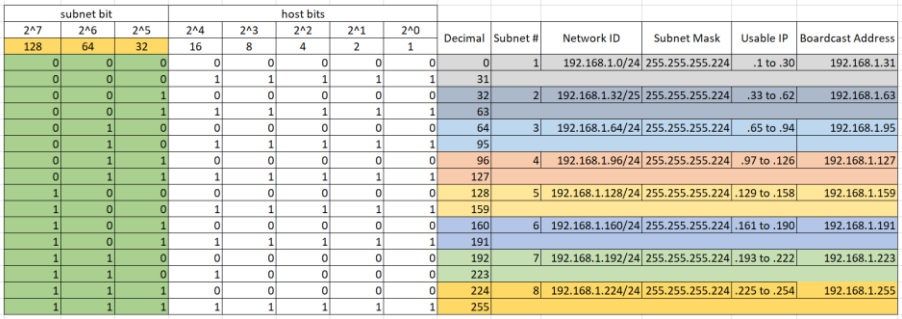
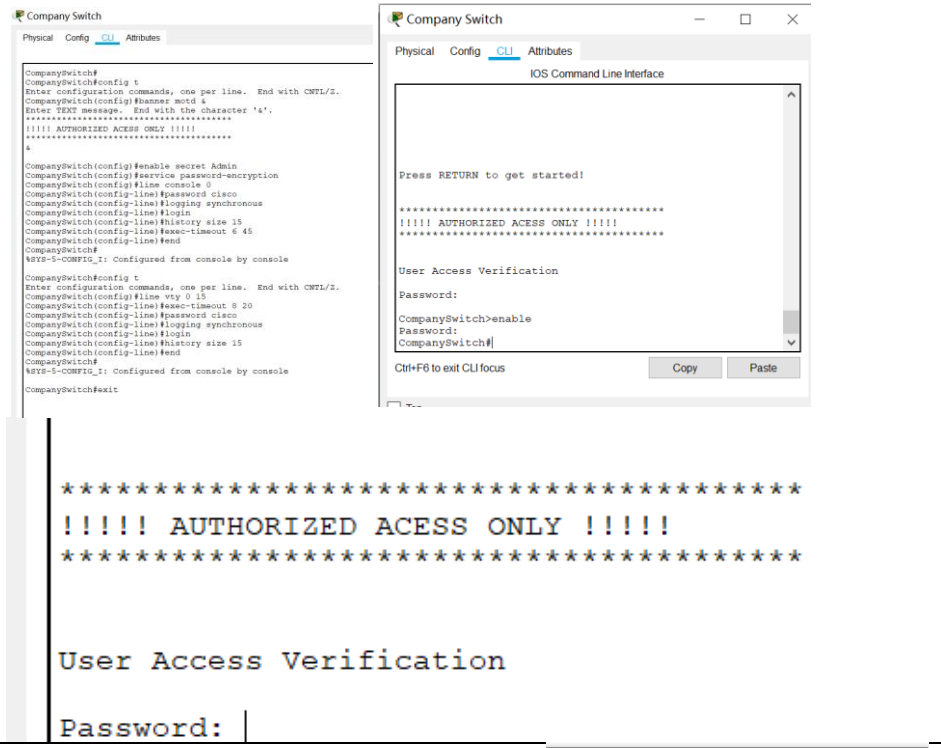
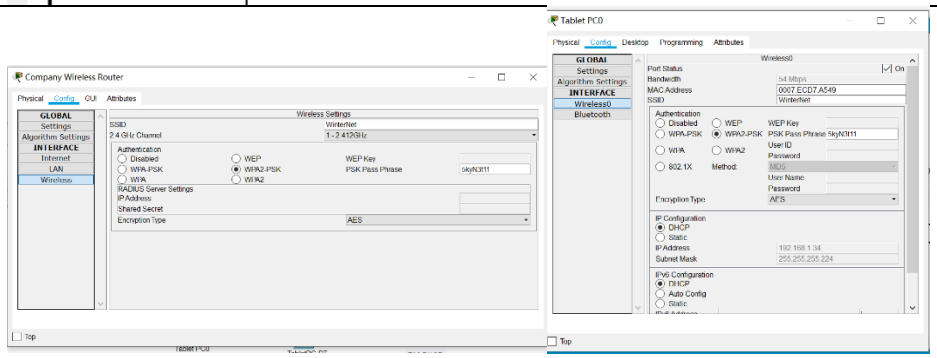
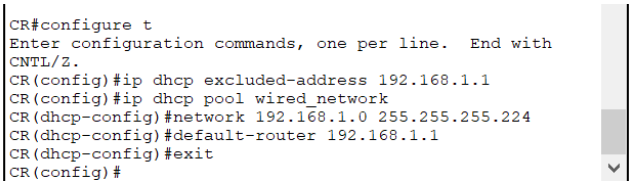
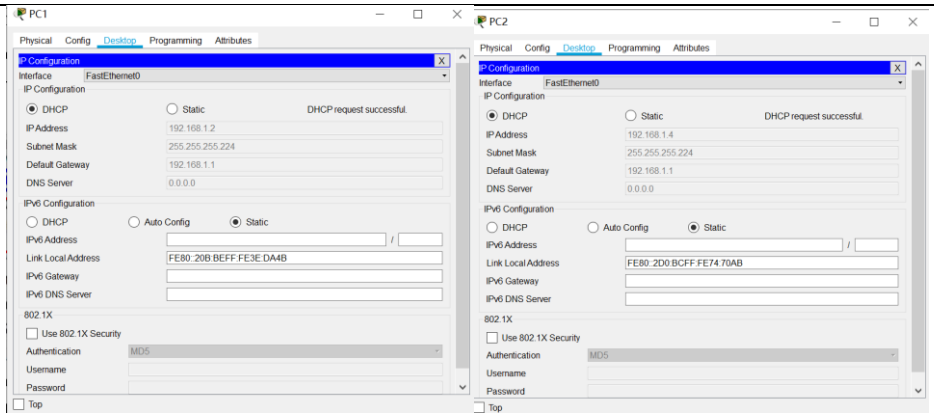
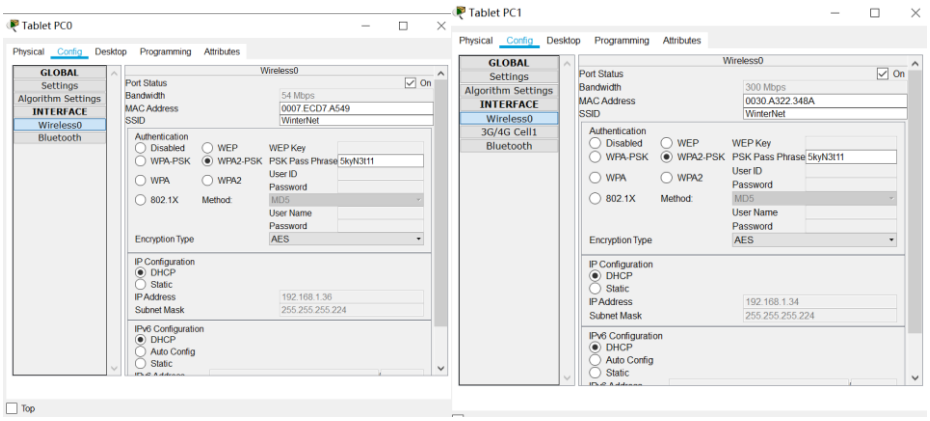
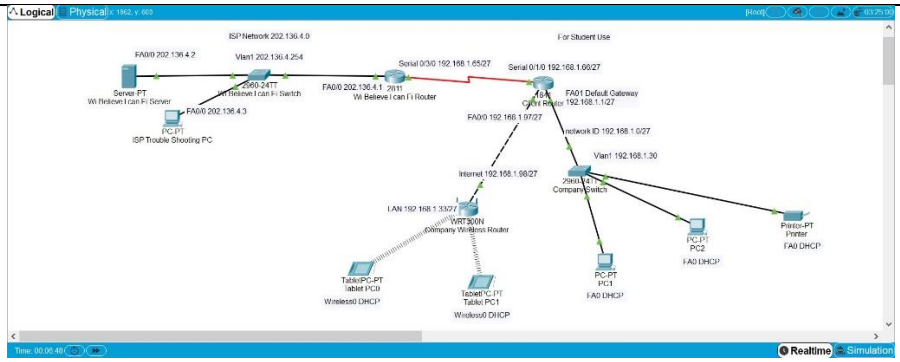
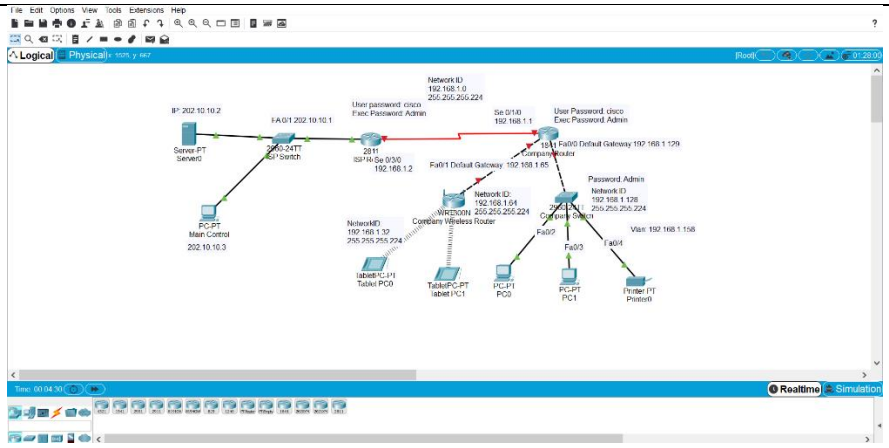
DAILY LOG

