_I: Configured from console by console

SWA#con
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEthernet0/1 (1).
i
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
SWA(config)int F0/1
SWA(config-if)#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).
z

SWA(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
SWA(config-if)#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEthernet0/1 (1).

^
% Invalid input detected at '^' marker.

SWA(config-if)#
SWA(config-if)#
SWA(config-if)#
SWA#exit
SWA#
%SYS-5-CONFIG_I: Configured from console by console

Ctrl+F6 to exit CLI focus
```

Physical Config **CLI** Attributes

IOS Command Line Interface

```
#  
SWA(config-if)#  
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down  
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up  
SWA(config-if)#switchport mode ccc  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEthernet0/1 (1).  
        ^  
        % Invalid input detected at '' marker.  
SWA(config-if)#switchport mode trunk  
SWA(config-if)#end  
SWA#  
%SYS-5-CONFIG_I: Configured from console by console  
  
SWA#conf  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).  
Configuring from terminal, memory, or network [terminal]?  
Enter configuration commands, one per line. End with CNTL/Z.  
SWA(config)#int f0/5  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEthernet0/1 (1).  
SWA(config-if)#switchport access vlan 10  
SWA(config-if)#end  
SWA#  
%SYS-5-CONFIG_I: Configured from console by console  
  
SWA#cop run s  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).  
t  
Destination filename [startup-config]?  
Building configuration...  
[OK]  
SWA#cop run star  
Destination filename [startup-config]?  
Building configuration...  
[OK]  
SWA#  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEthernet0/1 (1).  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEthernet0/1 (1).  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEthernet0/1 (1).  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEthernet0/1 (1).
```

Ctrl+F6 to exit CLI focus

Switch6

Physical Config **CLI** Attributes

```
%CDE-9-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/9 (20), with switch fastet  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt  
et  
% Incomplete command.  
SWA(config)#enable secret Hospital  
SWA(config)#end  
SWA#  
%SYS-5-CONFIG_I: Configured from console by console  
  
SWA#cop run star  
Destination filename [startup-config]?  
Building configuration...  
[OK]  
SWA#  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/4 (20), with Switch FastEt  
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/6 (20), with Switch FastEt
```

Ctrl+F6 to exit CLI focus

Top

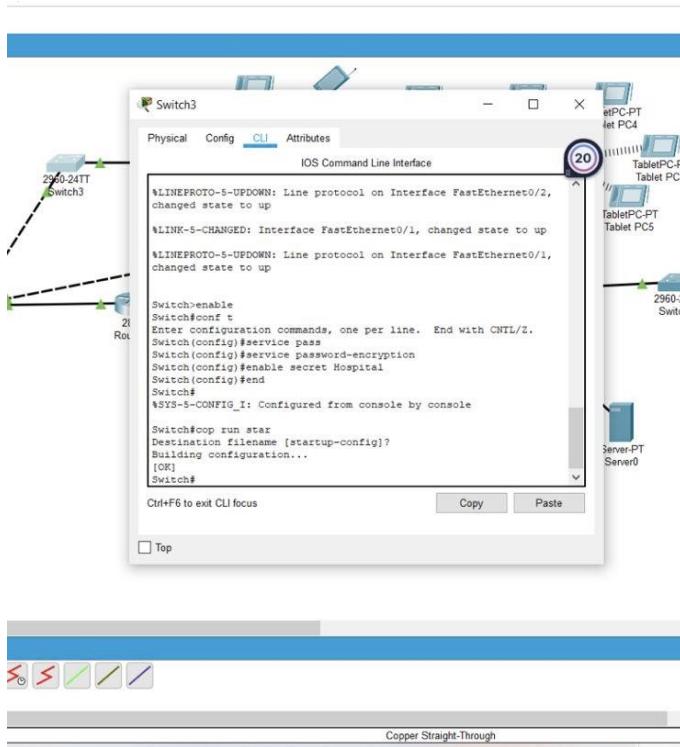
Switch1:

```
Switch0
Physical Config CLI Attributes
IOS Command Line Int

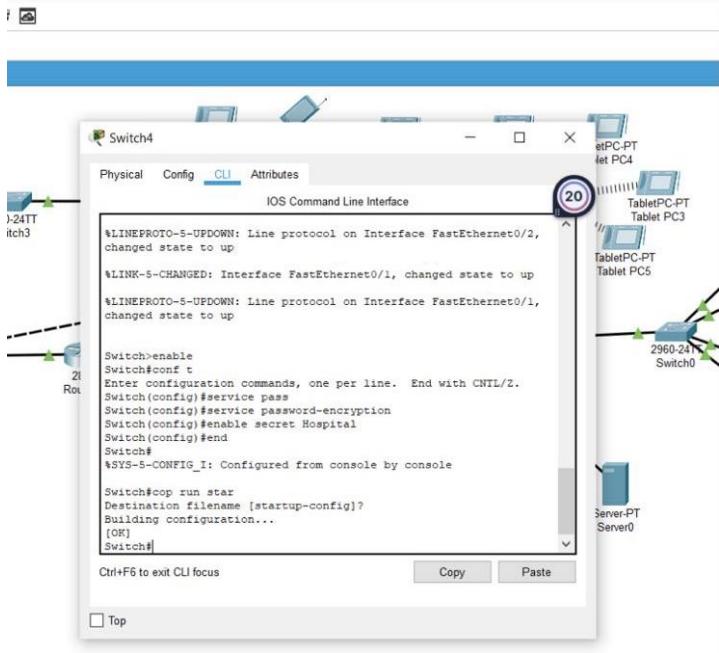
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINKPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up
%LINKPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
%LINKPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINKPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to up
%LINKPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up
%LINK-3-UPDOWN: Interface FastEthernet0/6, changed state to down
%LINKPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to down

Switch>enable
Switch>conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#service password-encryption
Switch(config)#invalid input detected at '^' marker.
Switch(config)#service password-encryption
Switch(config)#enable secret Hospital
Switch(config)#line cons 0
Switch(config-line)#password cisco
^
% Invalid input detected at '^' marker.
Switch(config-line)#password cisco
Switch(config-line)#login
Switch(config-line)#exit
Switch(config)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console
Switch#cop run star
Destination filename [startup-config]?
