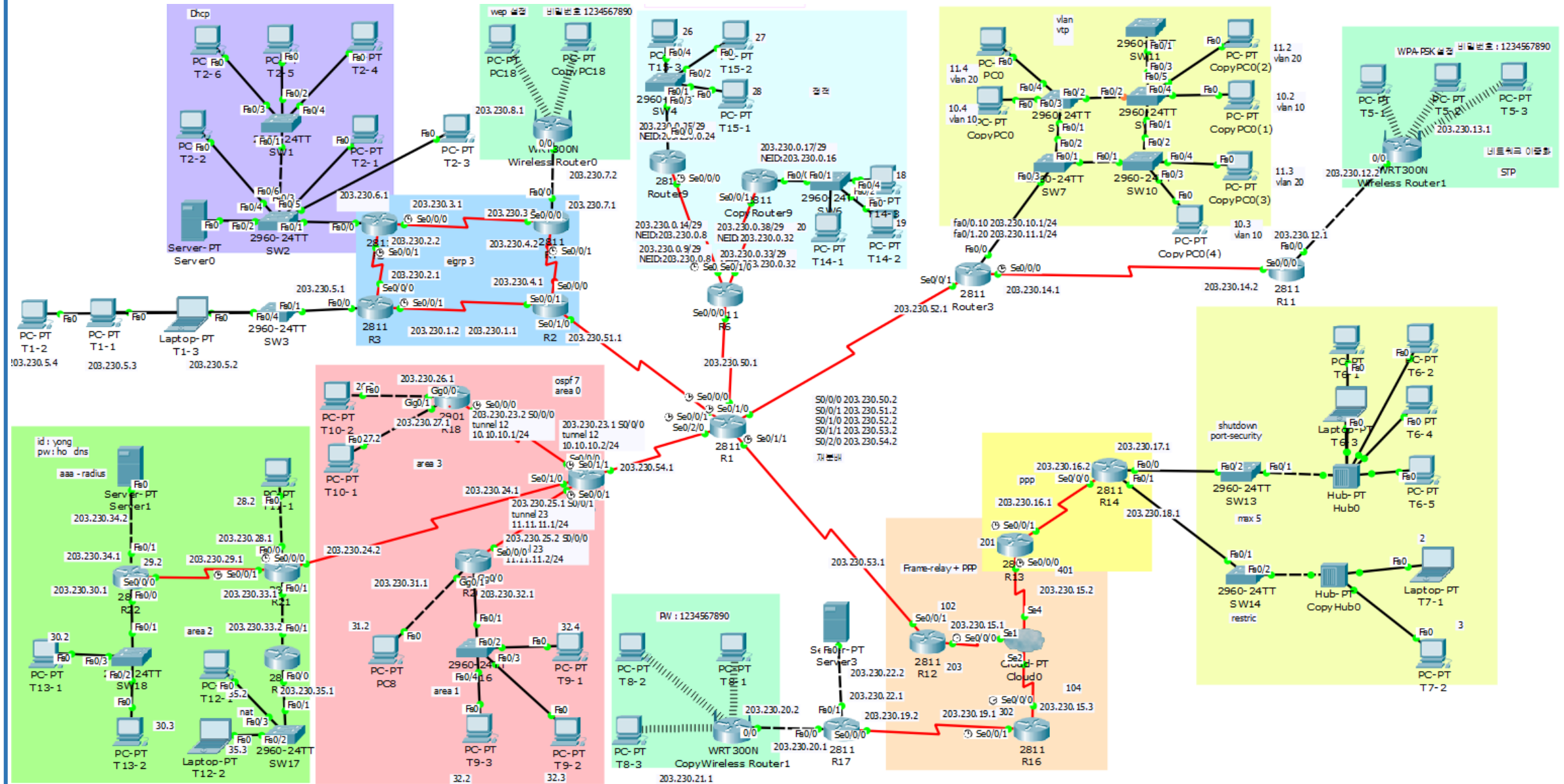


대규모 네트워크 설계 및 구축

91514658 권용호

전체 토폴로지



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1. 정적경로설정

? 정적경로설정이란?

- 관리자가 경로를 직접 지정
- 설정이 간단
- 토폴로지가 변경되면 관리자가 직접 변경해야 함
- 경로 설정을 유지하기 위한 라우팅 정보 교환이 불필요
- 소규모 네트워크, 경로가 고정된 네트워크에 주로 사용

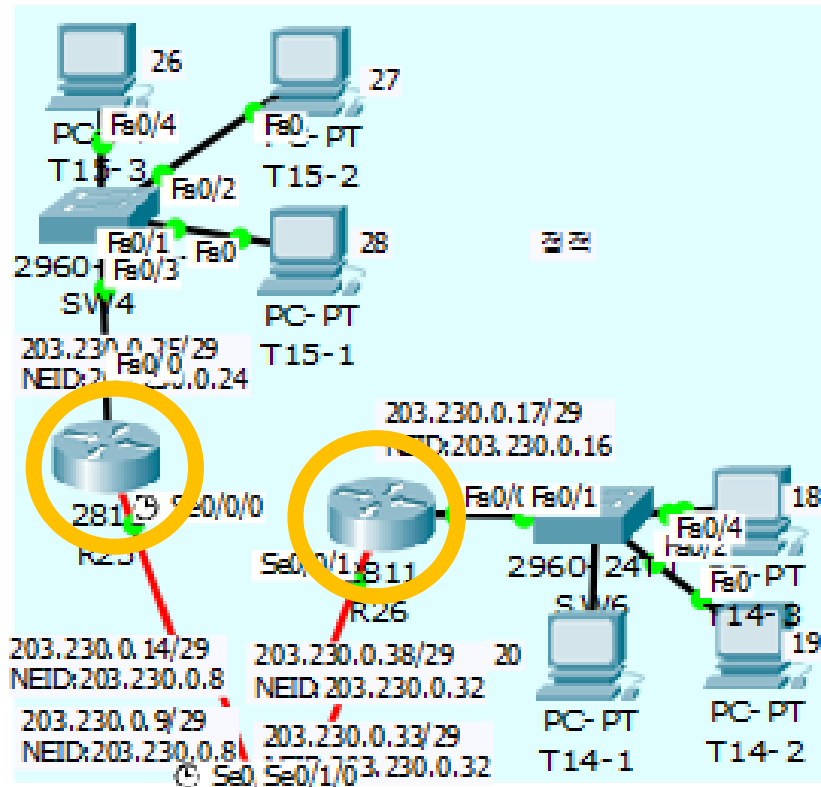
1. 정적경로설정

① 정적경로설정

```
R25(config)#ip route 203.230.32.0 255.255.255.0 S0/0/0  
R25(config)#ip route 203.230.16.0 255.255.255.0 S0/0/0
```

② 디폴트정적경로

```
R26(config)#ip route 0.0.0.0 0.0.0.0 S0/0/1
```



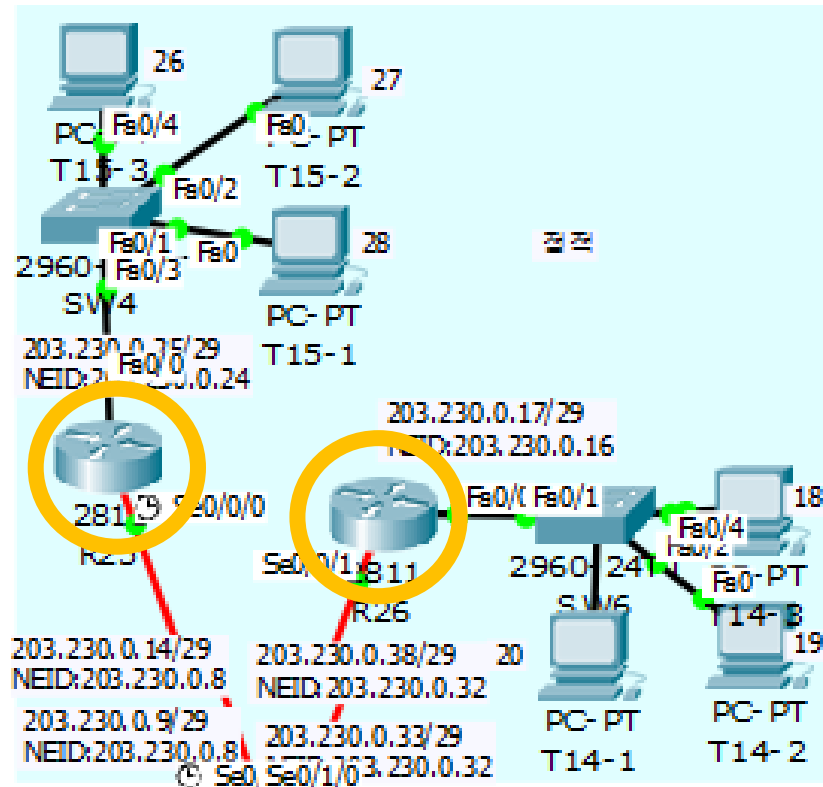
1. 정적경로설정

① 정적경로설정

```
S    203.230.0.16 is directly connected, Serial0/0/0
C    203.230.0.24 is directly connected, FastEthernet0/0
S    203.230.0.32 is directly connected, Serial0/0/0
```

② 디폴트정적경로

```
C    203.230.0.16 is directly connected, FastEthernet0/0
C    203.230.0.32 is directly connected, Serial0/0/1
S*  0.0.0.0/0 is directly connected, Serial0/0/1
```

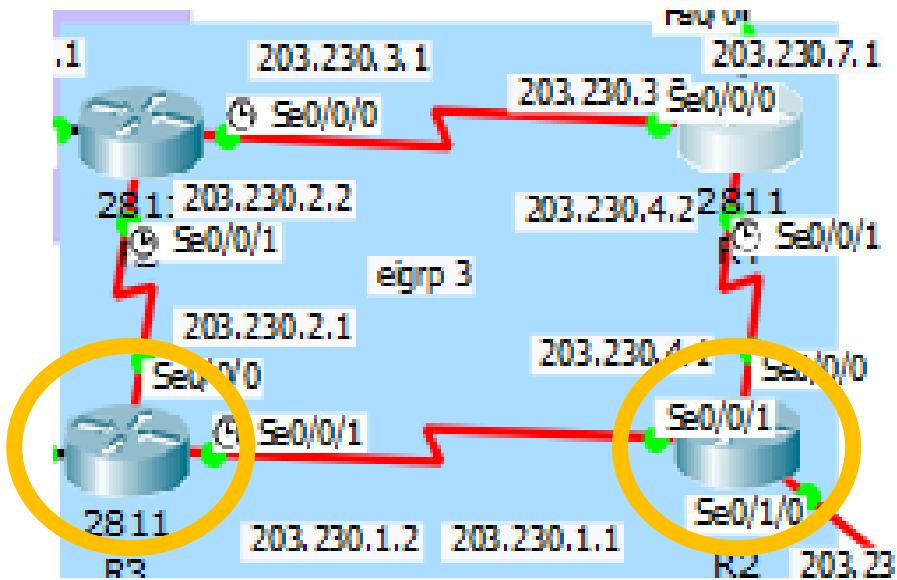


2. EIGRP

? EIGRP 이란?

- 거리 벡터 라우팅 프로토콜
- 클래스리스
- 224.0.0.10의 멀티캐스트 주소, 88번 포트 사용
- 자동요약(auto-summary) 기능을 수행
- Process-ID로 자율시스템번호(Autonomous System Number, 동일한 관리를 받는 라우터들의 집합 번호)를 사용.
- Process-ID가 서로 다른 여러 개의 EIGRP가 한 라우터 상에서 동작 가능

2. EIGRP



```
R2(config-if)#router eigrp 3
```

```
R2(config-router)#network 203.230.3.0
```

```
R2(config-router)#network 203.230.4.0
```

```
R2(config-router)#network 203.230.5.0
```

```
R2(config-router)#no auto-summary
```

```
R3(config)#router eigrp 3
```

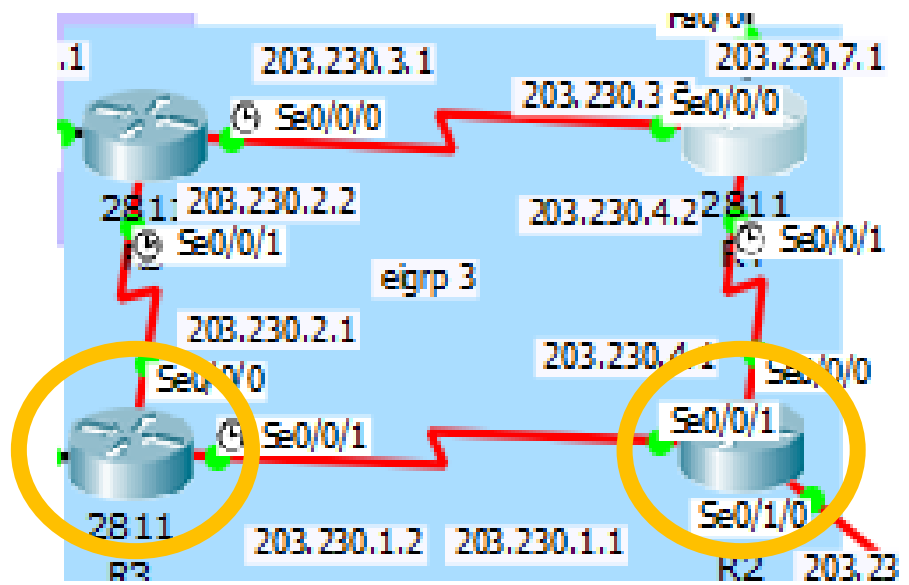
```
R3(config-router)#network 203.230.1.0
```

```
R3(config-router)#network 203.230.4.0
```

```
R3(config-router)#network 203.230.51.0
```

```
R3(config-router)#no auto-summary
```

2. EIGRP



```

C 203.230.1.0/24 is directly connected, Serial0/0/1
C 203.230.2.0/24 is directly connected, Serial0/0/0
D 203.230.3.0/24 [90/2681856] via 203.230.2.2, 00:00:29, Serial0/0/0
C 203.230.5.0/24 is directly connected, FastEthernet0/0
D 203.230.6.0/24 [90/2172416] via 203.230.2.2, 00:00:29, Serial0/0/0
D 203.230.7.0/24 [90/2684416] via 203.230.2.2, 00:00:27, Serial0/0/0
  
```

```

C 203.230.1.0/24 is directly connected, Serial0/0/1
D 203.230.2.0/24 [90/2681856] via 203.230.1.2, 00:01:04, Serial0/0/1
D 203.230.3.0/24 [90/3193856] via 203.230.1.2, 00:01:04, Serial0/0/1
C 203.230.4.0/24 is directly connected, Serial0/0/0
D 203.230.5.0/24 [90/2172416] via 203.230.1.2, 00:01:05, Serial0/0/1
D 203.230.6.0/24 [90/2684416] via 203.230.1.2, 00:01:04, Serial0/0/1
D 203.230.7.0/24 [90/3196416] via 203.230.1.2, 00:01:03, Serial0/0/1
C 203.230.51.0/24 is directly connected, Serial0/1/0
  
```

3. VLAN

? VLAN 이란?