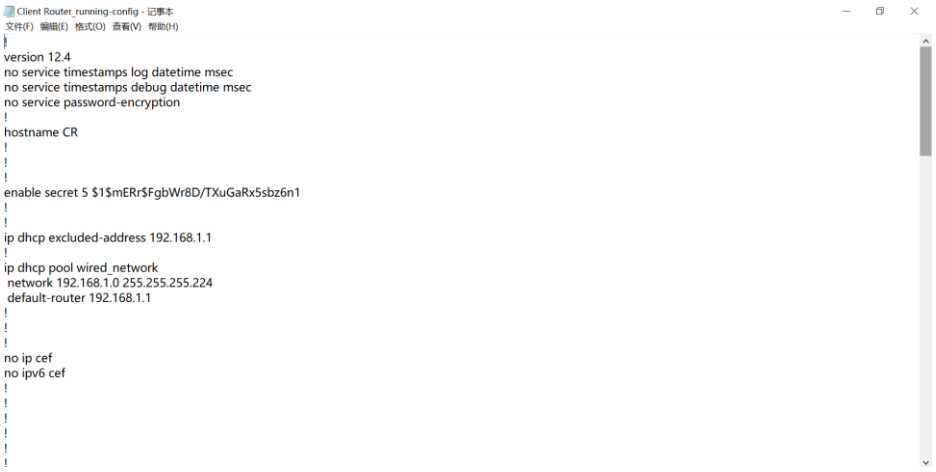
DATE	Screenshot	Description
9.24		Finish the IP address subnetting table.
9.25(2)		Configured the administration on the company switch. And tested if the banner works (the last screenshot) Password is required after setting. LAN is built up and interfaces are configured.
9.25(2)		Wireless router and device setup so the devices can be connected to the router therefore can be connected to the Internet.
9.26	DHCP for the wired devices 	Configure the dhcp setting for both wired and wireless devices. And changed the IP configuration on

	
	DHCP for the wireless devices
	 
	Check which IP address has been assigned.
	`Hardware address`
	`192.168.1.2 000B.BE3E.DA4B --`
	`Automatic`
	`192.168.1.3 0003.E473.BD0A --`
	`Automatic`
	`192.168.1.4 00D0.BC74.70AB --`
	`Automatic`
	`CR#`
		PC from static to DHCP. And checked on the PC if the IP address is allocated correctly or not. And check on company router which IP address has been assigned.

9.27	NAT on company router
	`CR(config)#`
	`CR(config)#ip nat pool ISP 192.168.1.66 192.168.1.66 netmask 255.255.255.224`
	`CR(config)#access-list 1 permit 192.168.1.0 0.0.0.31`
	`CR(config)#ip nat inside source list 1 pool ISP overload`
	`CR(config)#`
	NAT setting for wireless devices.
	`CR(config)#access-list 1 permit 192.168.1.96 0.0.0.31`
	`CR(config)#interface fa0/0`
	`CR(config-if)#ip nat inside`
	`CR(config-if)#exit`
	`CR(config)#end`
	`CR#`
	
	Show on router if nat is working or not
	`CR#show ip nat translation`
	`Pro Inside global Inside local Outside local`
	`Outside global`
	`icmp 192.168.1.66:1 192.168.1.2:1 192.168.1.65:1`
	`192.168.1.65:1`
	`icmp 192.168.1.66:2 192.168.1.2:2 192.168.1.65:2`
	`192.168.1.65:2`
	`icmp 192.168.1.66:3 192.168.1.2:3 192.168.1.65:3`
	`192.168.1.65:3`
	`icmp 192.168.1.66:4 192.168.1.2:4 192.168.1.65:4`
	`192.168.1.65:4`
		Setting the NAT for wired and wireless devices so they can connect to the external server. And check on the router if the nat is working.

10.15	 The final product. (test procedure please see below)	Finished all the setup at the packet tracer, started to test the network.
10.16	 (Troubleshooting procedure please see below)	Finished all the testing, they were all successful. Started the next step, troubleshooting.
10.17	Tracert process please see below.	Used tracert/trace router and web browsing to test trouble shooting.
10.18	Submitting and rechecking work.	