Building configuration...
[OK]
Switch#
Ctrl+F6 to exit CLI focus
```

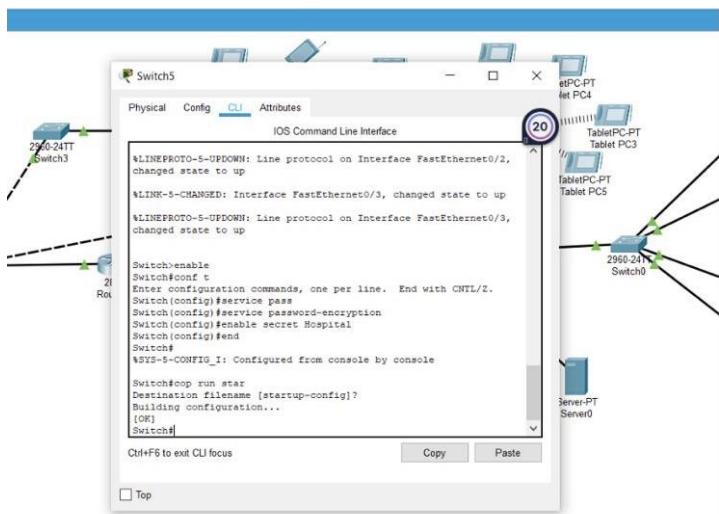
Switch3:



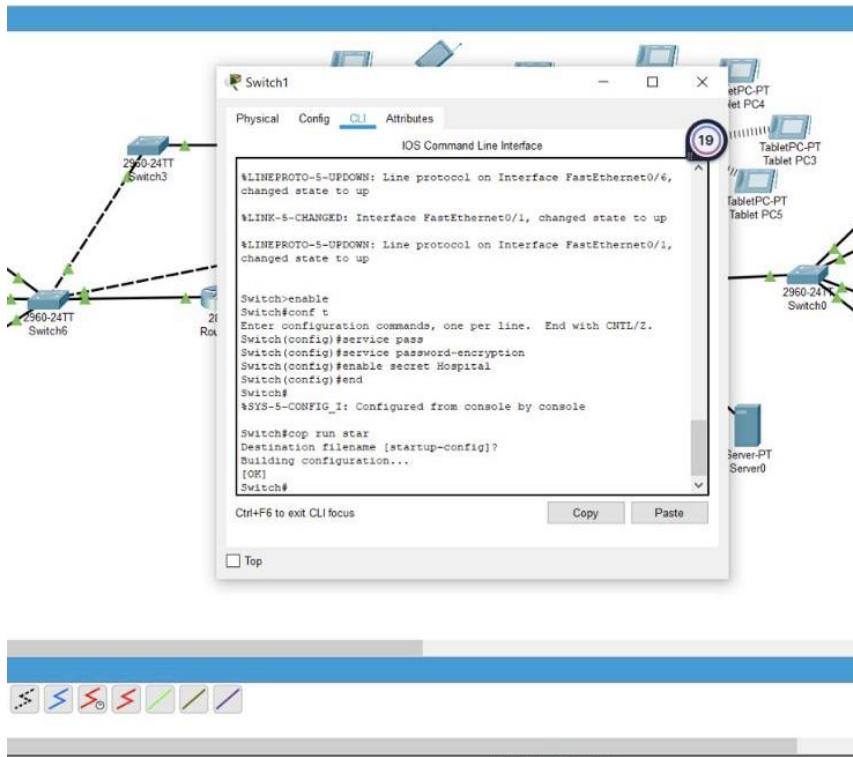
Switch 4



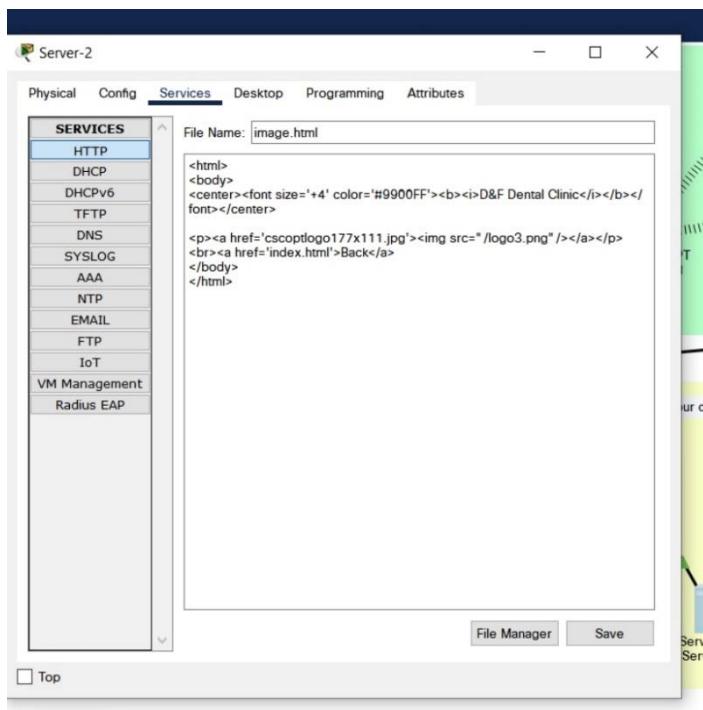
Switch 6

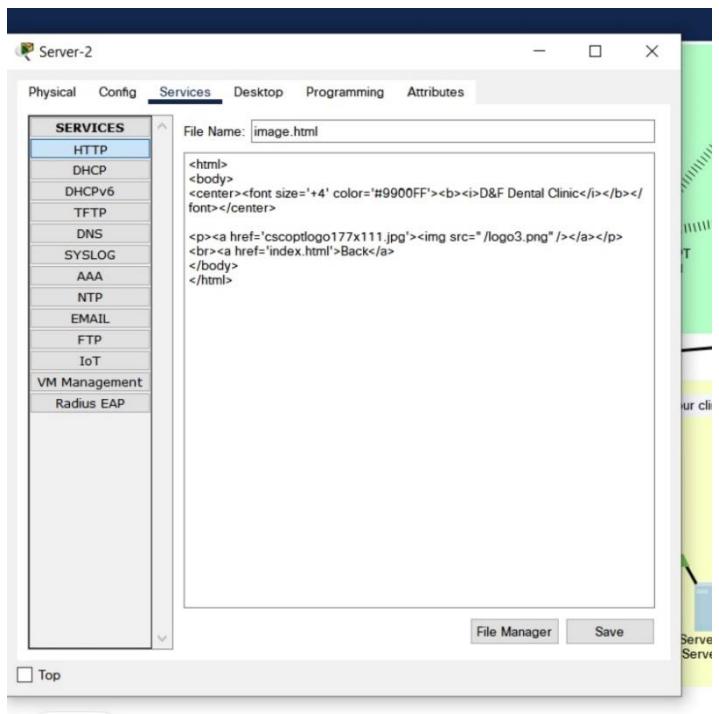


Switch 5

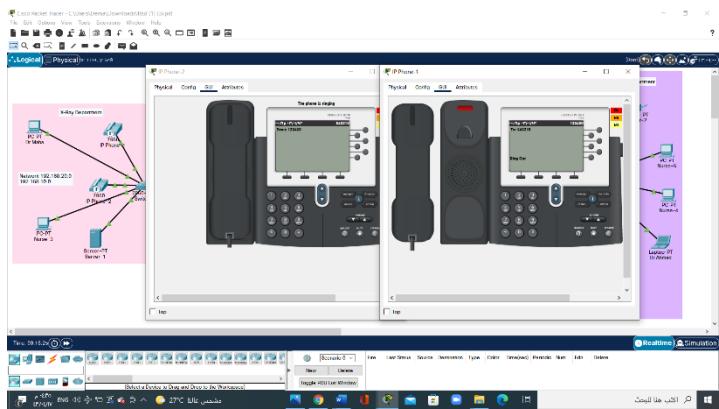


Web page:

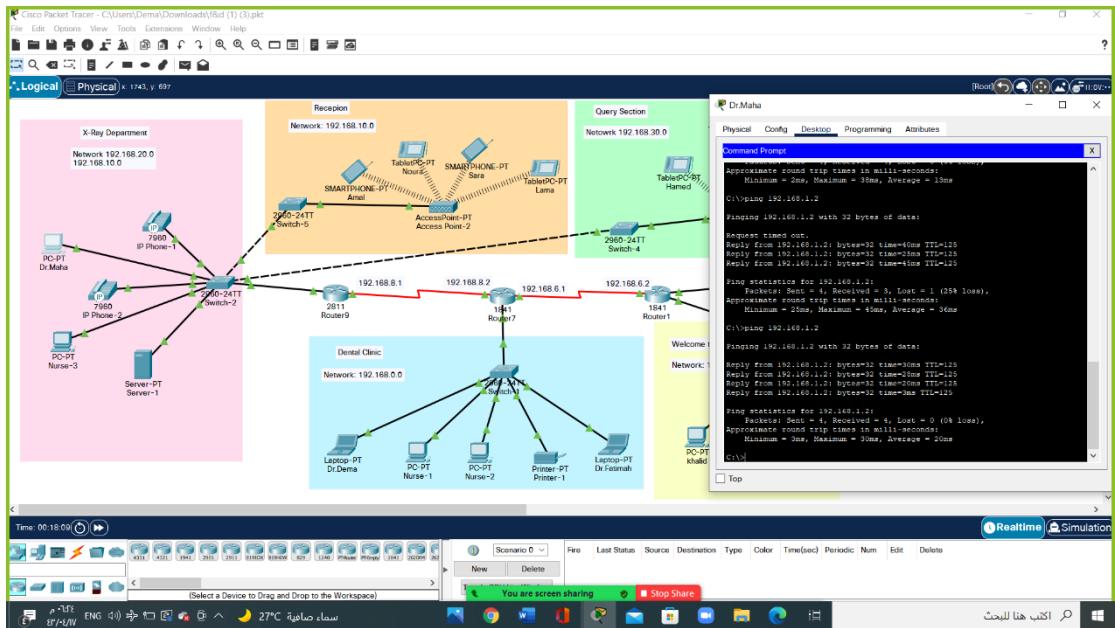




