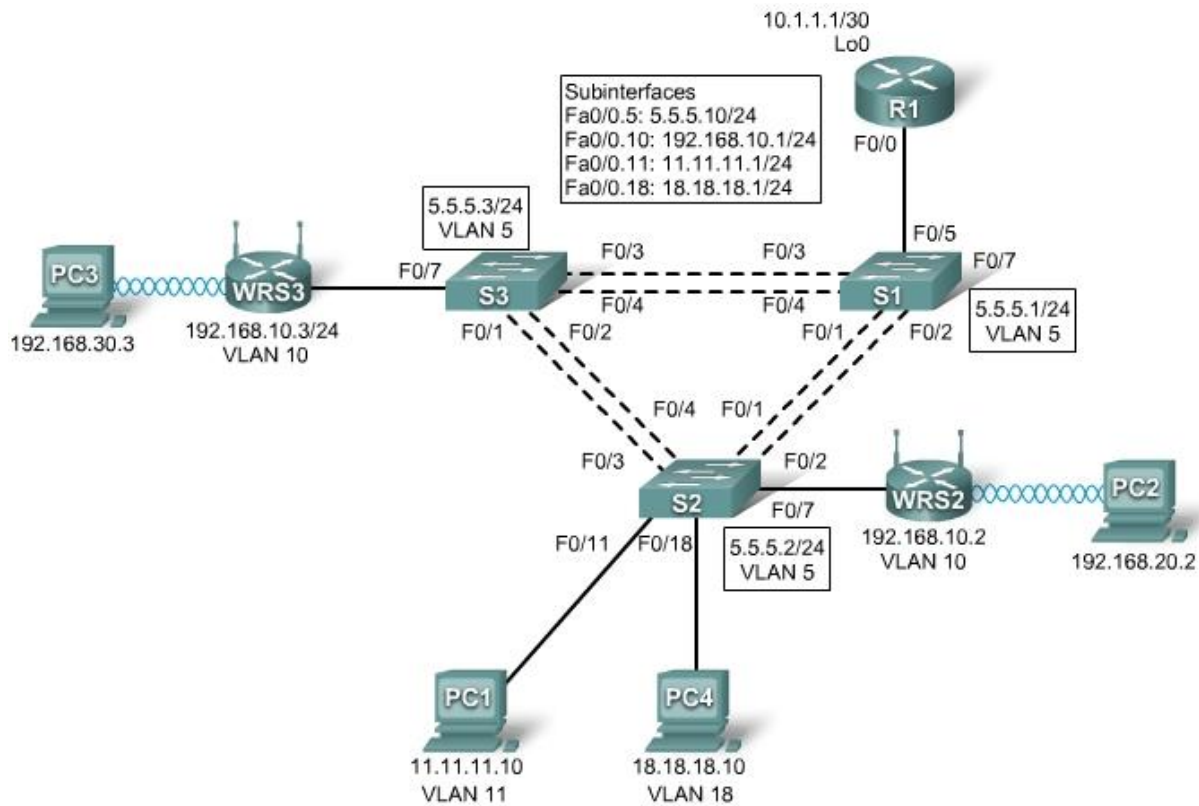


Felix Rohrer

## PT Activity 7.5.3: Troubleshooting Wireless WRT300N

### Topology Diagram



## Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	Fa0/0.5	5.5.5.10	255.255.255.0	N/A
	Fa0/0.10	192.168.10.1	255.255.255.0	N/A
	Fa0/0.11	11.11.11.1	255.255.255.0	N/A
	Fa0/0.18	18.18.18.1	255.255.255.0	N/A
	Lo0	10.1.1.1	255.255.255.252	N/A
WRS2	WAN	192.168.10.2	255.255.255.0	192.168.10.1
	LAN/Wireless	192.168.20.1	255.255.255.0	N/A
WRS3	WAN	192.168.10.3	255.255.255.0	192.168.10.1
	LAN/Wireless	192.168.30.1	255.255.255.0	N/A
PC1	NIC	11.11.11.10	255.255.255.0	11.11.11.1
PC4	NIC	18.18.18.10	255.255.255.0	18.18.18.1
S1	VLAN 5	5.5.5.1	255.255.255.0	N/A
S2	VLAN 5	5.5.5.2	255.255.255.0	N/A
S3	VLAN 5	5.5.5.3	255.255.255.0	N/A

## Learning Objectives

- Troubleshoot the network.
- Verify connectivity.

## Scenario

In this activity, a basic network and wireless network have been configured improperly. You must find and correct the misconfigurations based on the minimum network specifications provided by your company.