Set up on router (Export)



```
Client Router_running-config - 记事本
文件(F)  编辑(E)  格式(O)  查看(V)  帮助(H)
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname CR
!
!
!
enable secret 5 $1$mERr$FgbWr8D/TXuGaRx5sbz6n1
!
!
ip dhcp excluded-address 192.168.1.1
!
ip dhcp pool wired_network
 network 192.168.1.0 255.255.255.224
 default-router 192.168.1.1
!
!
!
no ip cef
no ipv6 cef
!
!
!
!
!
```

Client Router_running-config - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

```
!
!
no ip domain-lookup
!
!
spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
 description connected to wireless router
 ip address 192.168.1.97 255.255.255.224
 ip nat inside
 duplex auto
 speed auto
!
interface FastEthernet0/1
 ip address 192.168.1.1 255.255.255.224
 ip nat inside
 duplex auto
 speed auto
!
interface Serial0/1/0
 ip address 192.168.1.66 255.255.255.224
 ip nat outside
!
```

Client Router_running-config - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

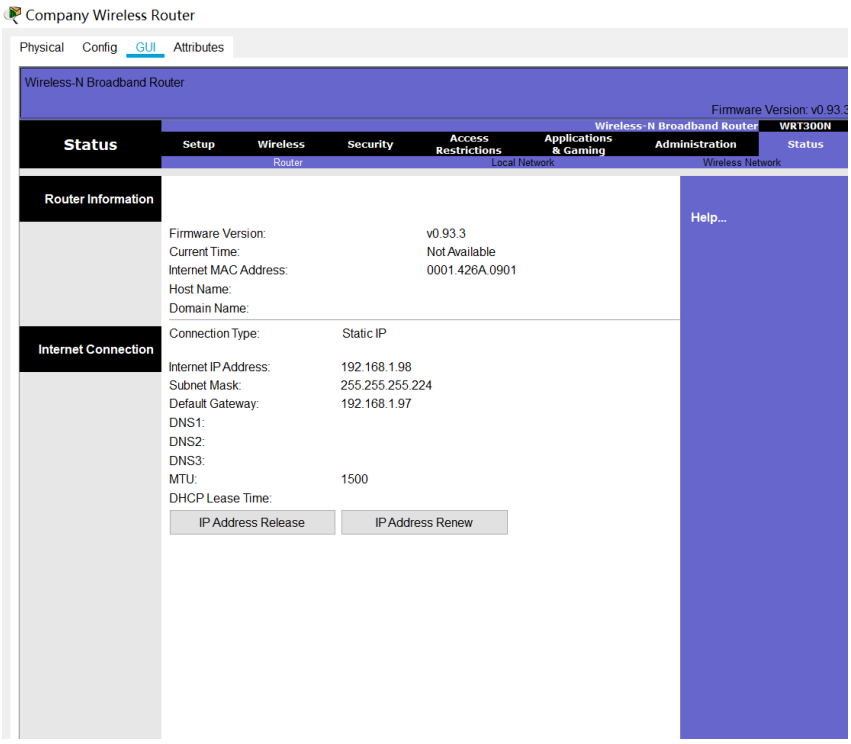
```
!
interface Serial0/1/1
 no ip address
 clock rate 2000000
!
interface Vlan1
 no ip address
 shutdown
!
ip nat pool ISP 192.168.1.66 192.168.1.66 netmask 255.255.255.224
ip nat inside source list 1 pool ISP overload
ip classless
ip route 0.0.0.0 0.0.0.0 192.168.1.33
ip route 0.0.0.0 0.0.0.0 192.168.1.65
!
ip flow-export version 9
!
!
access-list 1 permit 192.168.1.0 0.0.0.31
access-list 1 permit 192.168.1.96 0.0.0.31
!
banner motd □
---------------------------------------------------
!!!!!!!!!!Authorized Access Only!!!!!!!!!!!!!!!!
---------------------------------------------------
□
!
!
!
```

Client Router_running-config - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

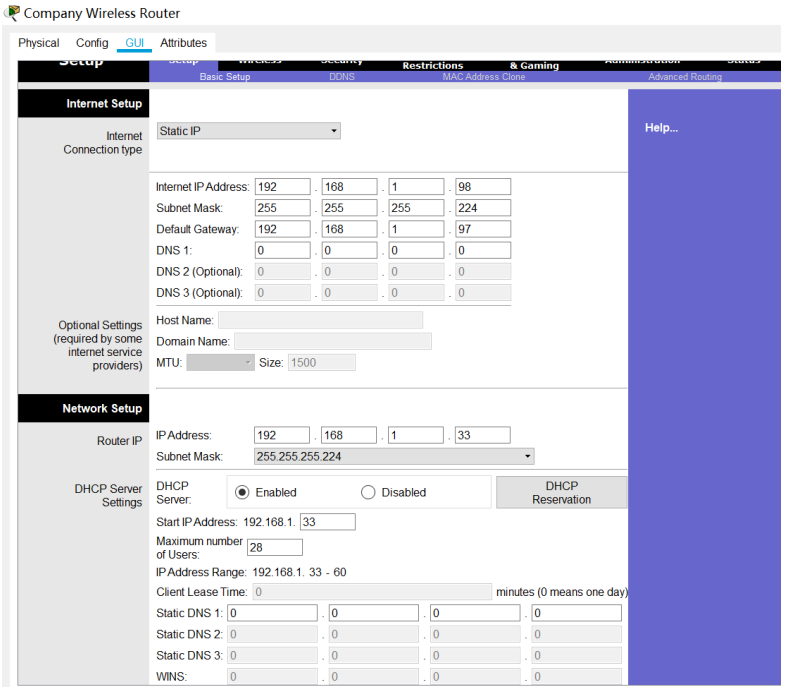
```
access-list 1 permit 192.168.1.0 0.0.0.31
access-list 1 permit 192.168.1.96 0.0.0.31
!
banner motd □
---------------------------------------------------
!!!!!!!!!!Authorized Access Only!!!!!!!!!!!!!!!!
---------------------------------------------------
□
!
!
!
!
!
line con 0
 password zxc22
 login
!
line aux 0
!
line vty 0 4
 password zxc85
 login
!
!
!
end
```

Wireless router GUI Screenshot

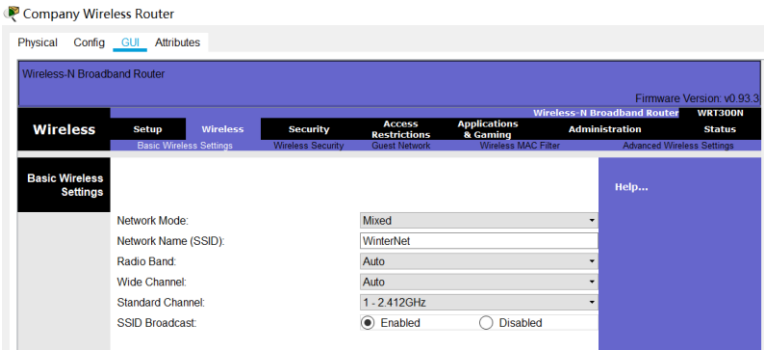
Status



Setup



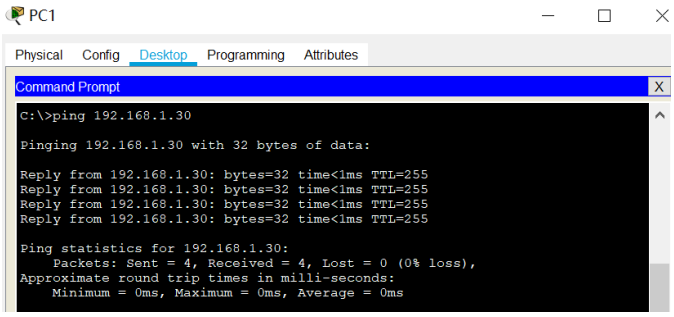
Wireless



PING TEST

1.From **PC1** to Web server.