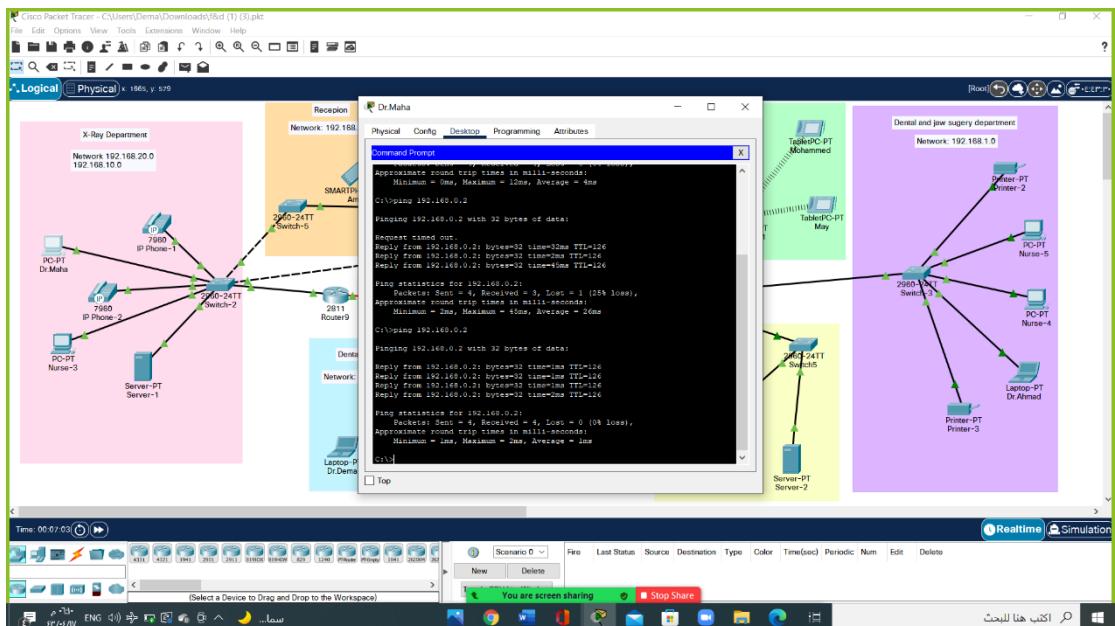
Ip phone (Dial the number 543210 to phone number 2)



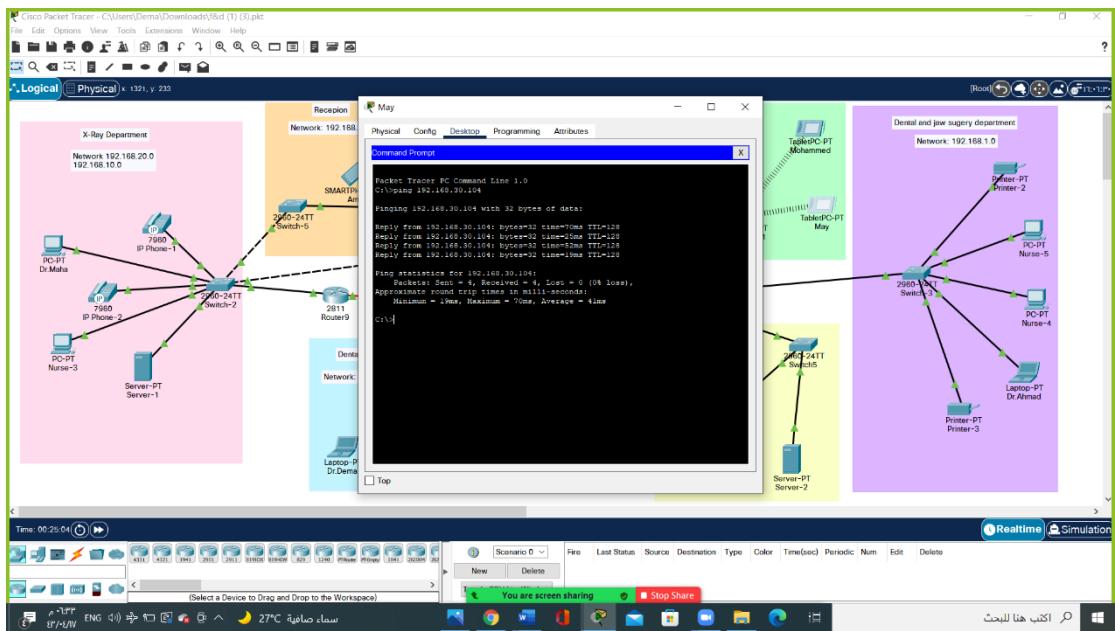
Ping :



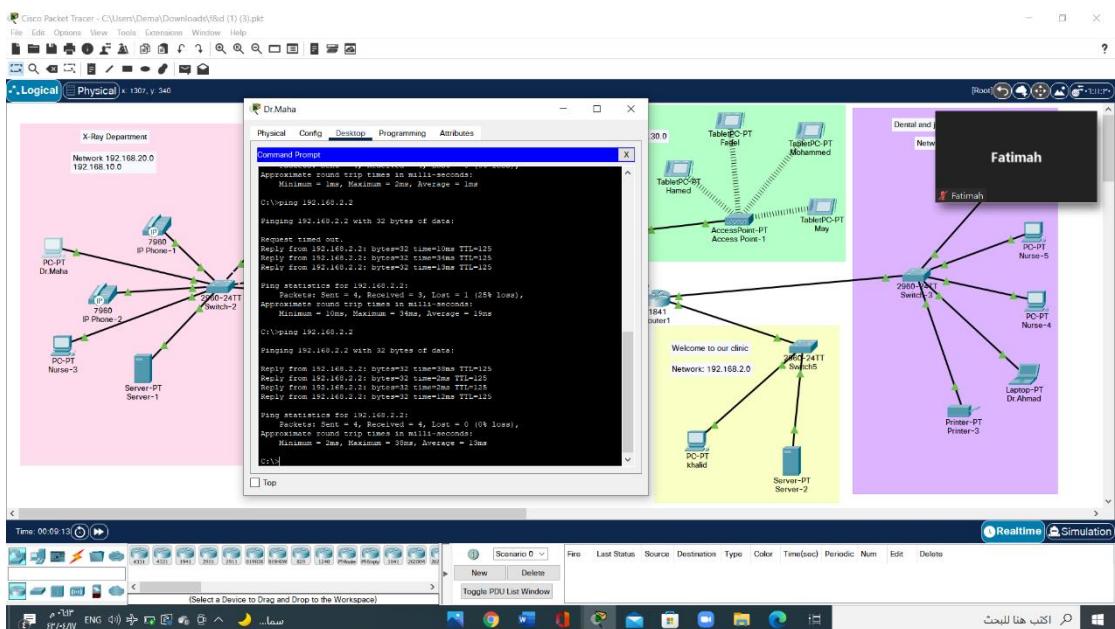
From PC-Dr.Maha to PC-Dr.Ahmad



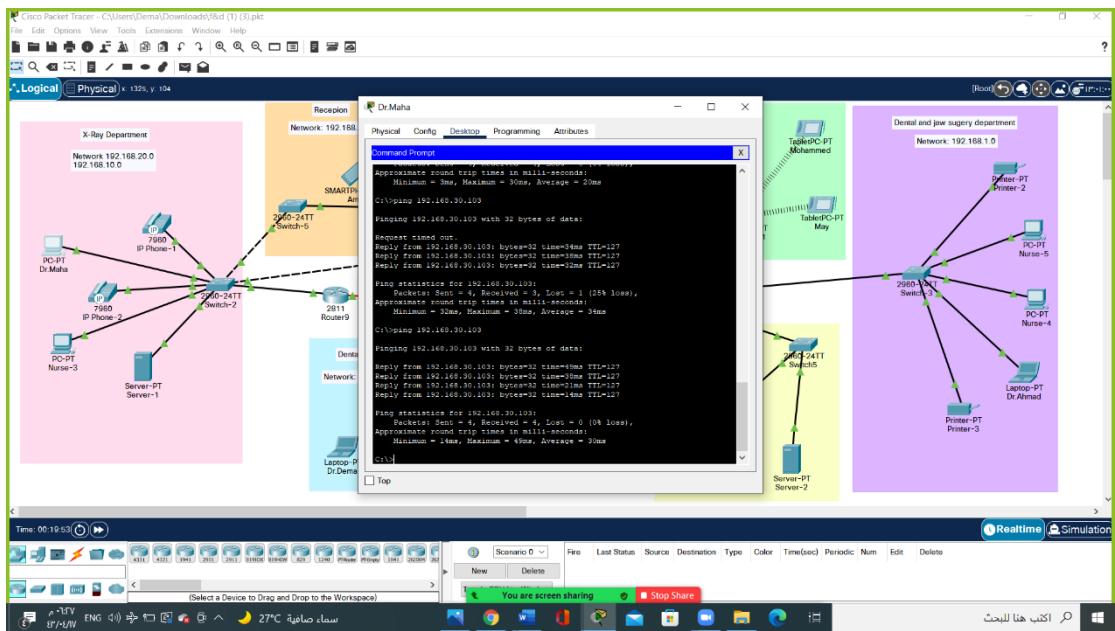
From PC-Dr.Maha to PC-Dr.Dema



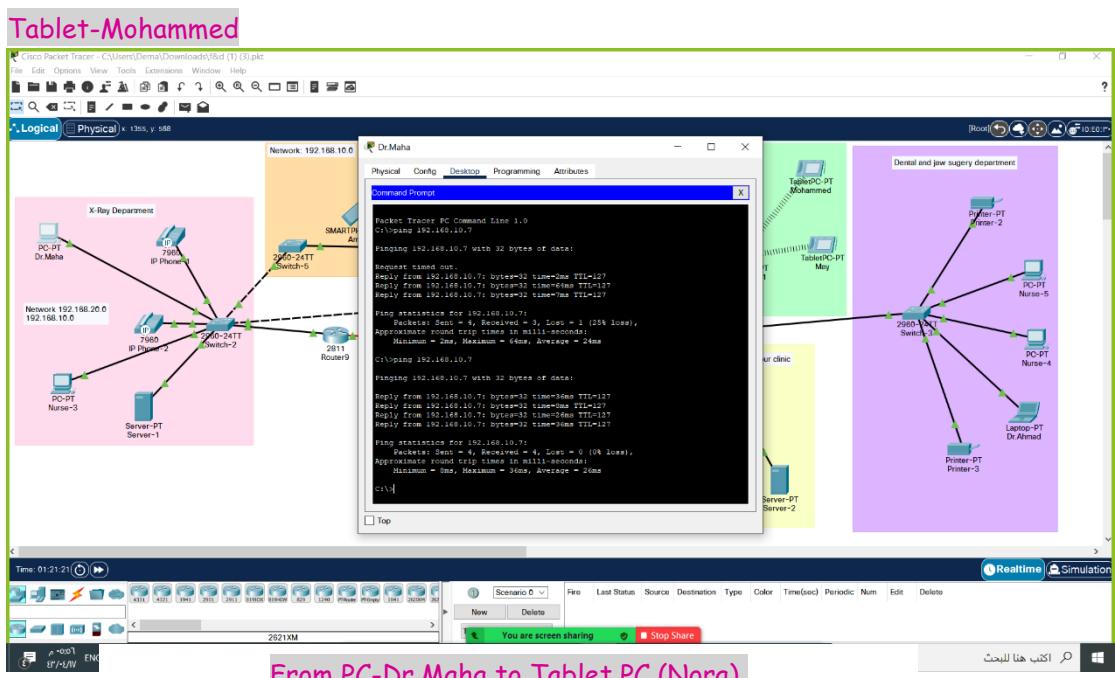