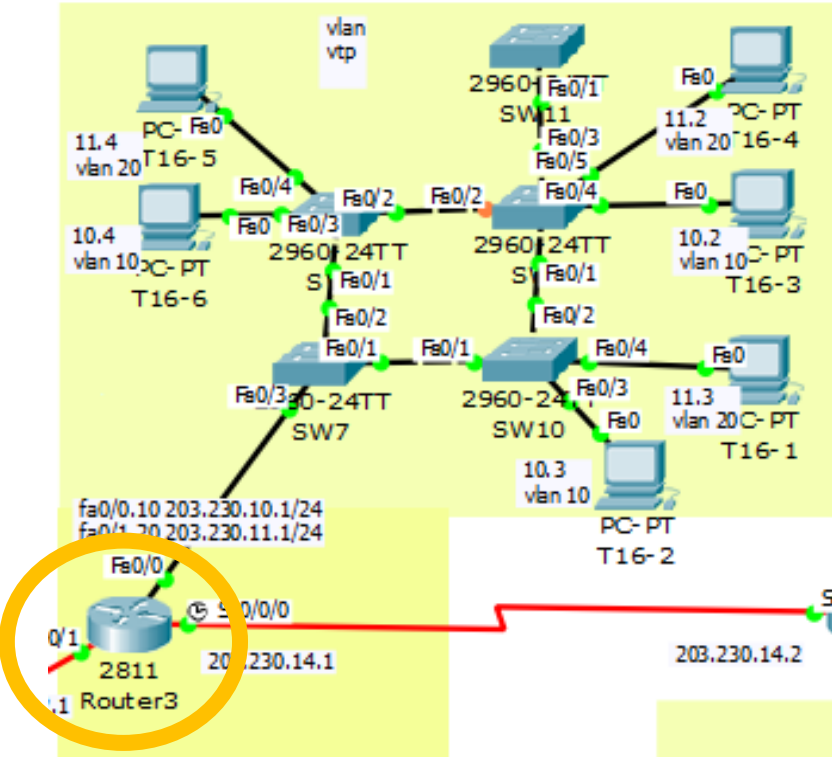
- **VLAN의 필요성**

- 네트워크의 크기가 커지면 플러딩 데이터가 커짐
- 내부에서 권한이 없는 사용자가 제약없이 특정 장치에 접속 가능

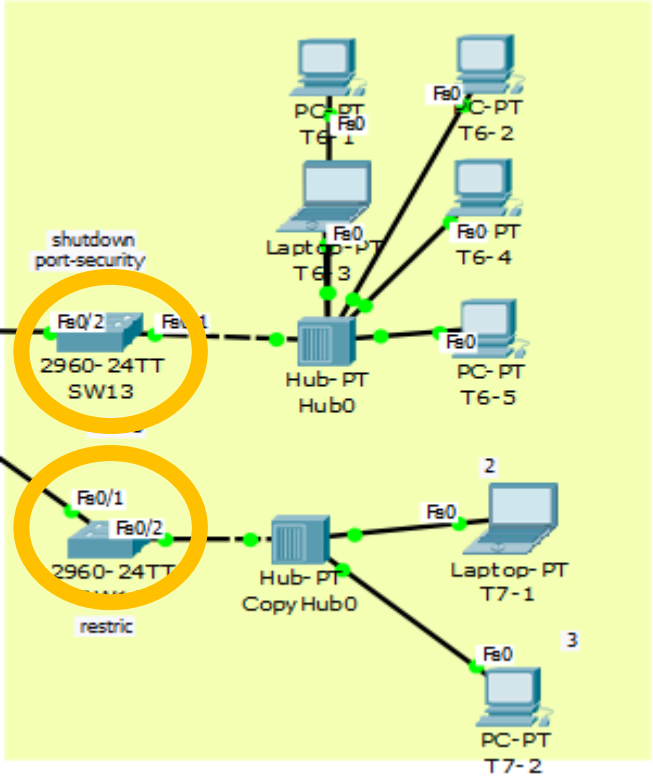
- **VLAN의 역할**

- 브로드캐스트 도메인을 분할하여 브로드캐스트 트래픽으로 인한 장비들의 성능저하를 막고자 함
- 서로 다른 VLAN에 속한 장치들은 통신이 불가능하여 보안에 도움
- 서로 다른 VLAN이 통신하려면 라우터나 L3 스위치가 필요
- 스위치의 모든 포트는 기본 VLAN 1번에 속해 있음

3. VLAN

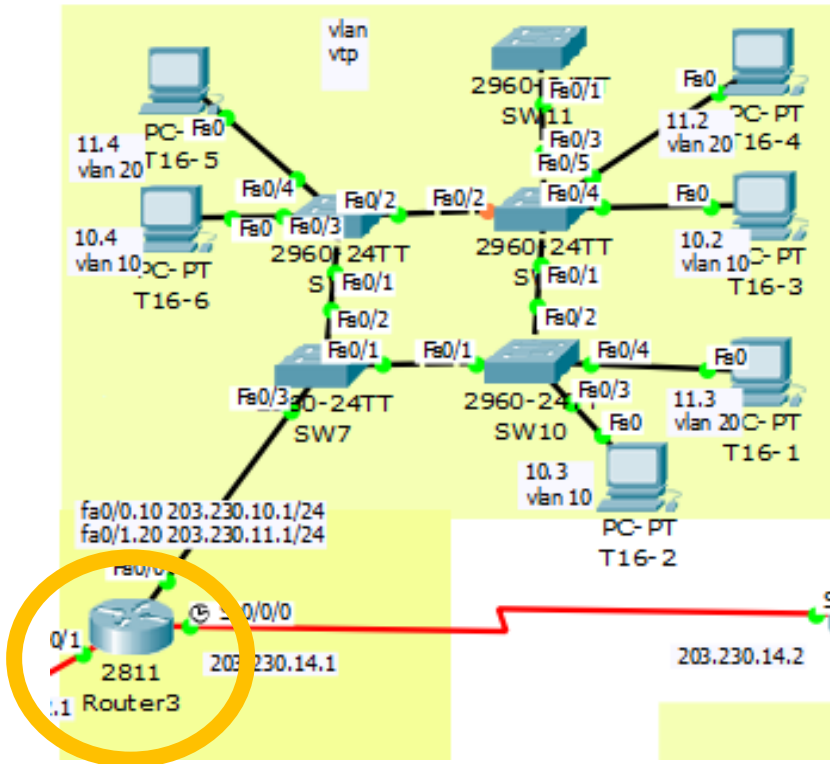


① 라우터-온-어-스틱



② Port-Security

3. VLAN - 라우터-온-어-스틱



```
Router3(config)#interface FastEthernet0/0
```

```
Router3(config-if)#no shutdown
```

```
Router3(config-if)#exit
```

```
Router3(config)#int fa0/0.10
```

```
Router3(config-subif)#encapsulation dot1q 10
```

```
Router3(config-subif)#ip add 203.230.10.1
```

```
255.255.255.0
```

```
Router3(config-subif)#exit
```

```
Router3(config)#int fa0/0.20
```

```
Router3(config-subif)#encapsulation dot1q 20
```

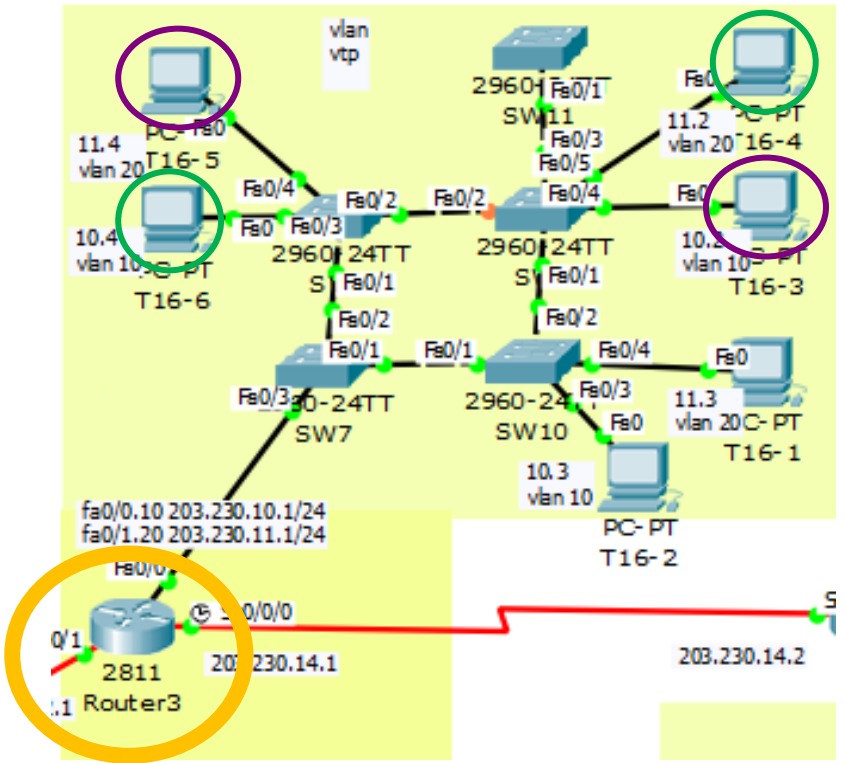
```
Router3(config-subif)#ip add 203.230.11.1
```

```
255.255.255.0
```

```
Router3(config-subif)#exit
```

3. VLAN - 라우터-온-어-스틱

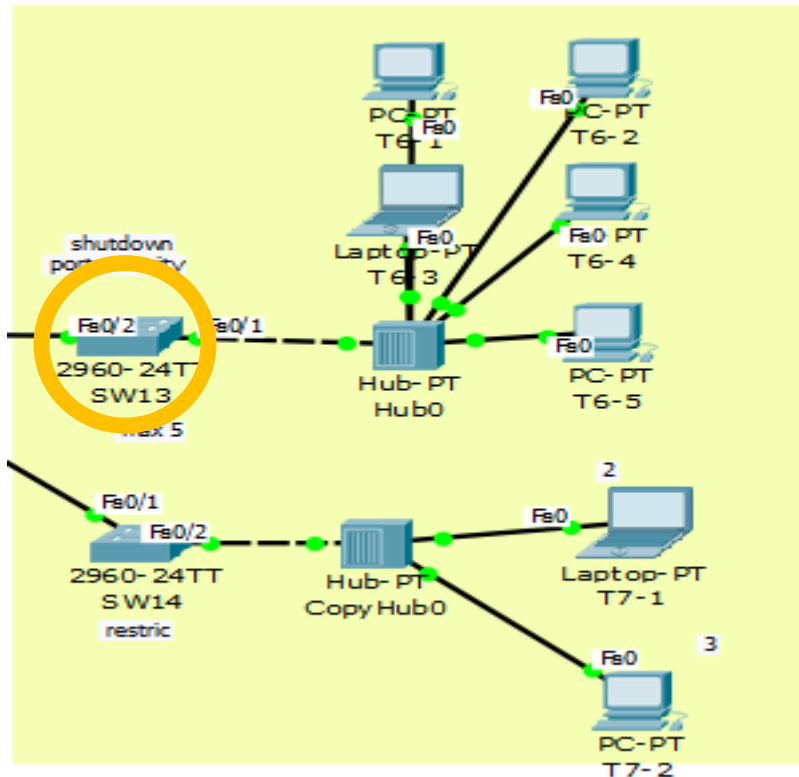
① 다른 VLAN 통신확인



```
Router(config)#do show ip int brief
Interface                IP-Address      OK? Method Status      Protocol
FastEthernet0/0          unassigned      YES unset  up          up
FastEthernet0/0.10      203.230.10.1    YES manual  up          up
FastEthernet0/0.20      203.230.11.1    YES manual  up          up
```