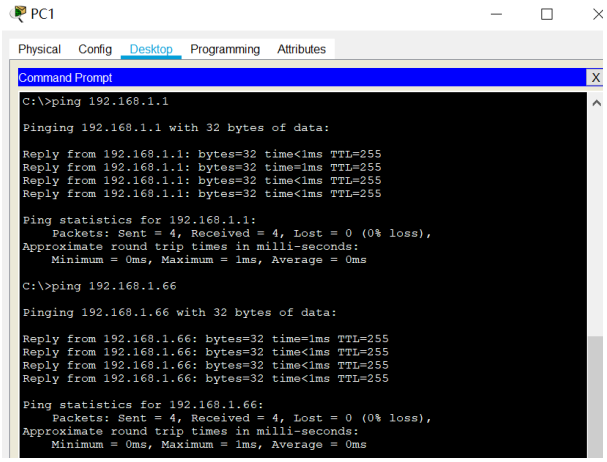
From PC1 to Vlan1(192.168.1.30). Successfully.



From PC1 to both ports of the company router.

Default Gateway (Fa0/1 192.168.1.1). Successfully.

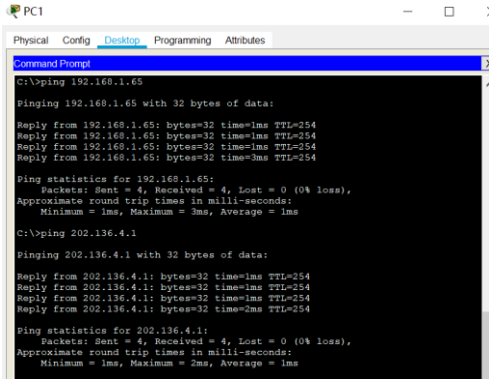
Serial0/1/0 (192.168.1.66). Successfully.



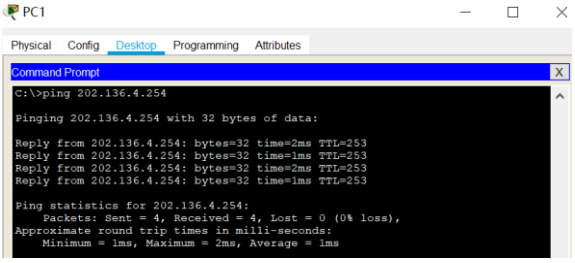
From PC1 to both ports of the ISP router.

Serial0/3/0 192.168.1.65. Successfully.

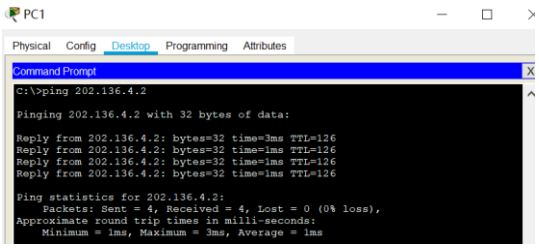
FA0/0 202.136.4.1. Successfully.



From PC1 to Vlan1(202.136.4.254) of the ISP side. Successfully.

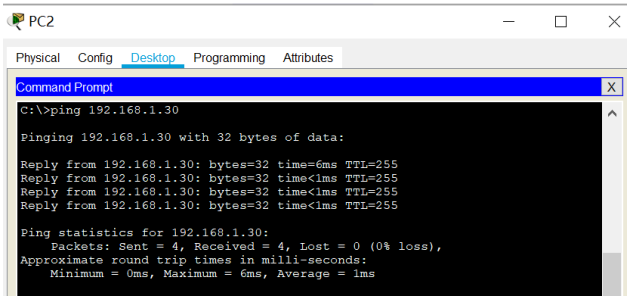


From PC1 to Web Server (202.136.4.2). Successfully.



2.From **PC2** to Web server.

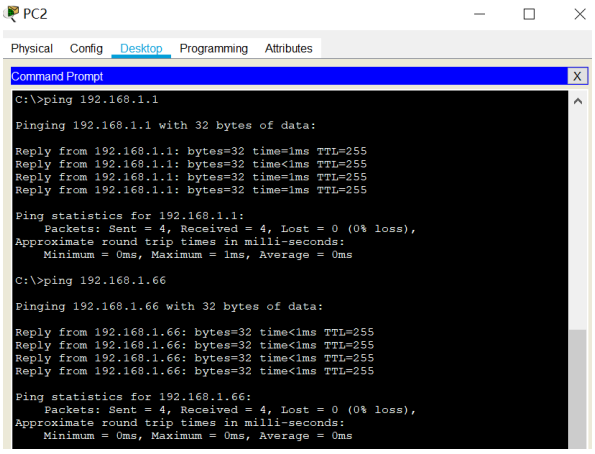
From PC2 to Vlan1(192.168.1.30). Successfully.



From PC2 to both ports of the company router.

Default Gateway (Fa0/1 192.168.1.1). Successfully.

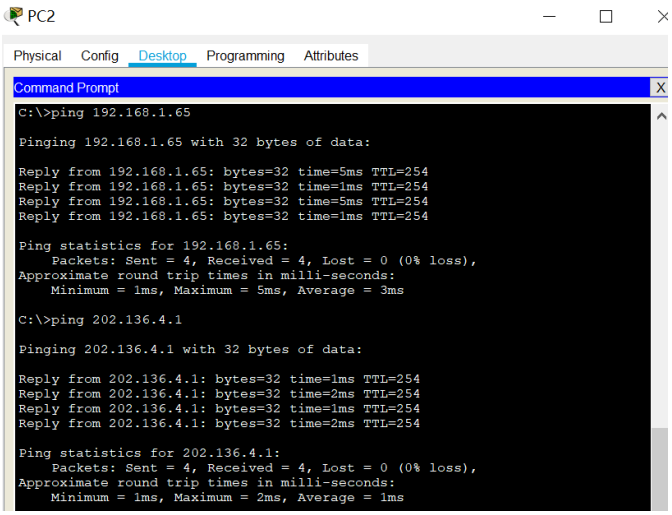
Serial0/1/0 (192.168.1.66). Successfully.



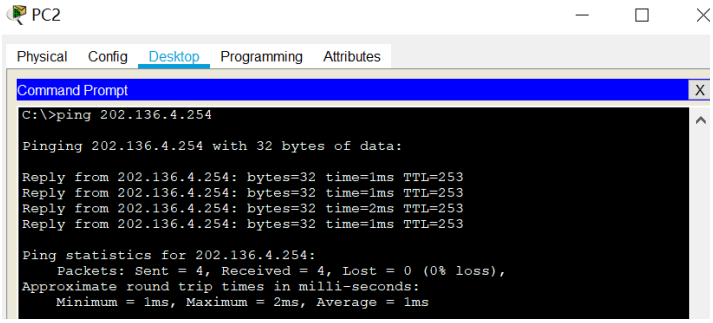
From PC2 to both ports of the ISP router.