From Tablet PC (May)to Tablet PC -Fadel



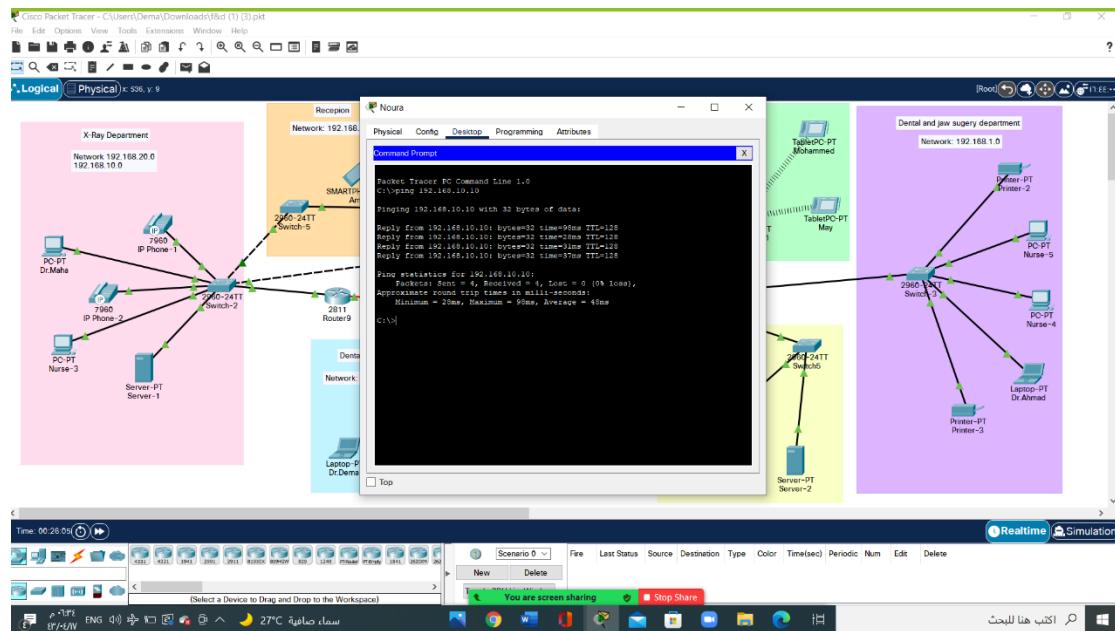
From PC-Dr.Maha to PC-Khalid



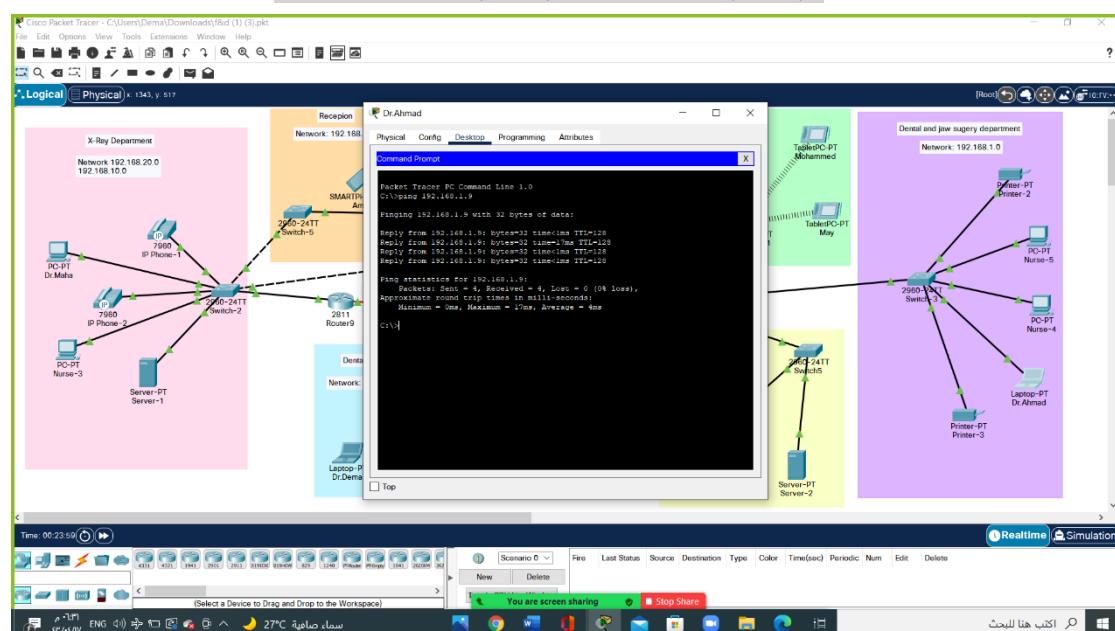
From PC-Dr.Maha to Tablet-Mohammed



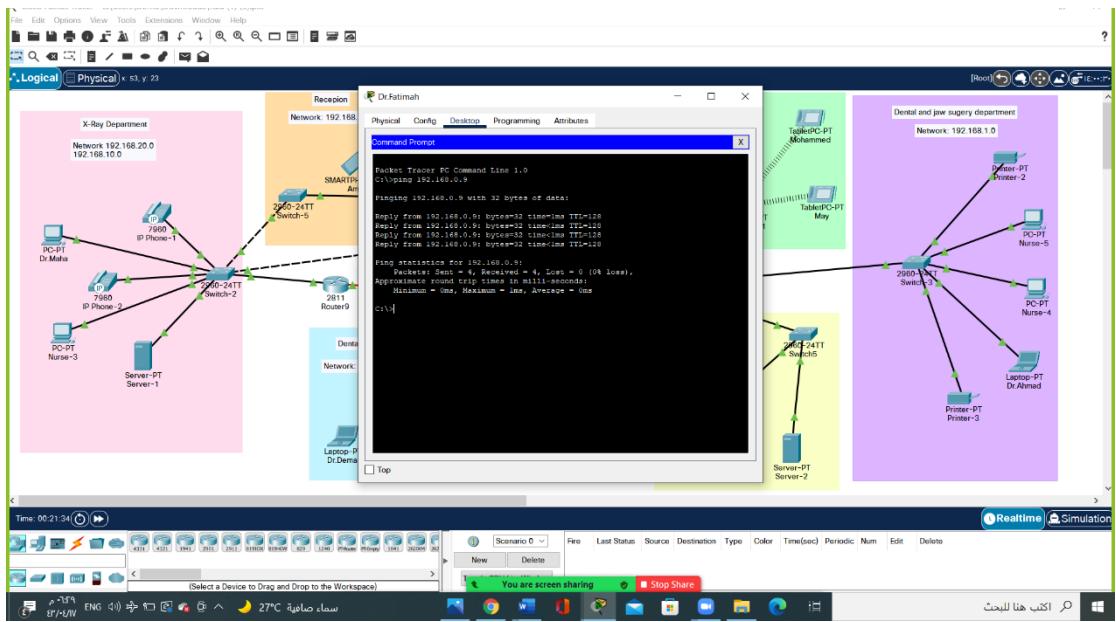
From PC-Dr.Maha to Tablet PC (Nora)



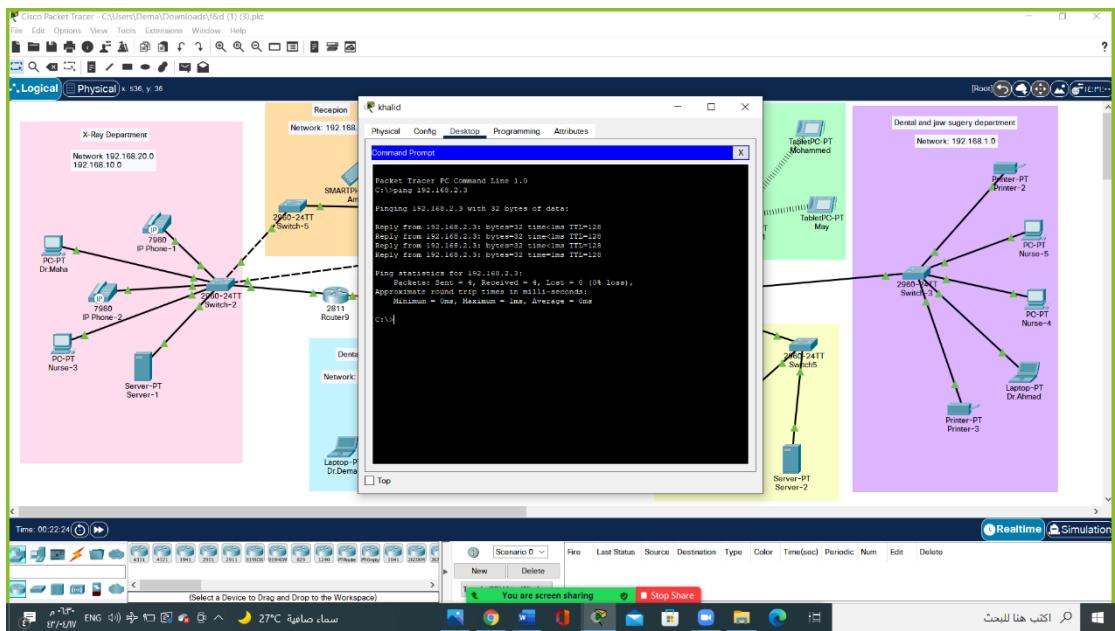
From Tablet PC (Nora) to Tablet PC (Lama)