- Successful T16-4 T16-6
- Successful T16-3 T16-5

3. VLAN - Port-Security



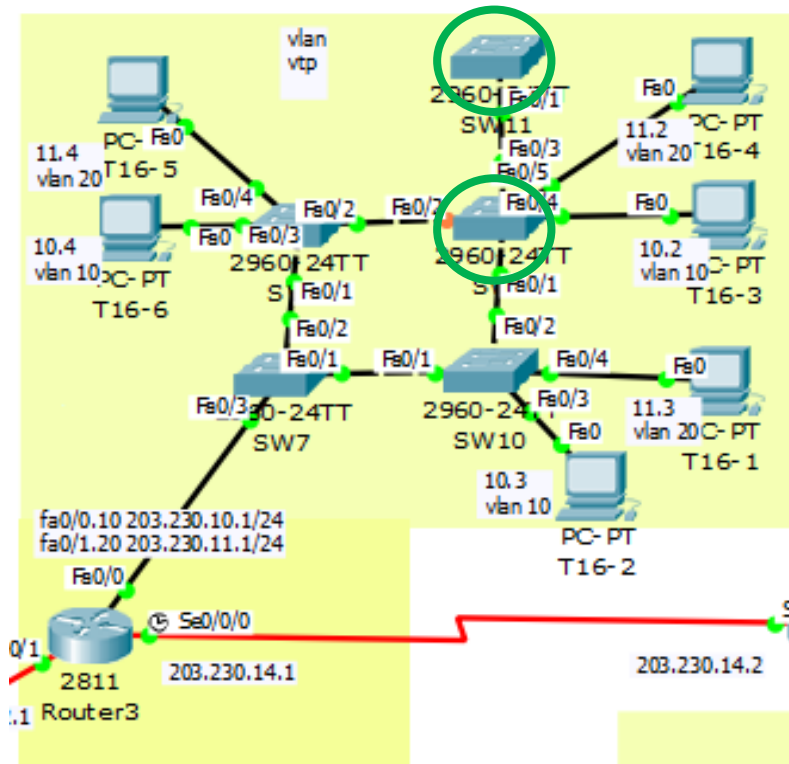
```
SW13(config)#interface FastEthernet0/1
SW13(config-if)#switchport mode access
SW13(config-if)#switchport port-security
SW13(config-if)#switchport port-security maximum 5
SW13(config-if)#switchport port-security violation
shutdown
```

4. VTP

? VTP 이란?

- 규모가 큰 네트워크에서 스위치별로 VLAN을 생성, 수정, 삭제 등을 직접 관리해야 한다면 매우 번거로움
- VLAN의 생성, 수정, 삭제 등의 관리를 쉽게 할 수 있도록 하는 프로토콜
- 스위치마다 일일이 VLAN을 설정하지 않아도 네트워크 전체에 일관성 있는 VLAN 설정 가능
- 시스코 전용 프로토콜

4. VTP설정



① Server 설정

```
SW11(config)#vtp version 2
```

```
SW11(config)#vtp mode server
```

```
SW11(config)#vtp domain yong
```

```
SW11(config)#vtp password yong
```

```
SW11(config)#int range fa0/1
```

```
SW11(config-if)#switchport mode trunk
```

② Transparent 설정

```
SW9(config)#vtp version 2
```

```
SW9(config)#vtp mode transparent
```

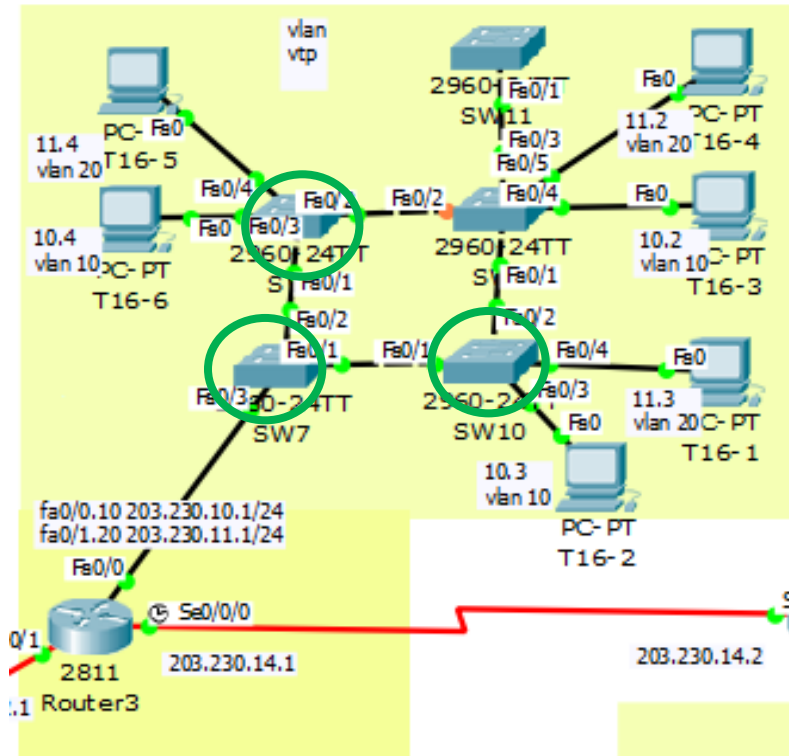
```
SW9(config)#vtp domain yong
```

```
SW9(config)#vtp password yong
```

```
SW9(config)#int range fa0/1-2
```

```
SW9(config-if-range)#switchport mode trunk
```

4. VTP설정



① Client 설정

```
SW8(config)#vtp version 2
```

```
SW8(config)#vtp mode client
```

```
SW8(config)#vtp domain yong
```

```
SW8(config)#vtp password yong
```

```
SW8(config)#int range fa0/1
```

```
SW8(config-if)#switchport mode trunk
```

```
SW10(config)#vtp version 2
```

```
SW10(config)#vtp mode client
```

```
SW10(config)#vtp domain yong
```

```
SW10(config)#vtp password yong
```

```
SW10(config)#int range fa0/1-2
```

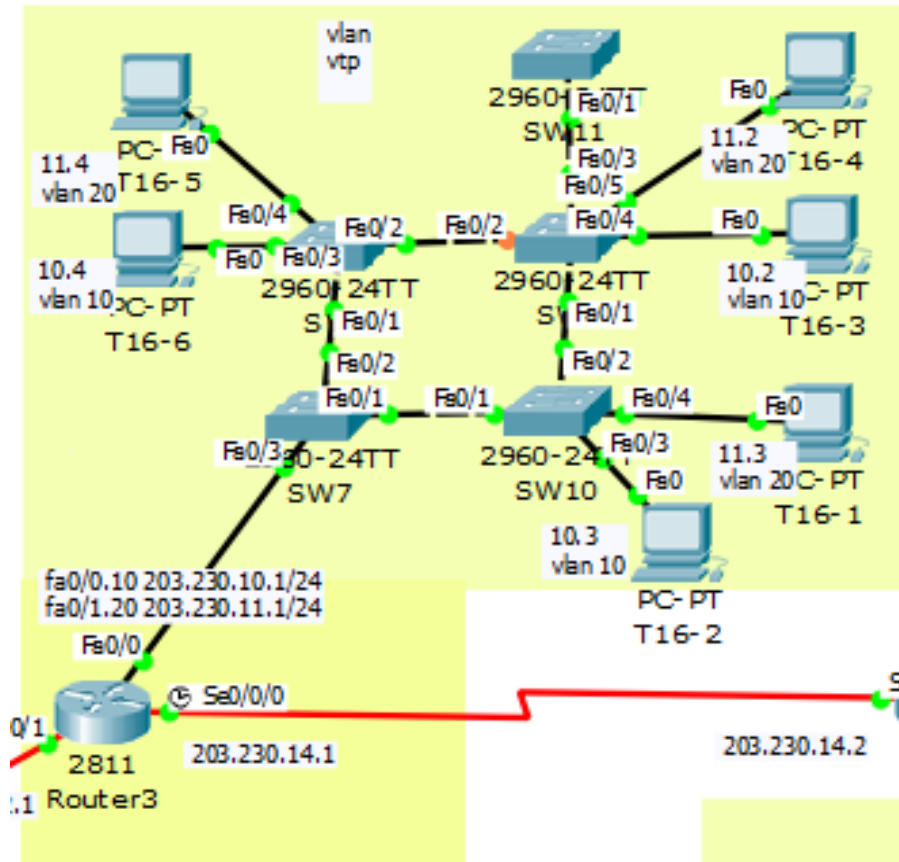
```
SW10(config-if-range)#switchport mode trunk
```

5. STP

? STP 이란?

- 프레임 플러딩과 루프 발생을 방지하기 위한 프로토콜
- STP는 모든 스위치에서 기본적으로 동작
- IEEE 802.1D 표준
- 루프가 발생할 수 있는 경로를 논리적으로 차단함으로써 목적지로 가는 경로를 하나로 만듦
- 사용하던 경로에 문제가 발생할 경우 대체경로를 통해 통신할 수 있도록 운영

5. STP설정



① Server에서 설정

```
SW11(config)#vlan 10
```

```
SW11(config-vlan)#name v10
```

```
SW11(config-vlan)#exit
```

```
SW11(config)#vlan 20
```

```
SW11(config-vlan)#name v20
```

```
SW11(config-vlan)#exit
```

② VLAN 설정

```
SW10(config)#int fa0/3
```

```
SW10(config-if)#switch access vlan 10
```

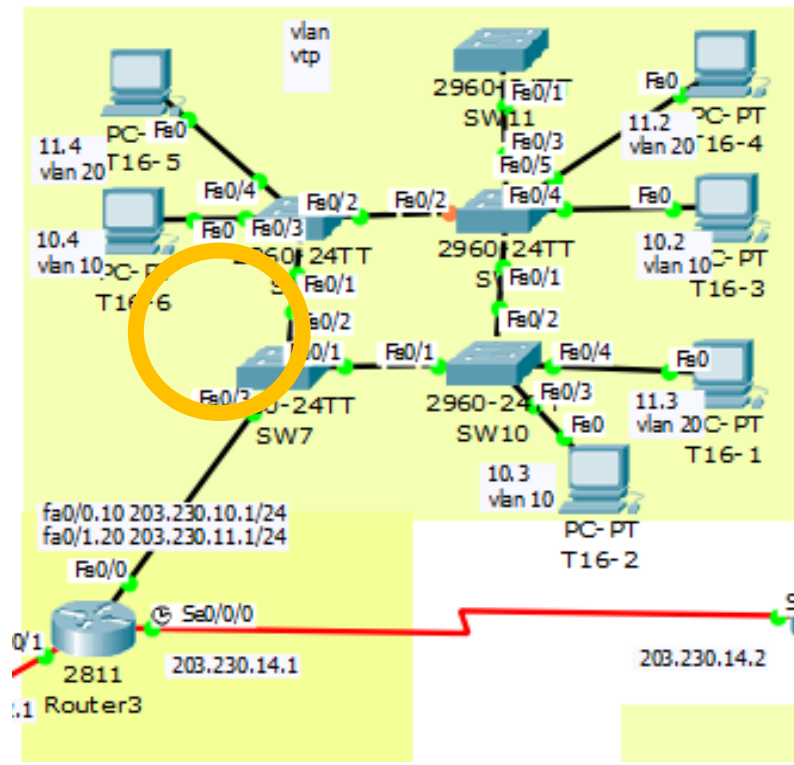
```
SW11(config-vlan)#exit
```

```
SW10(config)#int fa0/4
```

```
SW10(config-if)#switch access vlan 20
```

```
SW11(config-vlan)#exit
```


5. STP설정



```

Interface          Role Sts Cost      Prio.Nbr Type
-----
Fa0/1              Root FWD 19        128.1   P2p
Fa0/2              Desg FWD 19        128.2   P2p
Fa0/4              Desg FWD 19        128.4   P2p
    
```

SW10 (config) #

```

Interface          Role Sts Cost      Prio.Nbr Type
-----
Fa0/1              Root FWD 19        128.1   P2p
Fa0/2              Desg FWD 19        128.2   P2p
Fa0/4              Desg FWD 19        128.4   P2p
    
```

SW8 (config) #

```

Interface          Role Sts Cost      Prio.Nbr Type
-----
Fa0/1              Desg FWD 19        128.1   P2p
Fa0/2              Desg FWD 19        128.2   P2p
Fa0/3              Desg FWD 19        128.3   P2p
    
```

SW7 (config) #

Root 확인

6. 무선LAN

? 무선LAN 이란?

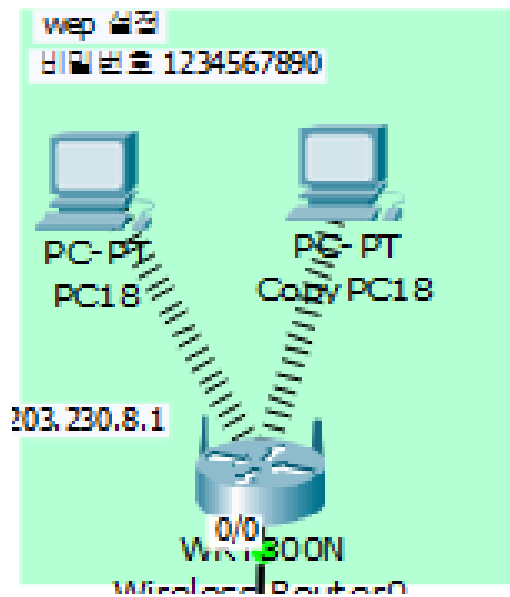
- **장점**

- 무선 연결의 편리함.
- 이동성 제공. 사용의 유연성.
- 비용의 감소.