Serial0/3/0 192.168.1.65. Successfully.

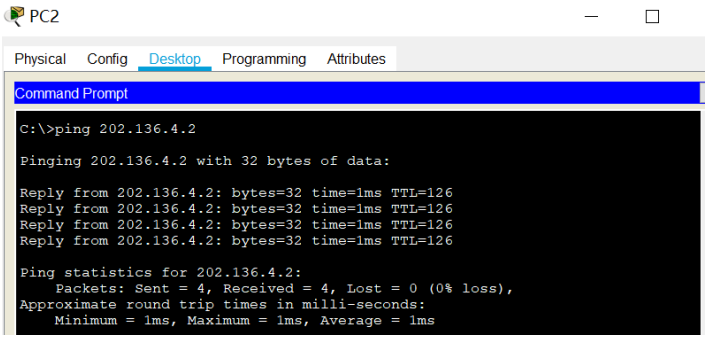
FA0/0 202.136.4.1. Successfully.



From PC2 to Vlan1(202.136.4.254) of the ISP side. Successfully.



From PC2 to Web Server (202.136.4.2). Successfully.

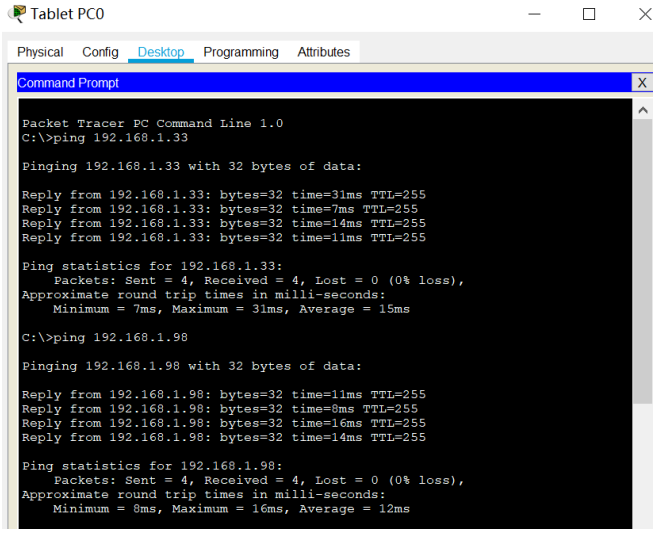


3.From **Wireless PC0** to Web server.

From Tablet PC0 to the LAN and the Internet.

LAN (192.168.1.33). Successfully.

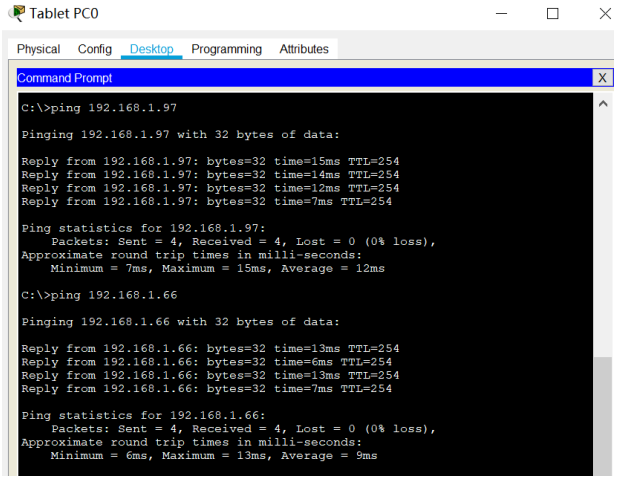
Internet (192.168.1.98). Successfully.



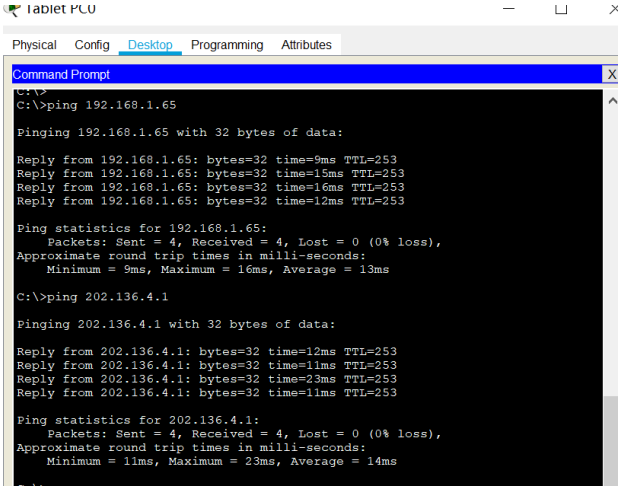
From Tablet PC0 to both ports of the company router.

(Fa0/0 192.168.1.97). Successfully.

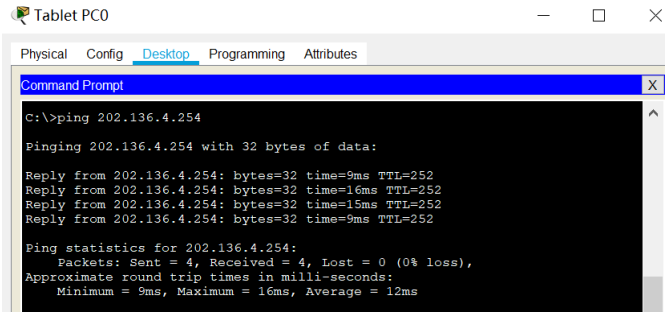
Serial0/1/0 (192.168.1.66). Successfully.



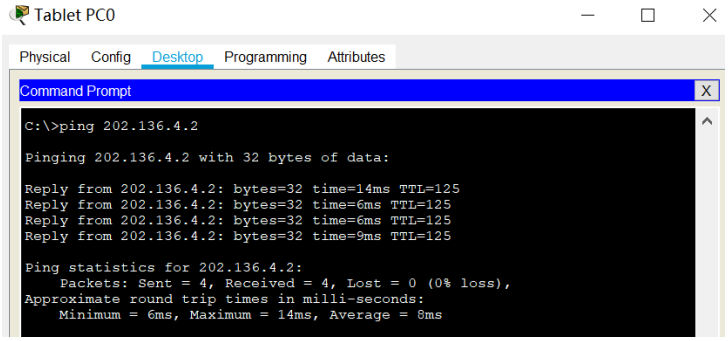
From Tablet PC0 to both ports of the ISP router.
Serial0/3/0 192.168.1.65. Successfully.
FA0/0 202.136.4.1. Successfully.



From Tablet PC0 to Vlan1(202.136.4.254) of the ISP side. Successfully.



From PC2 to Web Server (202.136.4.2). Successfully.