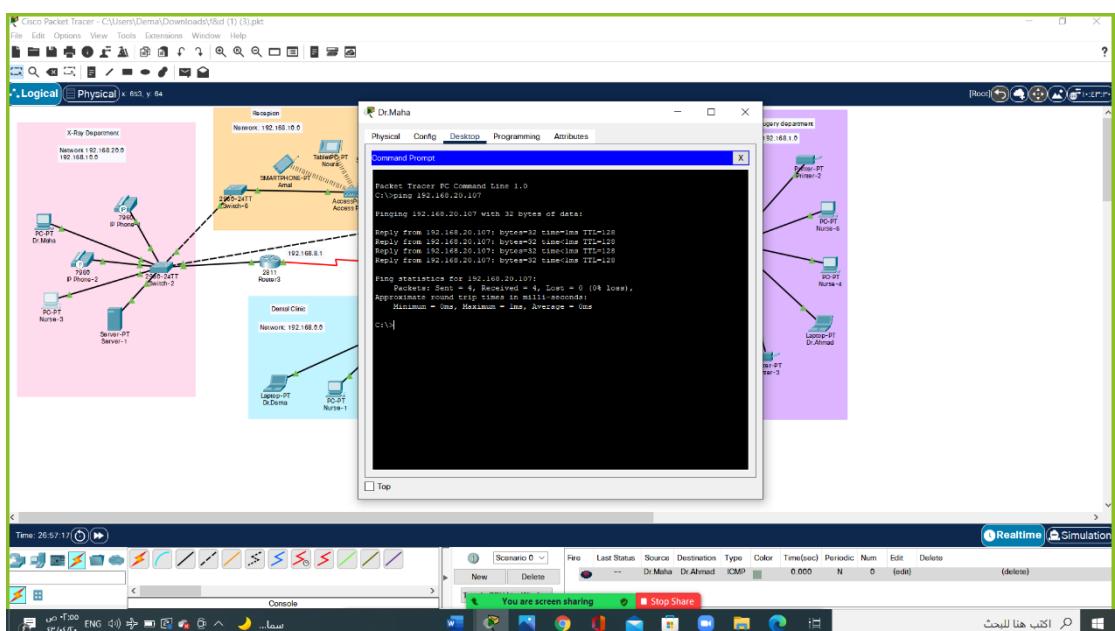
From PC-Dr.Ahmad to Printer-2



From PC-Dr.Fatimah to PC- Nurse-2



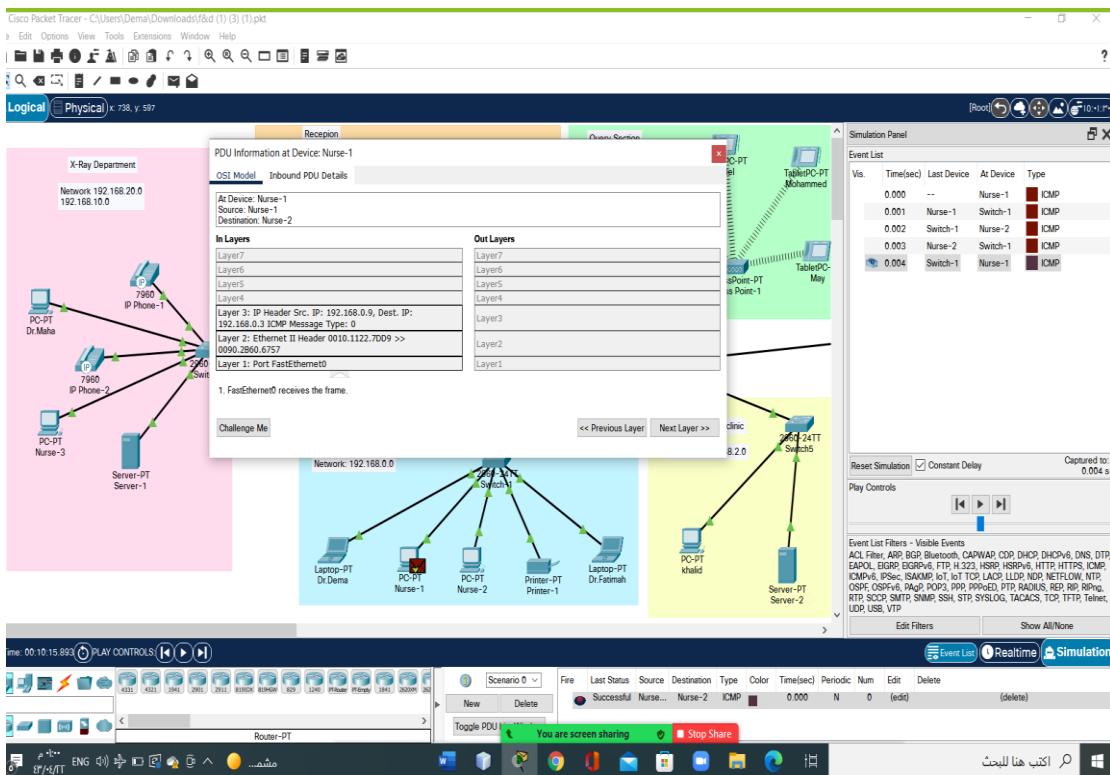
From PC-Khalid to Server-2



From PC-Dr.Maha to PC- Nurse-3

Capture:

(The protocol we analyzed is ICMP)



Source: Nurse-1

Destination: Nurse-2

IP address:

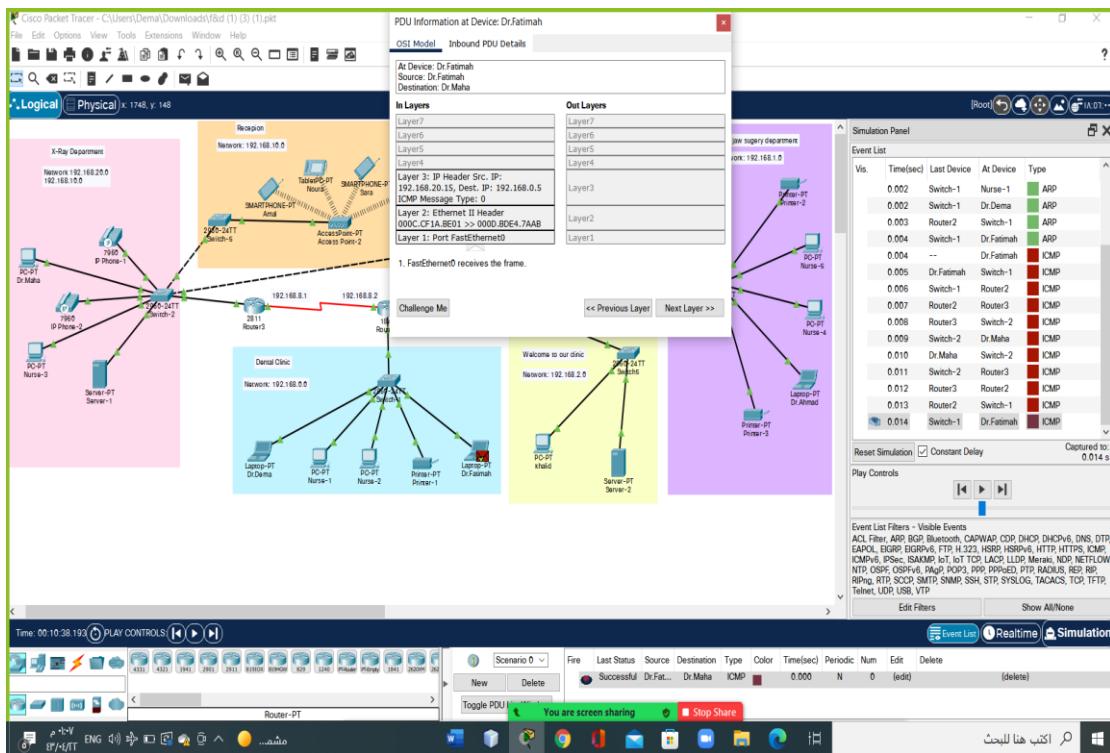