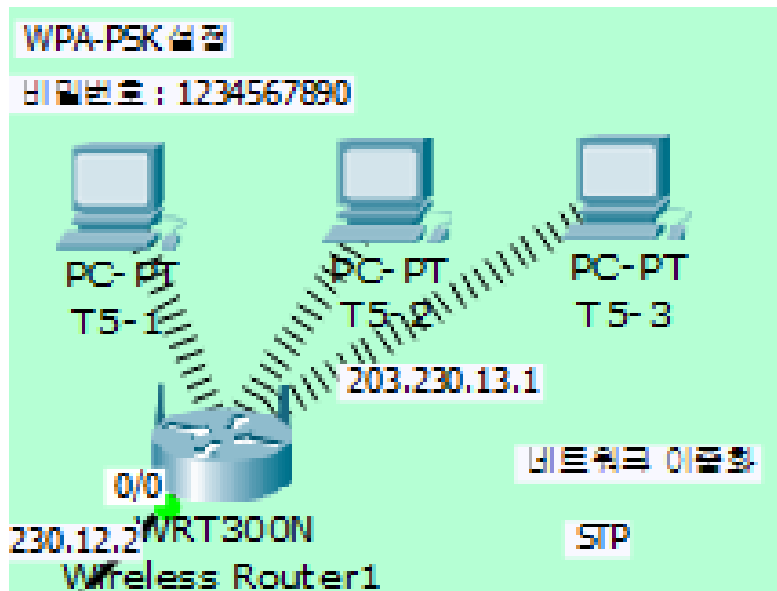
- **단점**

- 정보의 누출 가능성. 무선랜 분석도구 이용.
- 무선랜 보안에 사용되는 암호화 키값의 추출 가능성
- 무선랜 해킹기술: spoofing, sniffing 등

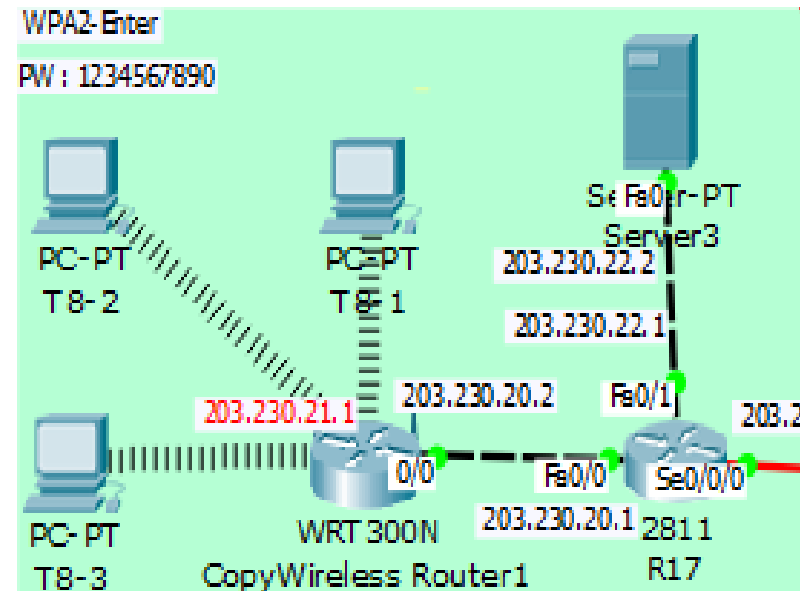
6. 무선LAN



① WEP 설정

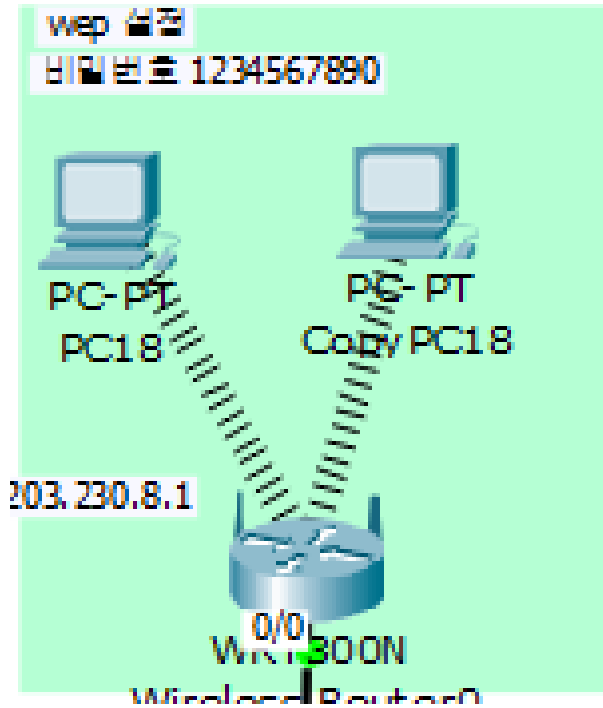


② WPA-PSK 설정



③ WPA2-Enter 설정

6. 무선LAN - WEP 설정



① 무선라우터 설정

Basic wireless settings wireless Security wireless MAC Filter

Security Mode: WEP

Encryption 40/64-Bits (10 H)

Passphrase Generate

Key1: 1234567890

공유키 설정

② PC 설정

Wireless0

Port Status On

Bandwidth 300 Mbps

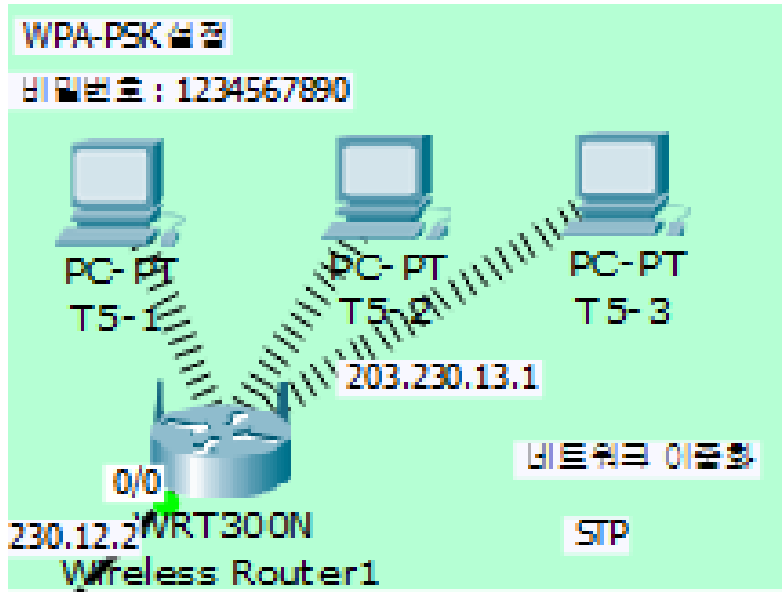
MAC Address 0030.F28E.D587

SSID LAN1

Authentication

Disabled WEP WEP Key 1234567890

6. 무선LAN - WPA2-PSK 설정



① 무선라우터 설정

Security Mode: WPA Personal
Encryption: AES
Passphrase: 1234567890
Key Renewal: 600 second

공유키 설정

② PC 설정

Wireless0

Port Status: On

Bandwidth: 300 Mbps

MAC Address: 00E0.F784.303D

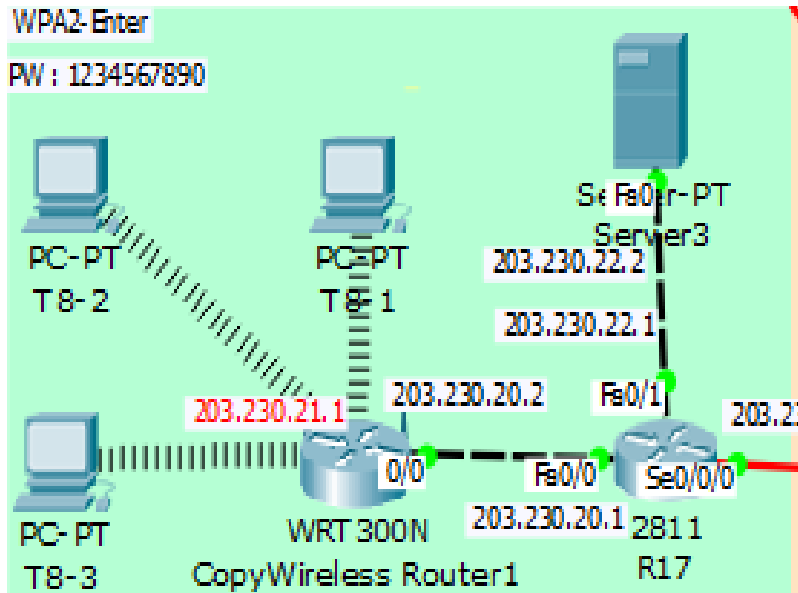
SSID: yong2

Authentication:
 Disabled WEP WPA-PSK WPA2-PSK

WEP Key: []
PSK Pass Phrase: 1234567890

6. 무선LAN - WPA-Enter 설정

① 무선라우터 설정



Security Mode: WPA2 Enter

Encryption: AES

RADIUS Se: 203 . 230 . 22 . 2

RADIUS Po: 645

Shared Sec: 1234567890

비밀번호 설정

② PC 설정

Wireless0

Port Status: On

Bandwidth: 300 Mbps

MAC Address: 0060.47C7.4ADC

SSID: yong2

Authentication:

Disabled WEP WPA-PSK WPA2-PSK WPA2

WEP Key: []

PSK Pass Phrase: []

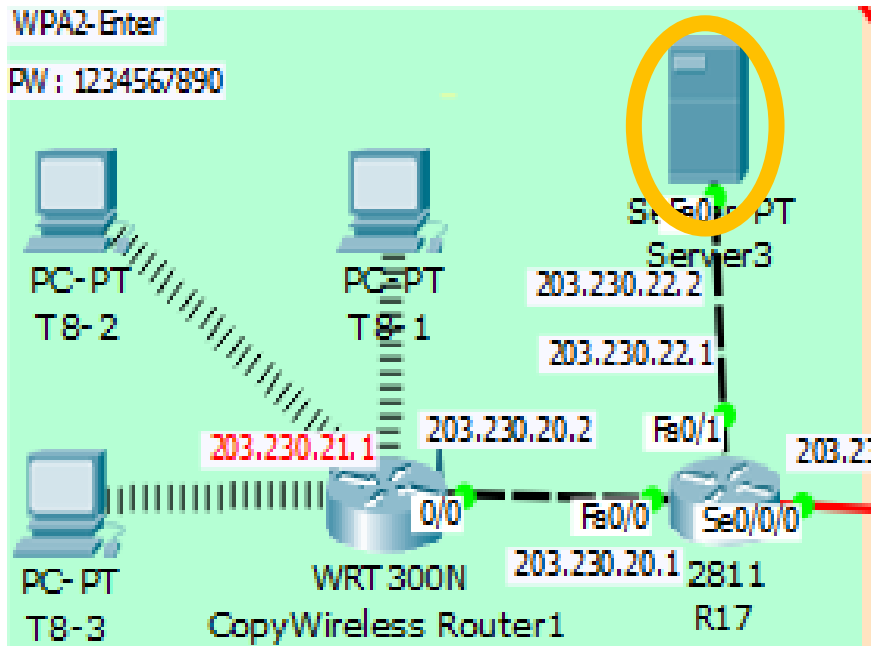
User ID: test3

Password: []

Encryption Type: AES

아이디/비밀번호 입력

6. 무선LAN - WPA-Enter 설정



① Server AAA 설정

AAA

Service On Off Radius Port

Network Configuration

Client Name Client IP

Secret ServerType Radius

	Client Name	Client IP	Server Type	Key	
1	WRT300N	203.230.20.2	Radius	1234567890	Add
					Save
					Remove

아이디/비밀번호 생성

User Setup

Username Password

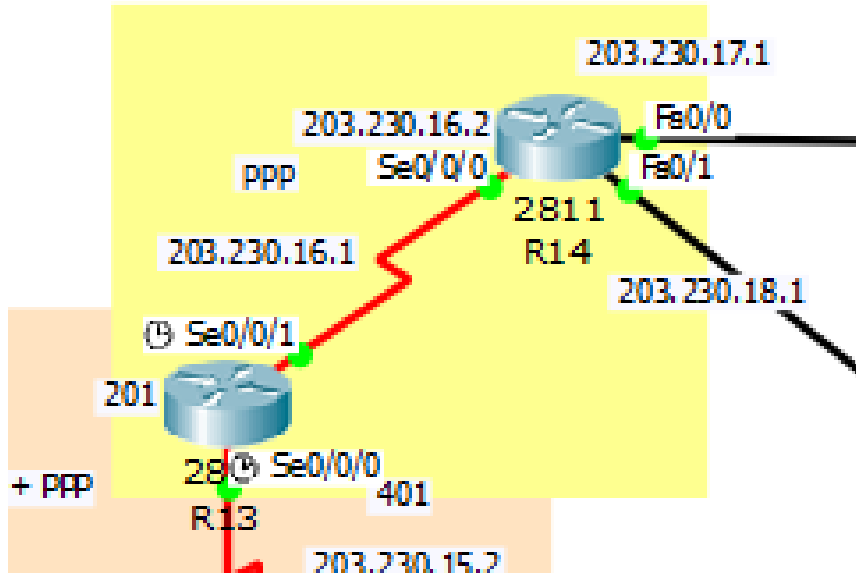
	Username	Password	
1	test1	test1	Add
2	test2	test2	Save
3	test3	test3	Remove

7. WAN

? WAN 이란?