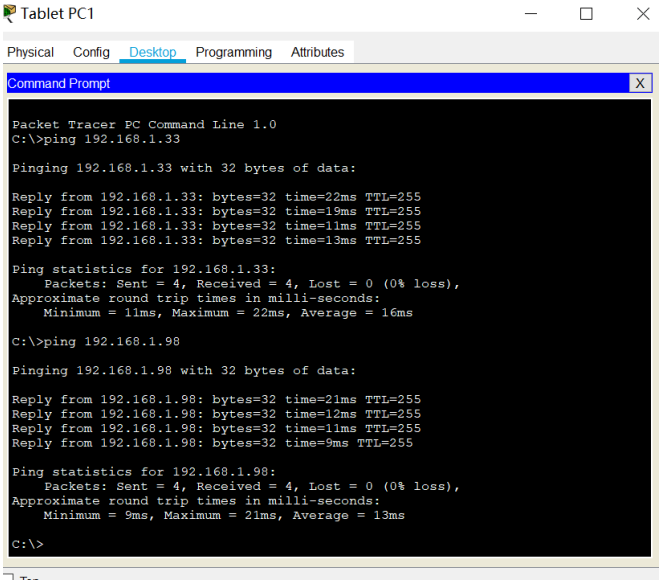


4.From **Wireless PC1** to Web server.

From Tablet PC1 to the LAN and the Internet.

LAN (192.168.1.33). Successfully.

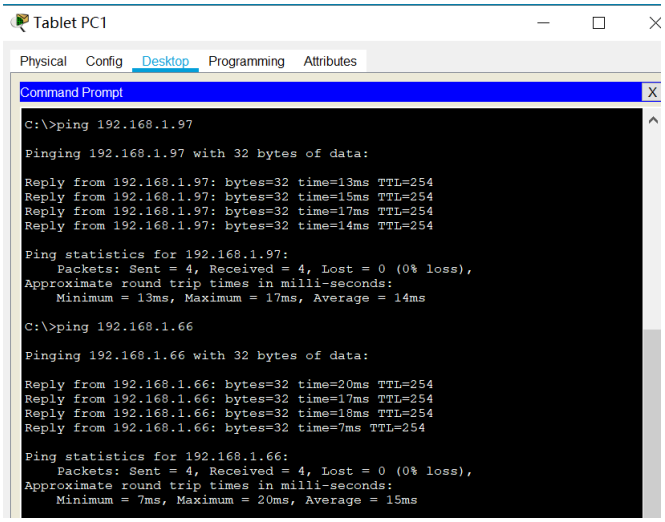
Internet (192.168.1.98). Successfully.



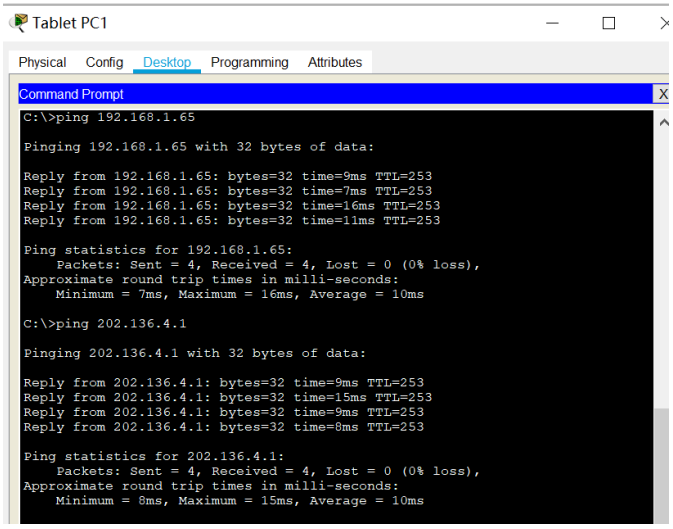
From Tablet PC0 to both ports of the company router.

(Fa0/0 192.168.1.97). Successfully.

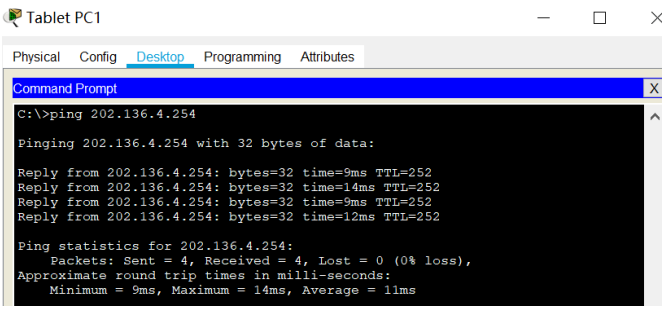
Serial0/1/0 (192.168.1.66). Successfully.



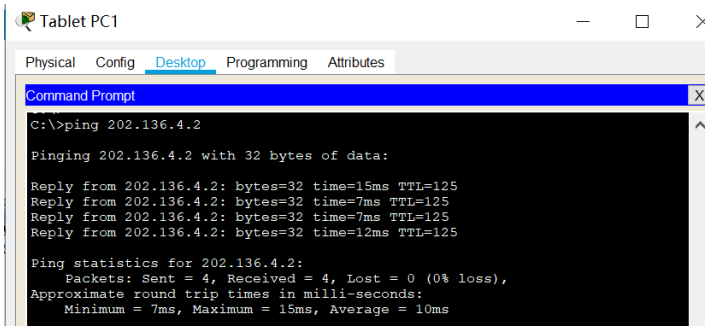
From Tablet PC0 to both ports of the ISP router.
Serial0/3/0 192.168.1.65. Successfully.
FA0/0 202.136.4.1. Successfully.



From Tablet PC0 to Vlan1(202.136.4.254) of the ISP side. Successfully.

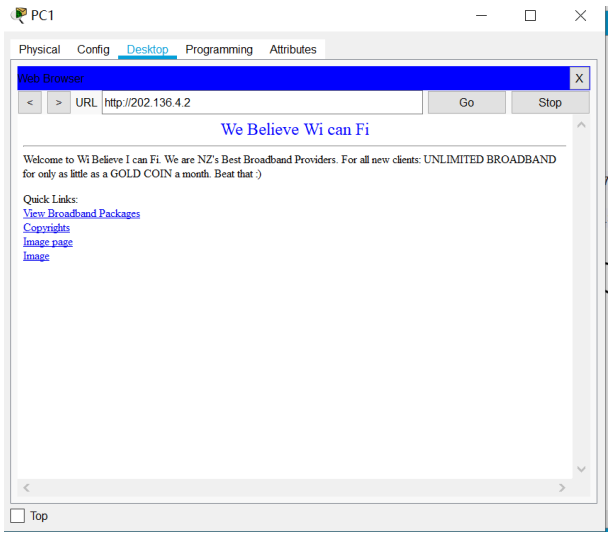


From PC2 to Web Server (202.136.4.2). Successfully.