Source :192.168.0.9

Destination: 192.168.0.3

MAC address:

Source : 0010.1122.7DD0

Destination:0090.2B60.6757



Source: Dr.Fatimah

Destination: Dr.Maha

IP address:

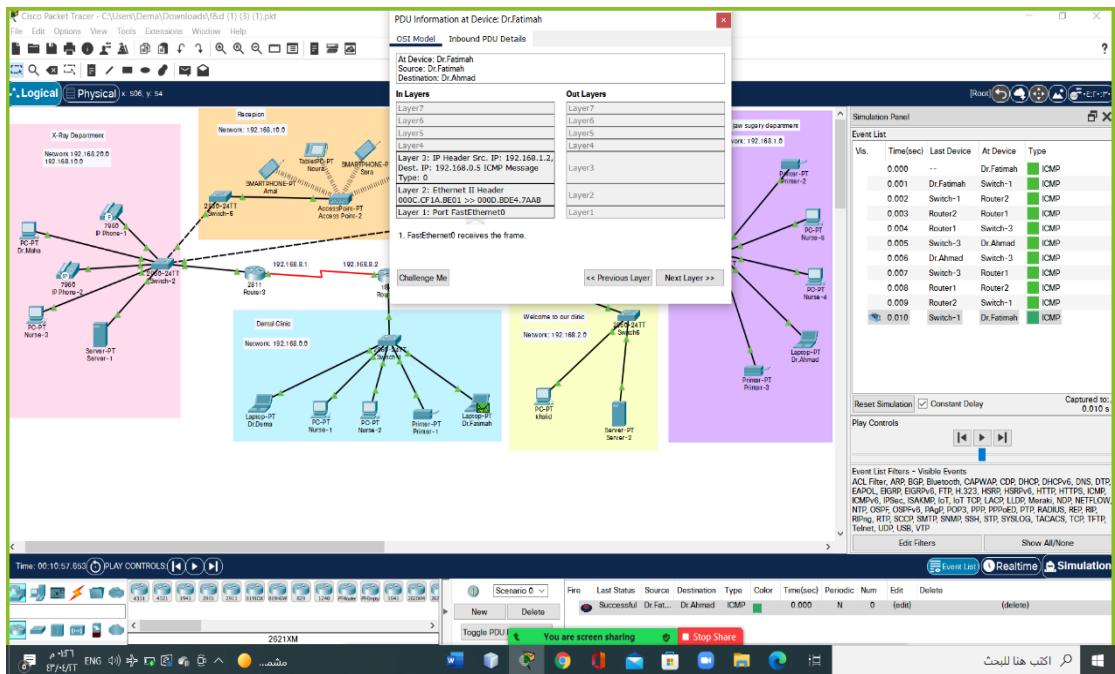
Source :192.168.20.15

Destination: 192.168.0.5

MAC address:

Source :00DC.CF1A.BE01

Destination:0000.DDC4.7AAB



Source: Dr.Fatimah

Destination: Dr.Ahmad

IP address:

Source :192.168.1.2

Destination: 192.168.0.5

MAC address:

Source :000C.CF1A.BE01

Destination: 000D.BDE4.7AAB

References :

- 1) Almalk,F.(2020). Implementation of 5G IoT Based Smart Buildings using VLAN Configuration via Cisco Packet Tracer. *International Journal of Electronics Communication and Computer Engineering*,11(4),57-67.Taif:KAS.
https://ijecce.org/administrator/components/com_jresearch/files/publications/IJECCE_4379_FINAL.pdf
- 2) Al-Hemairy,A.,& Al-Joboury,I.(2018). INTERNET OF THINGS ARCHITECTURE BASED CLOUD FOR HEALTHCARE. *Iraqi Journal of Information and Communications Technology*,1(1),18-26.Baghdad:Iraqi. <https://ijict.edu.iq/index.php/ijict/article/do%20wnload/7/4/>