- LAN과 MAN을 포괄하는 광역 네트워크
- 라우터, 스위치 뿐만 아니라 다양한 장비들이 사용됨
- 다양한 접속기술과 접속장치들을 통해 네트워크를 구성

7. WAN - PPP PAP 설정



```
R13(config)#username R14 password yong
```

```
R13(config)#int s0/0/1
```

```
R13(config-if)#encapsulation ppp
```

```
R13(config-if)#ppp authentication pap
```

```
R13(config-if)#ppp pap sent-username R13 password yong
```

```
R14(config)#username R13 password yong
```

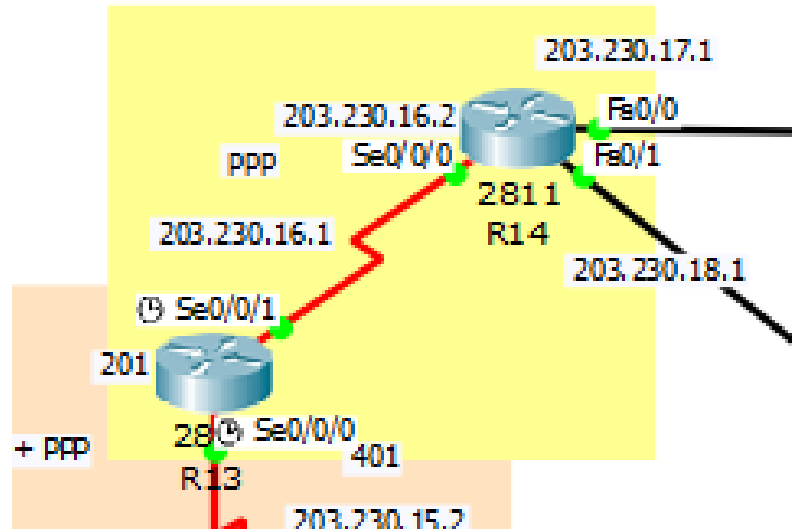
```
R14(config)#int s0/0/0
```

```
R14(config-if)#encapsulation ppp
```

```
R14(config-if)#ppp authentication pap
```

```
R14(config-if)#ppp pap sent-username R14 password yong
```

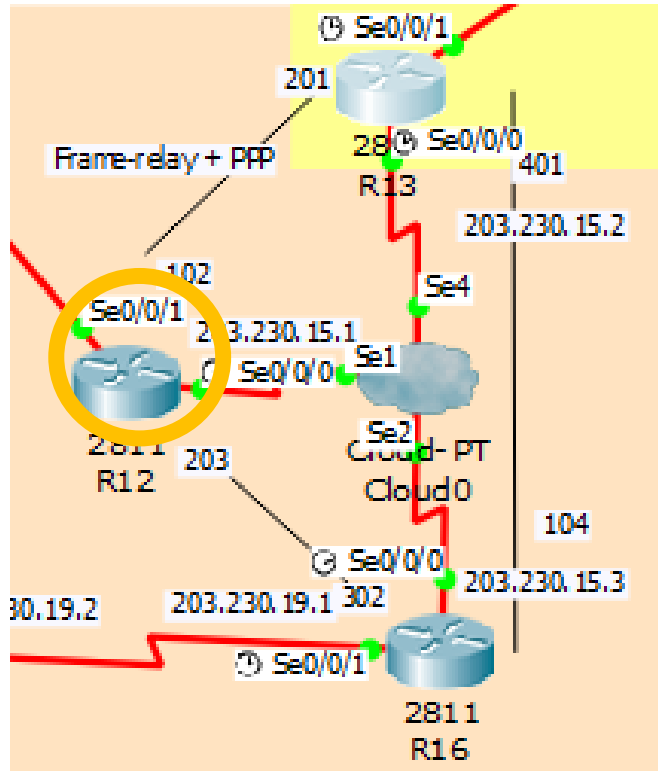
7. WAN - PPP PAP 설정



```
R13(config)#do show int s0/0/1
Serial0/0/1 is up, line protocol is up (connected)
Hardware is HD64570
Internet address is 203.230.16.1/24
MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
    encapsulation PPP, loopback not set, keepalive set (10 sec)
```

캡슐화방식이 PPP로 변경

7. WAN – 프레임릴레이 설정



```
R12(config)#int s0/0/0
```

```
R12(config-if)#ip add 203.230.15.1 255.255.255.0
```

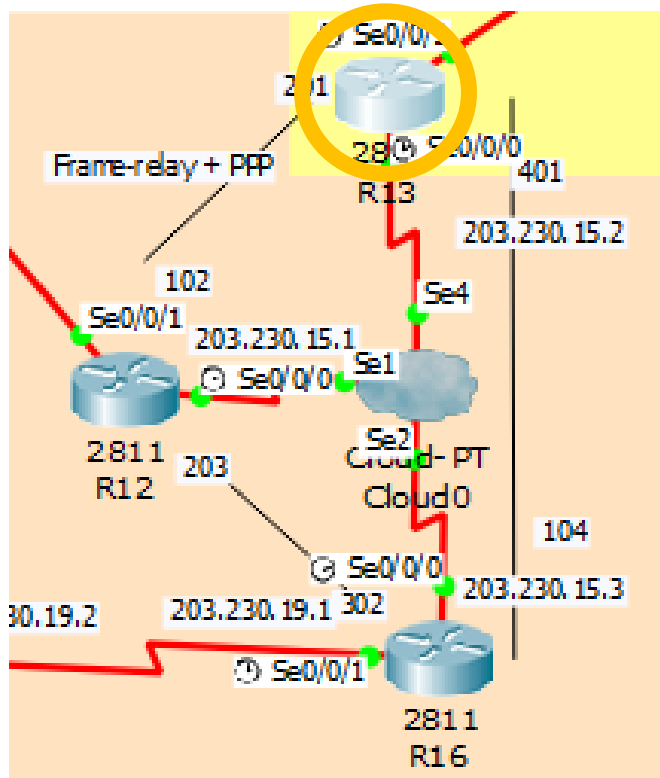
```
R12(config-if)#encapsulation frame-relay
```

```
R12(config-if)#frame-relay map ip 203.230.15.2 102 broadcast
```

```
R12(config-if)#frame-relay map ip 203.230.15.3 203 broadcast
```

```
R12(config-if)#no shutdown
```

7. WAN – 프레임릴레이 설정



```
R13(config)#int s0/0/0
```

```
R13(config-if)#ip add 203.230.15.2 255.255.255.0
```

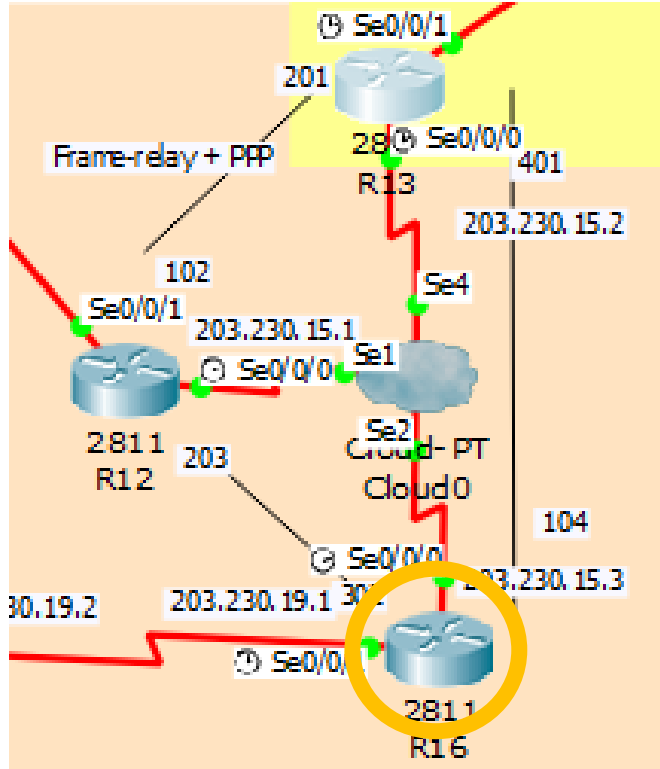
```
R13(config-if)#encapsulation frame-relay
```

```
R13(config-if)#frame-relay map ip 203.230.15.1 201 broadcast
```

```
R13(config-if)#frame-relay map ip 203.230.15.3 401 broadcast
```

```
R13(config-if)#no shutdown
```

7. WAN – 프레임릴레이 설정



```
R14(config)#int s0/0/0
```

```
R14(config-if)#ip add 203.230.15.3 255.255.255.0
```

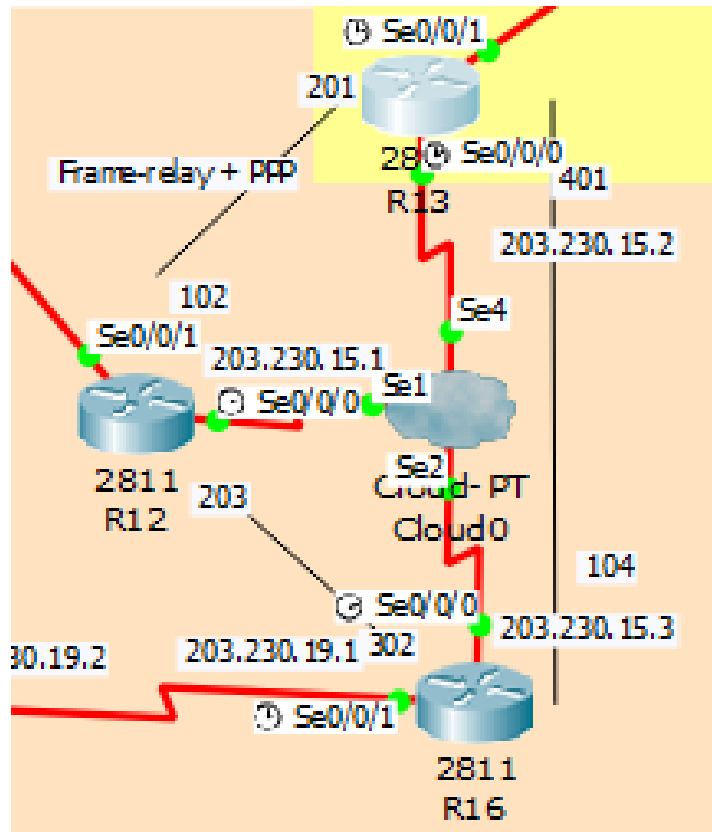
```
R14(config-if)#encapsulation frame-relay
```

```
R14(config-if)#frame-relay map ip 203.230.15.1 302 broadcast
```

```
R14(config-if)#frame-relay map ip 203.230.15.2 104 broadcast
```

```
R14(config-if)#no shutdown
```

7. WAN – 프레임릴레이 DLCI 설정



① Serial1 설정

INTERFACE	DLCI	Name
Serial1	102	R12-R13
Serial2	203	R12-R16
Serial3	401	R12-R16

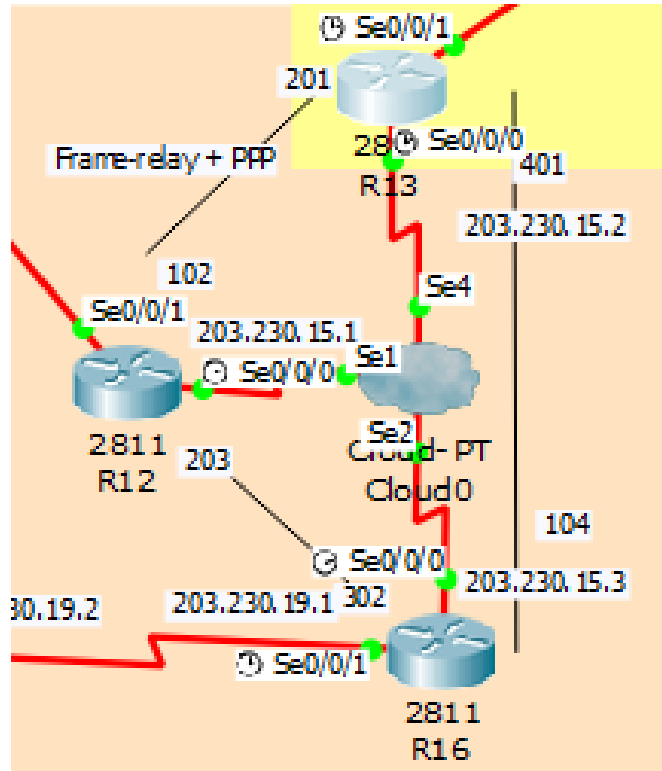
② Serial4 설정

INTERFACE	DLCI	Name
Serial1	201	R13-R12
Serial2	401	R13-R16
Serial3	104	R13-R16

③ Serial2 설정

INTERFACE	DLCI	Name
Serial1	302	R16-R12
Serial2	104	R16-R13
Serial3	104	R16-R13

7. WAN – 프레임릴레이 설정



① Frame Relay 설정

Cloud0

Physical Config

GLOBAL

- Settings
- TV Settings

CONNECTIONS

- Frame Relay
- DSL
- Cable

INTERFACE

- Serial1
- Serial2
- Serial3
- Serial4

Frame Relay

Serial1 R12-R13 <-> Serial1 R12-R13

Port	Sublink	Port	Sublink
1	Serial1 R12-R13	Serial4 R13-R12	R13-R12
2	Serial1 R12-R16	Serial2 R16-R12	R16-R12
3	Serial4 R13-R16	Serial2 R16-R13	R16-R13

8. VPN

? VPN 이란?