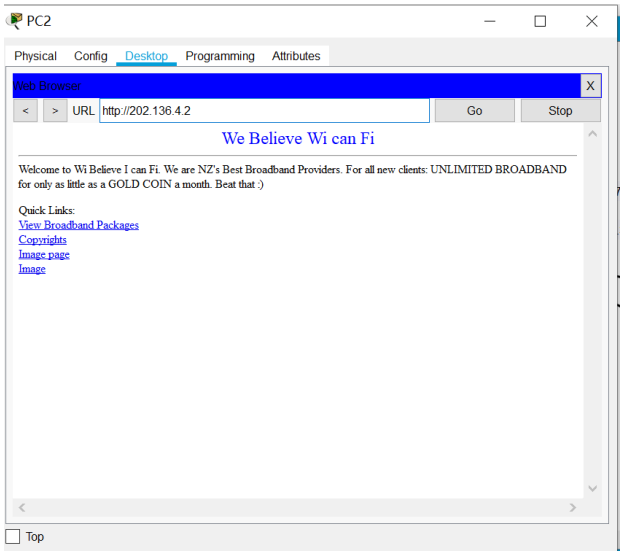


WEB BROWSING

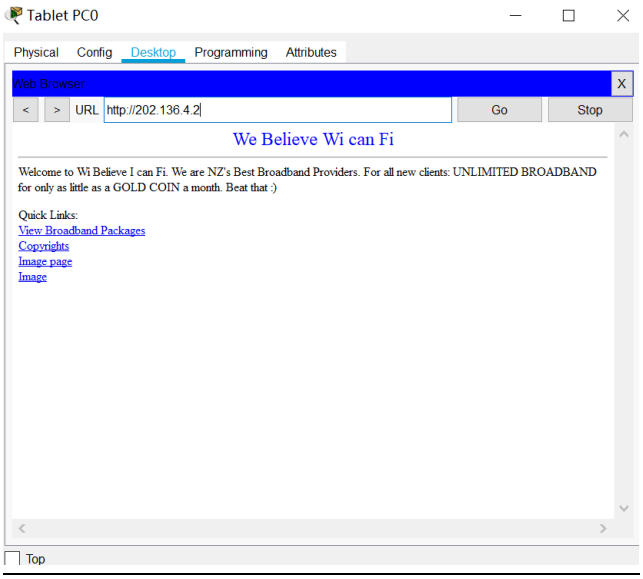
Web Browsing from wired PC1. Successfully.



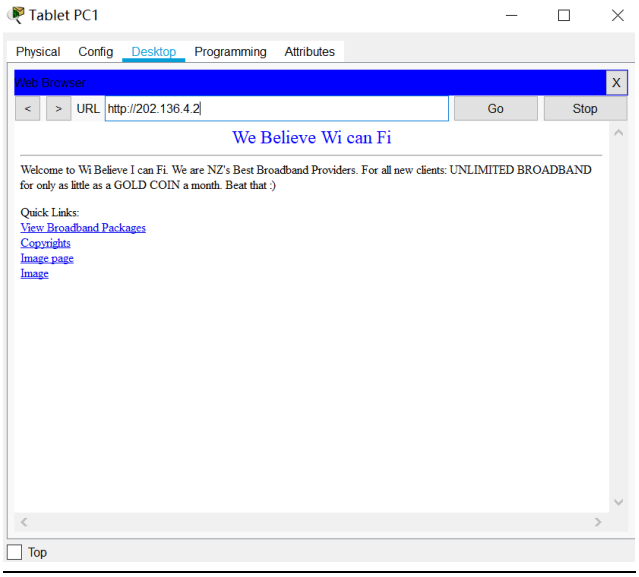
Web Browsing from PC2. Successfully.



Web browsing from wireless PC0. Successfully.

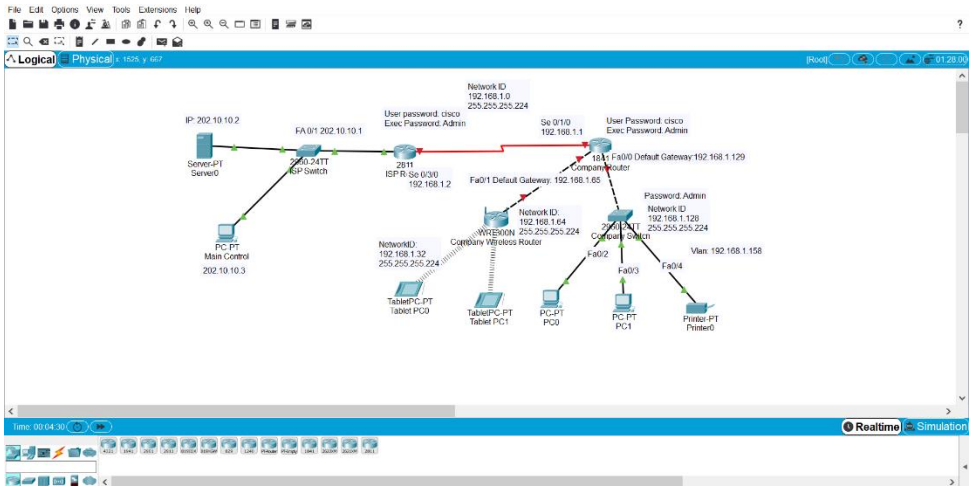


Web Browsing from wireless PC1. Successfully.



Troubleshooting

Before troubleshooting.



Fault 1

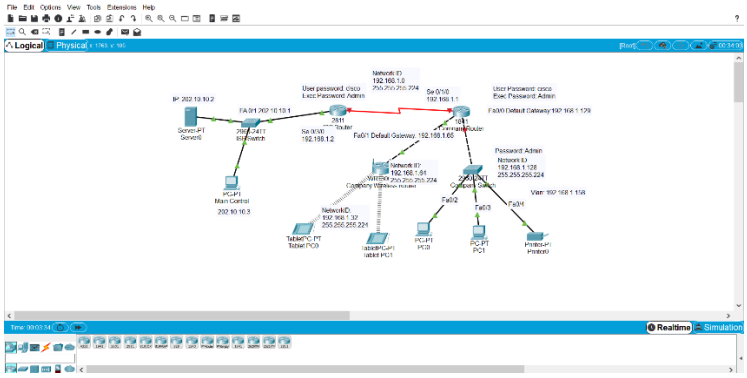
Identified(Yes)

Described: The company router hasn't turned on.

Resolution described: Physically turn on the router.

Tested: Pass

Fault corrected (Yes)



The connection between company router and wireless router becomes green.

Fault 2

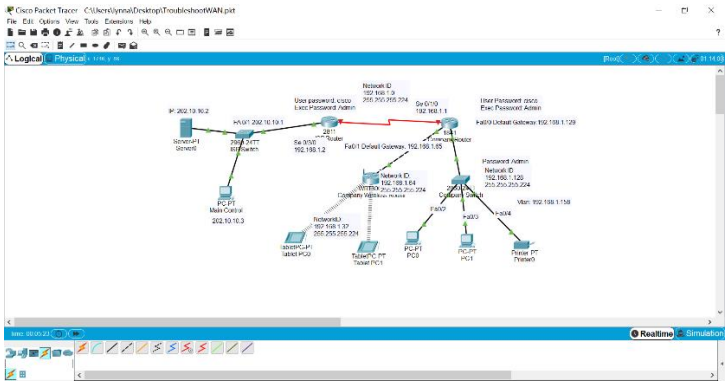
Identified(Yes)

Described: Using the wrong wire between the company switch and company router.