- VPN의 응용

- 안전한 기업 업무환경 구축

- VPN의 보안 기능

- 암호프로토콜 이용하여 인증, 보안, 기밀성 유지

- 키의 이용

- (1) 대칭키 암호화 (Symmetric Encryption) : PSK(Pre-shared key) – 공유키 이용

- 디피-헬만(Diffie-Hellman) – 온라인 키합의 방식

- (2) 비대칭키 암호화 (Asymmetric Encryption) : 인증서 이용

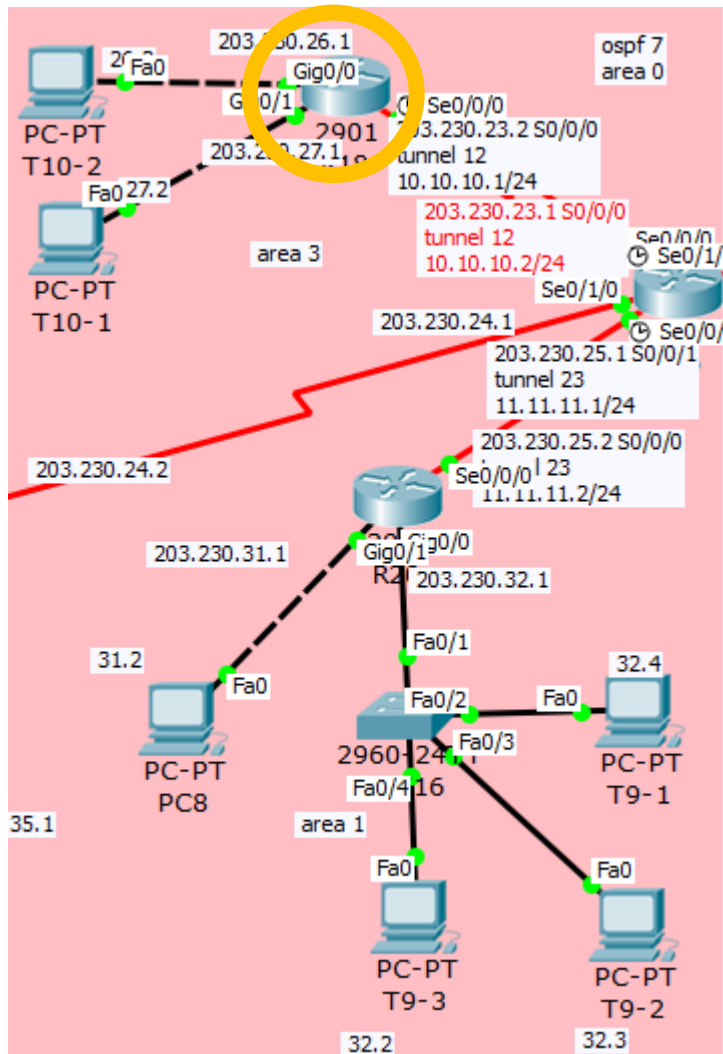
- 암호 알고리즘

- (1) 대칭키 암호: DES, 3DES, AES

- (2) 비대칭키 암호: RSA

- (3) 해쉬암고리즘: HMAC, MD5, SHA-1

8. VPN – GRE + IPSec VPN



① tunnel , License 설정

```
R18(config)#int tunnel 12
```

```
R18(config-if)#ip add 10.10.10.1 255.255.255.0
```

```
R18(config-if)#tunnel source s0/0/0
```

```
R18(config-if)#tunnel destination 203.230.23.1
```

```
R18(config-if)#exit
```

```
R18(config)#license boot module c2900 technology-  
package securityk9
```

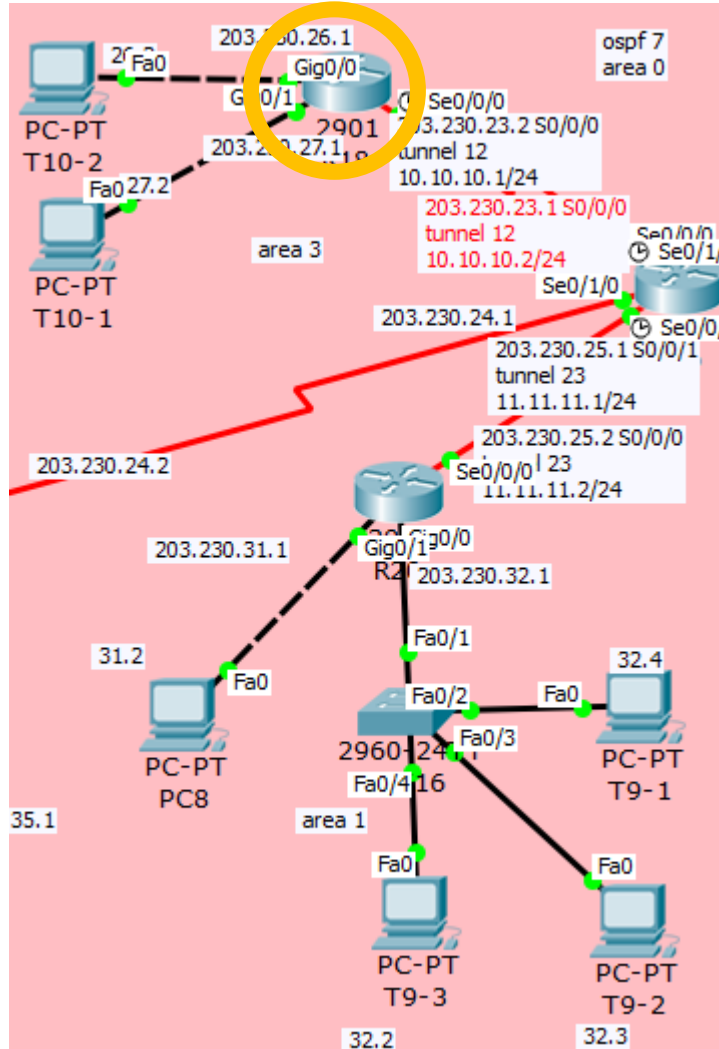
```
R18(config)#do write
```

```
R18(config)#exit
```

```
R18#reload
```

8. VPN – GRE + IPsec VPN

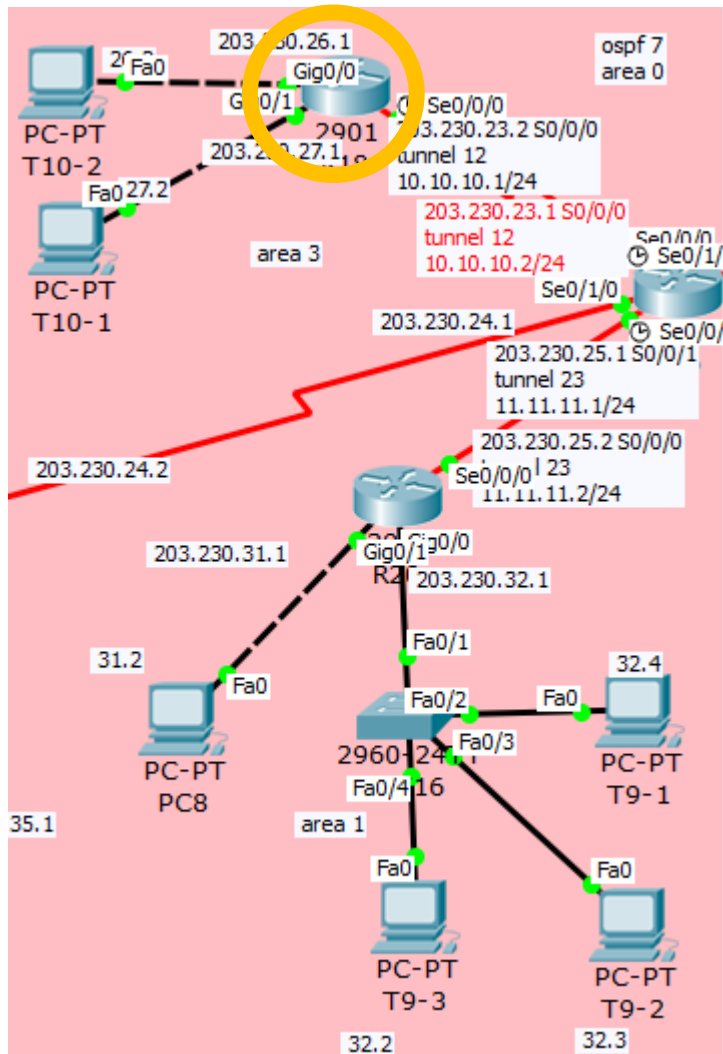
② 라우터 설정



```
R1(config)#crypto isakmp policy 10
R1(config-isakmp)#encryption aes 256
R1(config-isakmp)#authentication pre-share
R1(config-isakmp)#lifetime 36000
R1(config-isakmp)#hash sha
R1(config-isakmp)#exit
R1(config)#crypto ipsec transform-set STRONG esp-3des
esp-md5-hmac
R1(config)#crypto isakmp key cisco123 address 0.0.0.0
0.0.0.0
R1(config)#crypto map VPN1 110 ipsec-isakmp
R1(config-crypto-map)#set peer 203.230.25.1
```

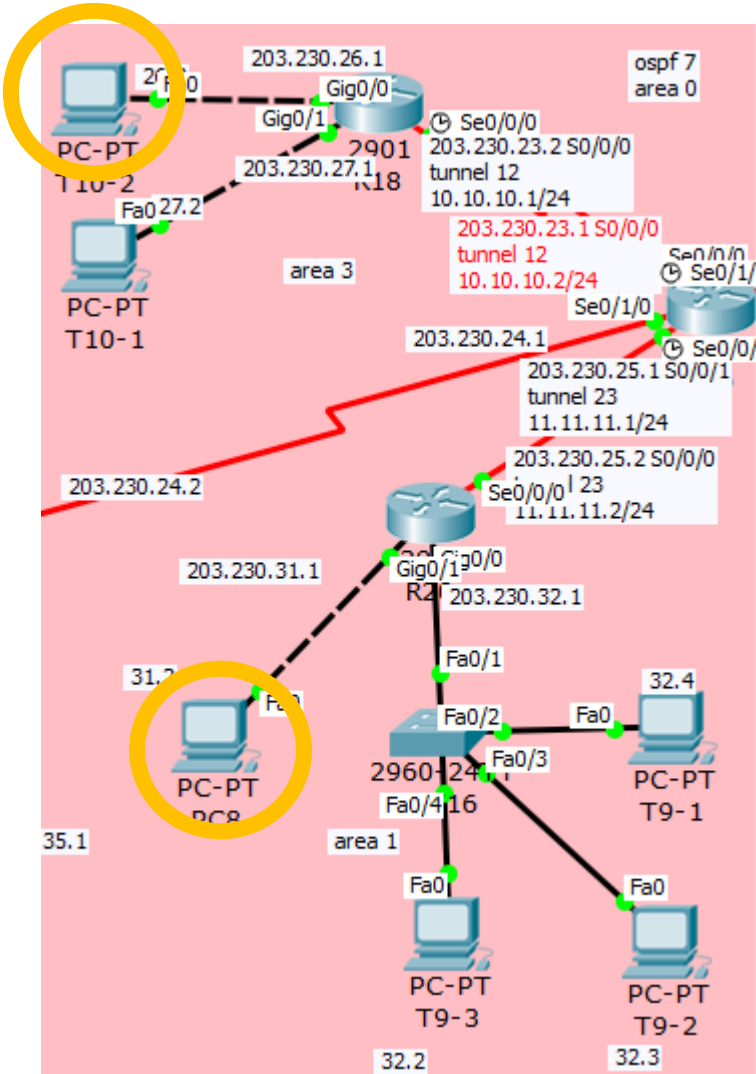
8. VPN – GRE + IPsec VPN

③ 라우터 설정



```
R1(config-crypto-map)#set transform-set STRONG
R1(config-crypto-map)#match address 110
R1(config-crypto-map)#exit
R1(config)#access-list 110 permit gre host 203.230.25.2
host 203.230.25.1
R1(config)#int s0/0/0
R1(config-if)#crypto map VPN1
R1(config-if)#exit
R1(config)#router ospf 7
R1(config-router)#network 203.230.25.1 0.0.0.0 area 0
R1(config-router)#network 203.230.27.1 0.0.0.0 area 0
R1(config-router)#network 203.230.23.2 0.0.0.0 area 0
R1(config-router)#network 10.10.10.1 0.0.0.0 area 0
R1(config-router)#exit
```

8. VPN – GRE + IPSec VPN



```

PC>tracert 203.230.31.2

Tracing route to 203.230.31.2 over a maximum of 30 hops:

  1  4 ms      0 ms      0 ms      203.230.26.1
  2  1 ms      2 ms      2 ms      10.10.10.2
  3  2 ms      11 ms     2 ms      11.11.11.2
  4  *          2 ms      3 ms      203.230.31.2
    
```

```

PC>tracert 203.230.26.2

Tracing route to 203.230.26.2 over a maximum of 30 hops:

  1  3 ms      0 ms      2 ms      203.230.31.1
  2  2 ms      3 ms      9 ms      11.11.11.1
  3  85 ms     5 ms      4 ms      10.10.10.1
  4  15 ms     87 ms     50 ms     203.230.26.2
    
```

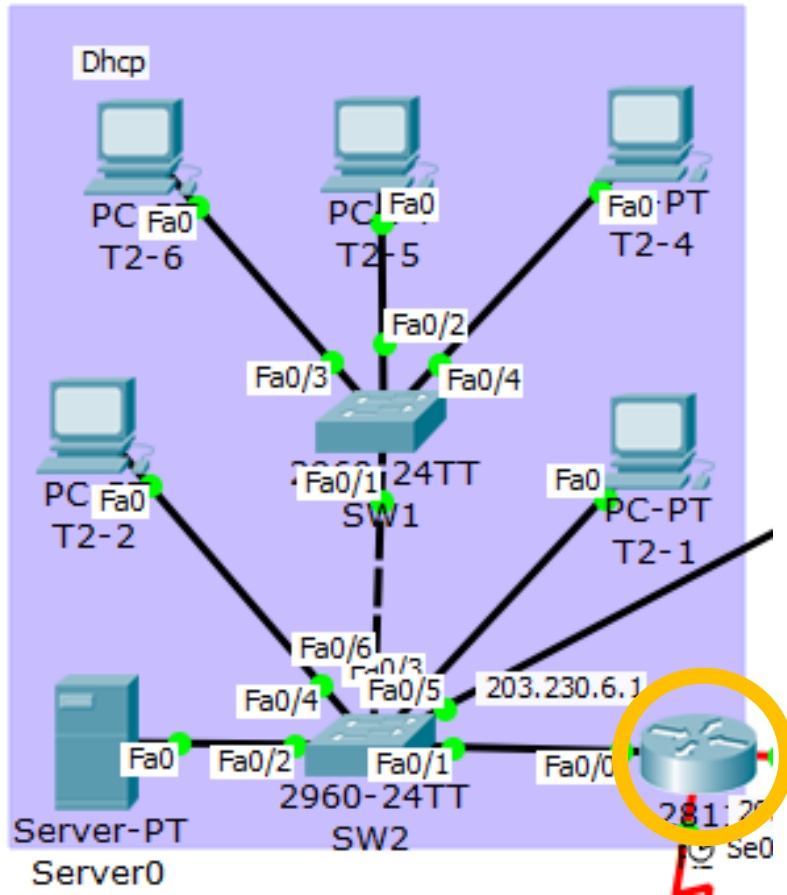
VPN을 통한
연결 확인

9. DHCP

? DHCP 이란?

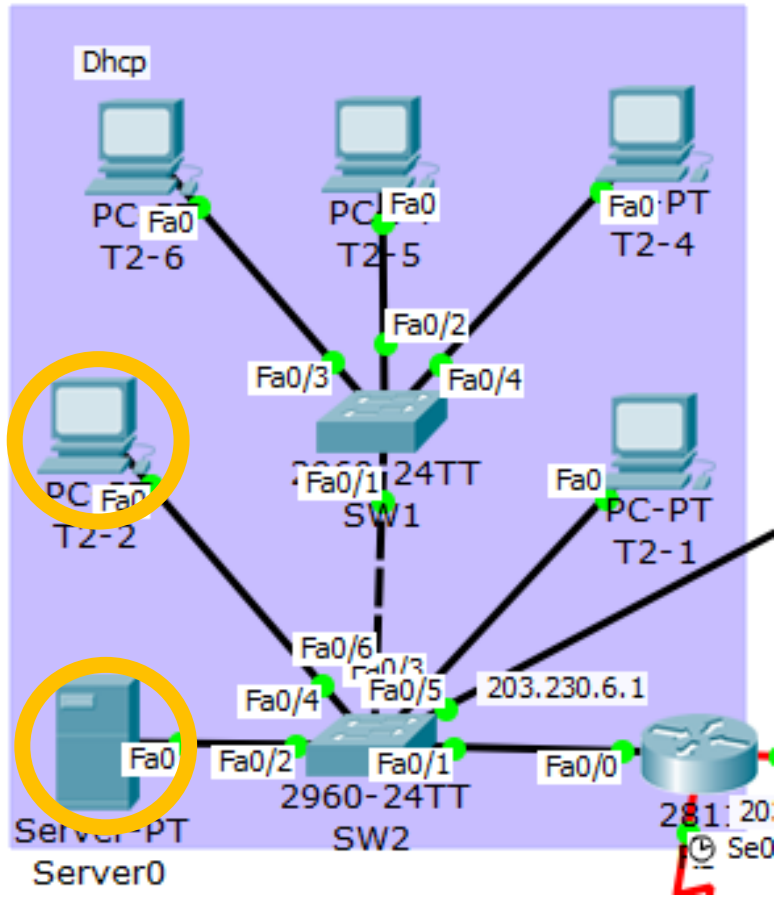
- 동적 호스트 구성 프로토콜
- TCP/IP 통신을 실행하기 위해 필요한 설정정보를 자동적으로 할당하고 관리하기 위한 통신 규약 (RFC 1541)
- IP주소의 자동관리로 관리의 편리성 향상
- IP주소의 가용성을 높여줌 - 할당만 하고 사용하지 않는 주소를 줄임

9. DHCP



```
R5(config)#interface FastEthernet0/0
R5(config-if)#ip address 203.230.6.1 255.255.255.0
R5(config-if)#no shutdown
R5(config)#ip dhcp excluded-address 203.230.6.1
R5(config)#ip dhcp excluded-address 203.230.6.255
R5(config)#ip dhcp pool yong
R5(dhcp-config)#network 203.230.6.0 255.255.255.0
R5(dhcp-config)#dns-server 1.1.1.1
R5(dhcp-config)#default-router 203.230.6.1
R5(dhcp-config)#exit
```

9. DHCP



IP Configuration	
<input checked="" type="radio"/> DHCP	<input type="radio"/> Static
DHCP request successful.	
IP Address	203.230.6.8
Subnet Mask	255.255.255.0
Default Gateway	203.230.6.1
DNS Server	1.1.1.1

주소 할당

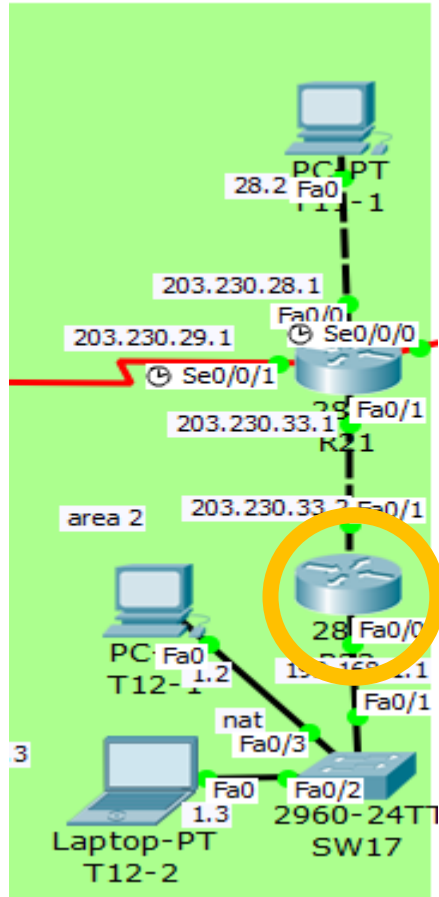
<input checked="" type="radio"/> DHCP	<input type="radio"/> Static
IP Address	203.230.6.4
Subnet Mask	255.255.255.0
Default Gateway	203.230.6.1
DNS Server	1.1.1.1

10. NAT

? NAT 이란?

- 사설주소를 사용하는 장치가 공중네트워크와 통신하고자 할 때 사설IP주소를 공인IP주소로 변환해 주는 기술
- 내부 네트워크에서는 사설 IP주소를 사용하고, 외부 네트워크로 나가는 경우 공인 IP주소로 변환돼서 나가게 하는 기술

10. NAT



```
R23(config)#router ospf 7
```

```
R23(config-router)#network 192.168.1.0 0.0.0.255 a 2
```

```
R23(config-router)#network 203.230.33.0 0.0.0.255 a 2
```

```
R23(config-router)#exit
```

```
R23(config)#ip nat inside source static 192.168.1.2
```

```
203.230.33.5
```

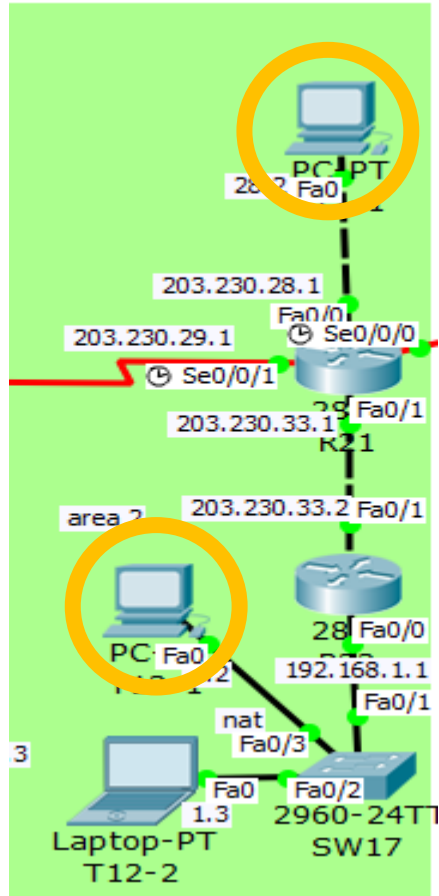
```
R1(config)#int fa0/0
```

```
R1(config-if)#ip nat inside
```

```
R1(config-if)#int fa0/1
```

```
R1(config-if)#ip nat outside
```

10. NAT



Pinging 203.230.28.2 with 32 bytes of data:

```
Reply from 203.230.28.2: bytes=32 time=0ms TTL=126
Reply from 203.230.28.2: bytes=32 time=0ms TTL=126
Reply from 203.230.28.2: bytes=32 time=1ms TTL=126
Reply from 203.230.28.2: bytes=32 time=0ms TTL=126
```

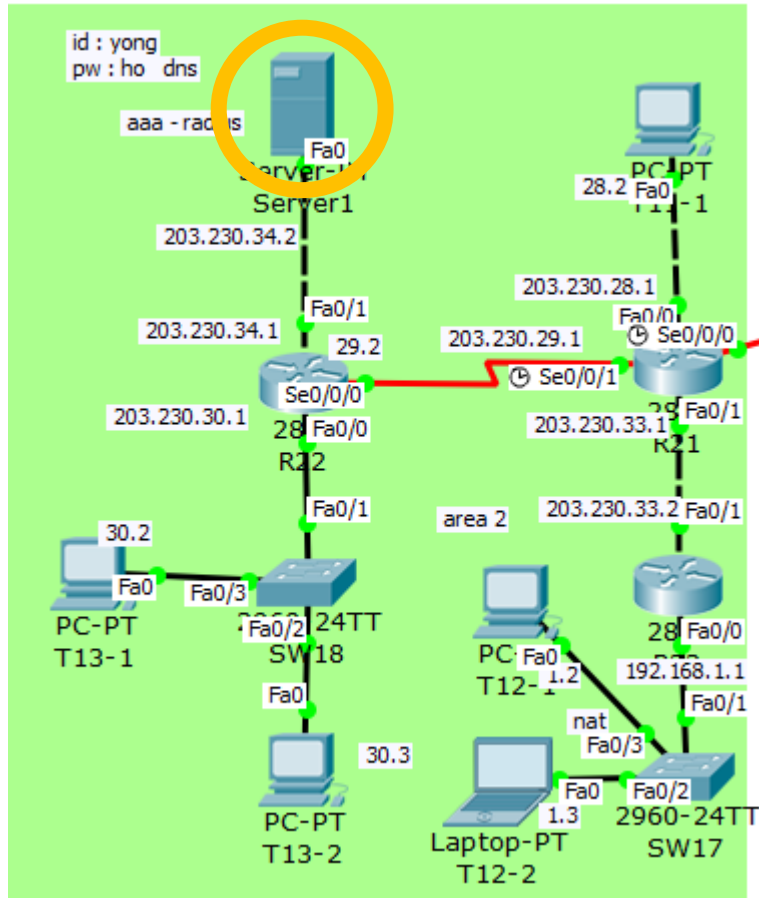
Router(config-if)#do show ip nat translations

Pro	Inside global	Inside local	Outside local	Outside global
icmp	203.230.33.5:10	192.168.1.2:10	203.230.28.2:10	203.230.28.2:10
icmp	203.230.33.5:11	192.168.1.2:11	203.230.28.2:11	203.230.28.2:11
icmp	203.230.33.5:12	192.168.1.2:12	203.230.28.2:12	203.230.28.2:12
icmp	203.230.33.5:13	192.168.1.2:13	203.230.28.2:13	203.230.28.2:13
icmp	203.230.33.5:8	192.168.1.2:8	203.230.28.2:8	203.230.28.2:8
icmp	203.230.33.5:9	192.168.1.2:9	203.230.28.2:9	203.230.28.2:9
---	203.230.33.5	192.168.1.2	---	---