Resolution described: changed the wire from copper cross-over to copper straight-through.

Tested: Pass

Fault corrected (Yes)



The connection between company router and the company switch becomes green after changing the wire.

Fault 3

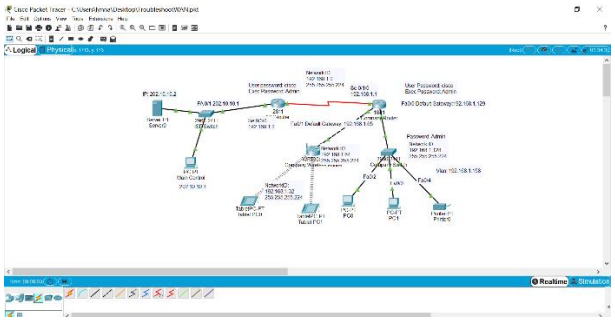
Identified(Yes)

Described: And the clock is at the wrong place(company router), should be on the ISP router. And the wire connected to the wrong port on the ISP router, should be on Se0/3/0

Resolution described: change the direction and connected port.

Tested: Pass/Fail

Fault corrected (Yes)



The connection between ISP router and the company router becomes green after refining the wire between.

Fault 4

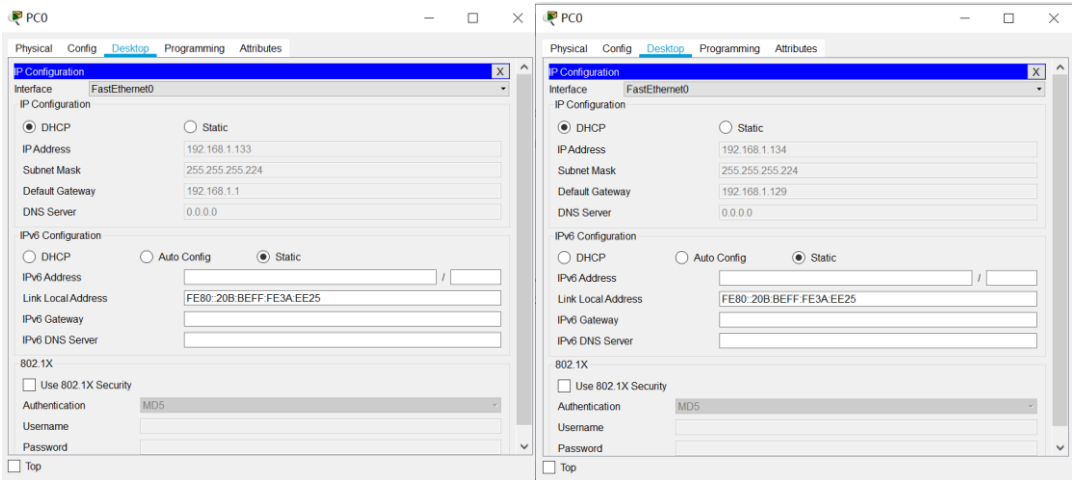
Identified(Yes)

Described: wrong default gateway

Resolution described: change the default gateway on switch and the dhcp setting on the router.

Tested: Pass/Fail

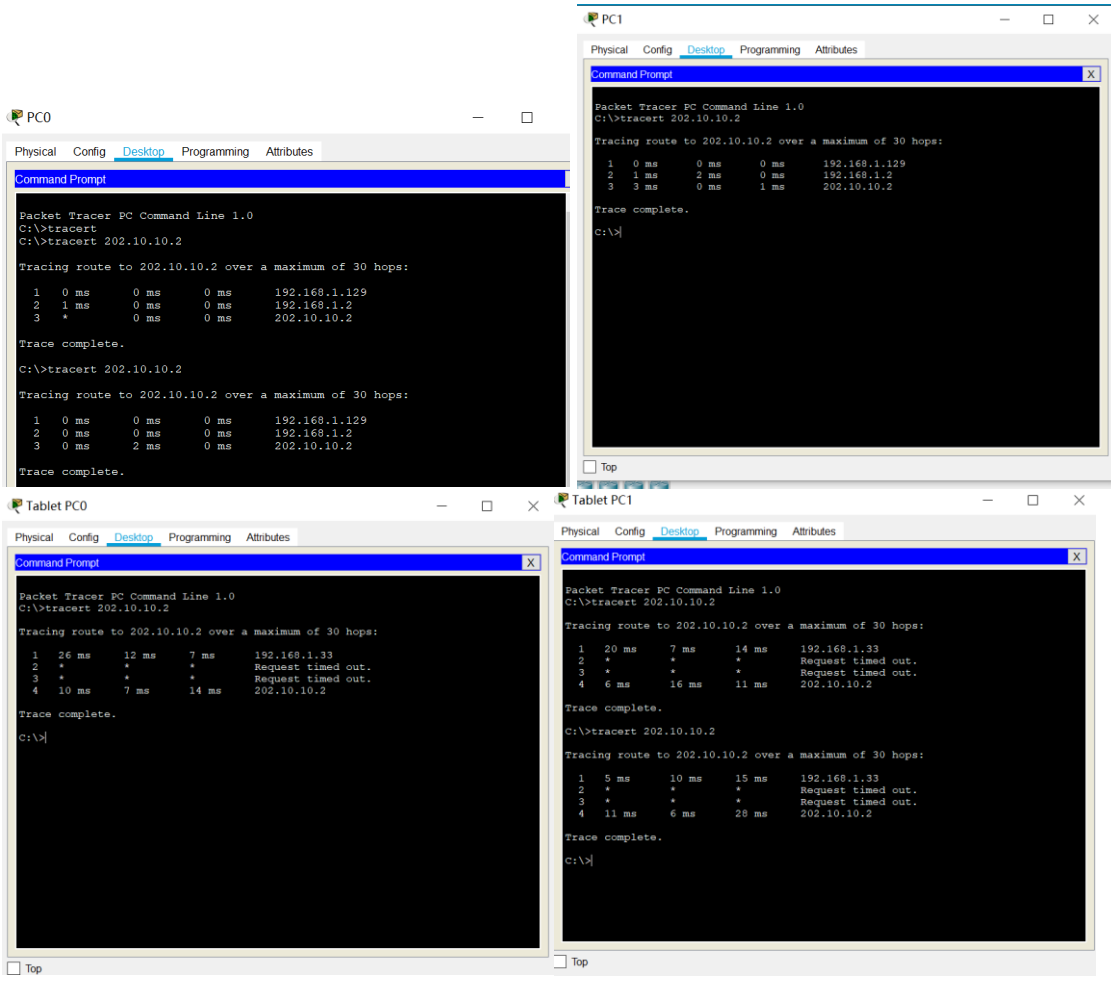
Fault corrected (Yes)



The default gateway on the PC was 192.168.1.1 which is the wrong port's IP address. After reset the default gateway on the switch and the DHCP setting and refresh on the PC. We can see that the default gateway changed to 192.168.1.129.

Troubleshooting Testing

Tracert/Trace router (to web server). Successfully.



Web browsing. Successfully.