192.168.1.2 -> 203.230.33.5 로 변환되서 핑

11. Server 기능

11. Server 기능 - DNS



① Server DNS 설정

DNS

DNS Service On Off

Resource Records

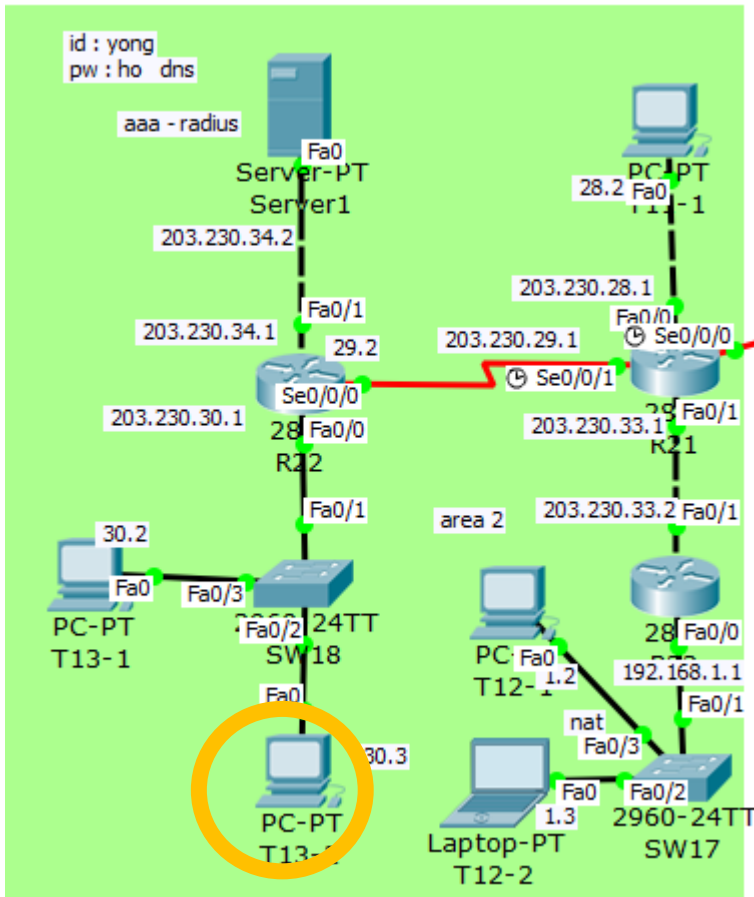
Name Type **A Record**

Address

No.	Name	Type	Detail
0	crisjoongbu.ac.kr	A Record	203.230.34.2
1	www.naver.com	A Record	203.230.34.2

11. Server 기능 - DNS

② PC DNS 설정 / 확인



DHCP Static

IP Address 203.230.30.3

Subnet Mask 255.255.255.0

Default Gateway 203.230.30.1

DNS Server 203.230.34.2

Web Browser

URL http://cris.joongbu.ac.kr

Go

Cisco Packet Tracer

Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind V Open.

Quick Links:

[A small page](#)

[Copyrights](#)

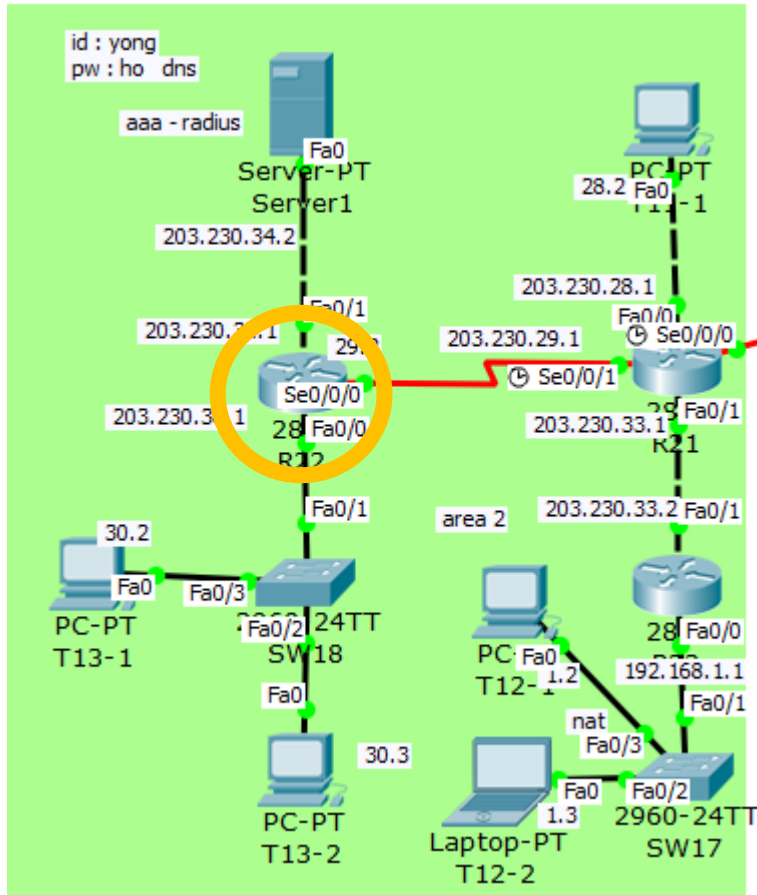
[Image page](#)

[Image](#)

Server TEST

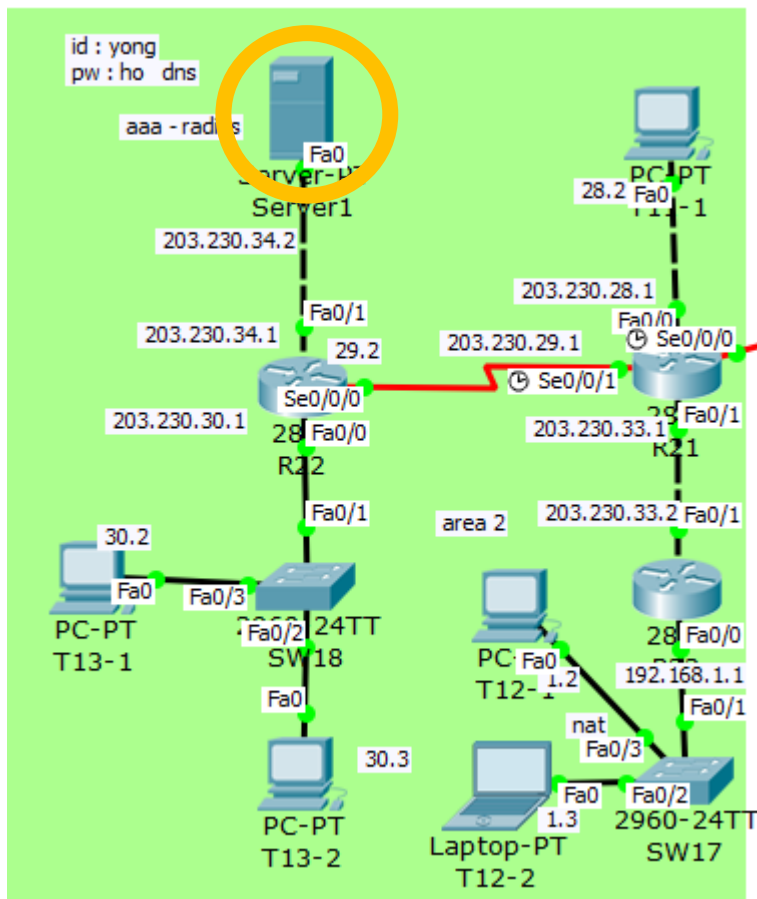
11. Server 기능 - AAA

① 라우터 Radius 설정



```
R22(config)#username admin password yong
R22(config)#aaa new-model
R22(config)#aaa authentication login default group
radius local
R22(config)#radius-server host 203.230.34.2
R22(config)#radius-server key yong
R22(config)#line console 0
R22(config-line)#login authentication default
R22(config-line)#exit
R22(config)#line vty 0 4
R22(config-line)#login authentication default
```

11. Server 기능 - AAA



② Server Radius 설정

AAA

Service On Off Radius Port

Network Configuration

Client Name Client IP

Secret ServerType Radius

Client Name	Client IP	Server Type	Key	Add
1 R22	203.230.34.1	Radius	yong	Save
				Remove

User Setup

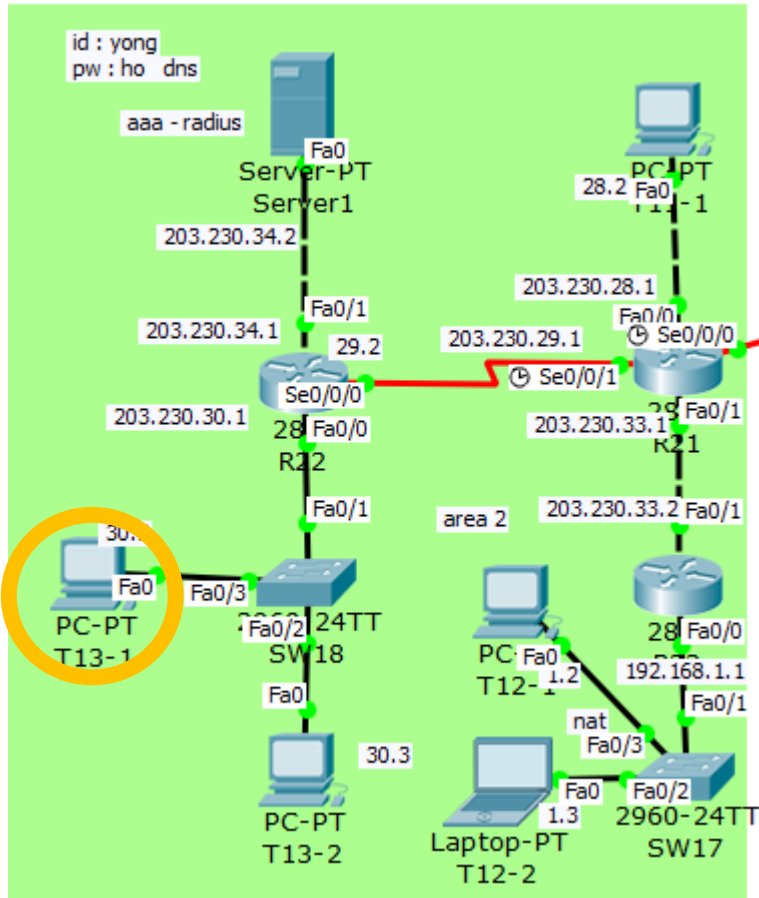
Username Password

Username	Password	Add
1 yong	ho	Save
		Remove

라우터 등록

계정 등록

11. Server 기능 - AAA



③ telnet 접속 확인

Command Prompt

```
Packet Tracer PC Command Line 1.0  
PC>telnet 203.230.34.1  
Trying 203.230.34.1 ...Open
```

텔넷 접속

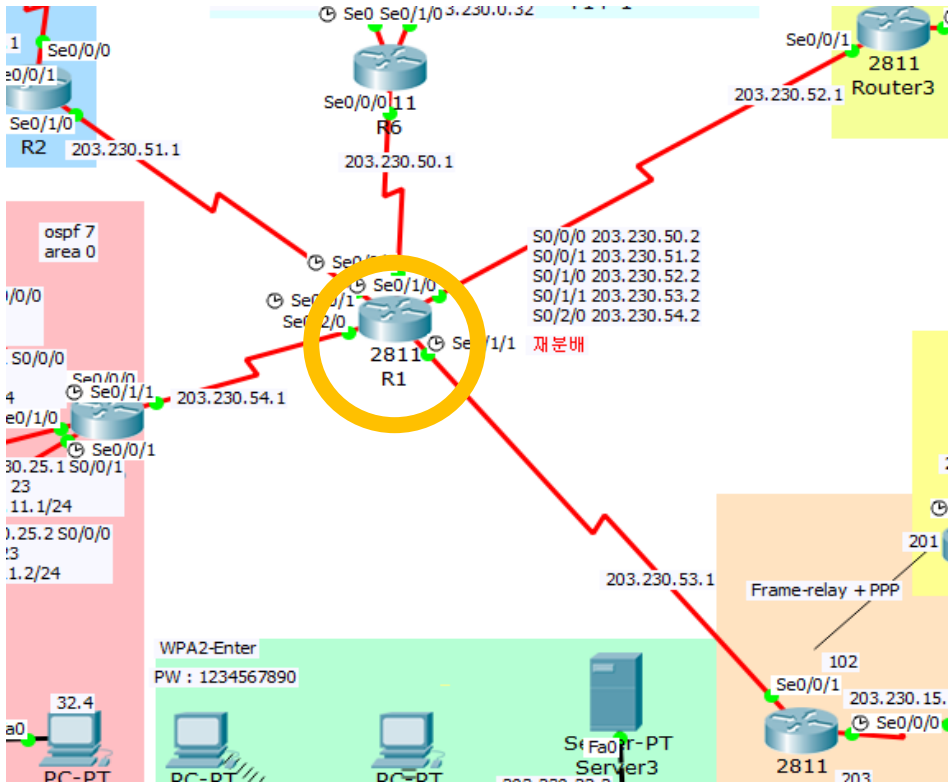
```
User Access Verification
```

```
Username: yong  
Password:  
R22>ho|
```

계정 등록

12. 재분배

12. 재분배



① RIPv2

```
Router(config)#router rip
```

```
Router(config-router)#version 2
```

```
Router(config-router)#redistribute eigrp 3 metric 4
```

```
Router(config-router)#redistribute ospf 7 metric 4
```

② OSPF

```
Router(config)#router ospf 7
```

```
Router(config-router)#version 2
```

```
Router(config-router)#redistribute eigrp 3 subnets
```

```
Router(config-router)#redistribute rip subnets
```

③ Eigrp

```
Router(config)#router eigrp 3
```

```
Router(config-router)#redistribute rip metric 1544 10 255 1 1500
```

```
Router(config-router)#redistribute ospf 7 metric 1544 10 255 1 1500
```

감사합니다.