## Task 1: Troubleshoot the Network

Examine the routers and switches; determine any errors in the network.

Note: Packet Tracer will not grade the allowed VLANs for trunking mode.

The wireless routing requirements are as follows:

- Connections via the IP addresses shown in the topology diagram.
- 30 clients can get an IP address through DHCP at a single time.
- Wireless clients must be authenticated using WEP with a key of **5655545251**.
- Ping requests coming from outside WAN ports of the Linksys routers to their inside LAN/wireless IP addresses (192.168.30.1) must be successful.
- DHCP must assign PC2 and PC3 their proper IP addresses.

R1            Subinterface Fa0/0.10 von 192.168.11.1 auf 192.168.10.1 korrigieren  
R1            Subinterface Fa0/0.11 mit encapsulation dot1q 11 und IP 11.11.11.1 erfassen

S1            VLAN 18 erfassen  
S1            Interfaces Fa0/1 – Fa0/5 Switchport mode Trunk, Allowed VLANs 5,10,11,18

S2            Interfaces Fa0/1 – Fa0/4 Switchport mode Trunk  
S2            Interface Fa0/7 Trunk löschen und für Access VLAN 10 korrigieren  
S2            Interface Fa0/11 Port Security aktivieren (switchport port-security)  
S2            Interface Fa0/11 Sticky-MAC Adresse auf diejenige von PC1 korrigieren  
S2            Interface Fa0/18 Sticky-MAC Adresse auf diejenige von PC4 korrigieren

S3            Interface Vlan 5 IP von 6.6.6.3 auf 5.5.5.3 korrigieren  
S3            Interface Fa0/7 Trunk löschen und für Access VLAN 10 korrigieren

PC2            mit WRS2 verbinden  
WRS2          WAN IP von 192.168.10.1 auf 192.168.10.2 korrigieren  
WRS2          WAN Gateway von 192.168.10.10 auf 192.168.10.1 korrigieren  
WRS2          DHCP Start IP von 192.168.20.10 auf 192.168.20.2 korrigieren  
WRS2          DHCP Max User von 64 auf 30 korrigieren  
PC2            ipconfig /renew  
WRS2          Wireless Security WEP aktivieren und Key 5655545251 eintragen  
PC2            neu mit WRS2 verbinden (WEP Key eintragen)

PC3            mit WRS3 verbinden (WEP Key 5655545251)  
WRS3          WAN IP von 192.168.10.2 auf 192.168.10.3 korrigieren  
WRS3          Router IP von 192.168.0.1 auf 192.168.30.1 korrigieren  
WRS3          DHCP Start IP von 192.168.30.2 auf 192.168.30.3 korrigieren  
PC3            ipconfig /renew

## Task 2: Verify Connectivity

Due to a bug, Packet Tracer does not allow for PC2 and PC3 to ping one another, however connectivity should exist in all other circumstances. If they do not, continue troubleshooting. All the PCs should be able to ping one another and R1. Your completion result should be 100%. If not, continue troubleshooting.

# R1

```
Current configuration : 1098 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1
!
spanning-tree mode pvst
!
interface Loopback0
 ip address 10.1.1.1 255.255.255.252
!
interface FastEthernet0/0
 no ip address
 duplex auto
 speed auto
!
interface FastEthernet0/0.5
 encapsulation dot1Q 5
 ip address 5.5.5.10 255.255.255.0
!
interface FastEthernet0/0.10
 encapsulation dot1Q 10
 ip address 192.168.10.1 255.255.255.0
!
interface FastEthernet0/0.11
 encapsulation dot1Q 11
 ip address 11.11.11.1 255.255.255.0
!
interface FastEthernet0/0.18
 encapsulation dot1Q 18
 ip address 18.18.18.1 255.255.255.0
!
interface FastEthernet0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 no ip address
 shutdown
!
interface Serial0/0/1
 no ip address
 shutdown
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
ip route 192.168.20.0 255.255.255.0 192.168.10.2
ip route 192.168.30.0 255.255.255.0 192.168.10.3
!
line con 0
!
line aux 0
!
line vty 0 4
 login
!
End
```

# S1

Current configuration : 1460 bytes

```
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S1
!
vtp mode transparent
spanning-tree mode pvst
!
vlan 5
!
vlan 10
!
vlan 11
!
vlan 18
!
interface FastEthernet0/1
  switchport trunk allowed vlan 5,10-18
  switchport mode trunk
!
interface FastEthernet0/2
  switchport trunk allowed vlan 5,10-18
  switchport mode trunk
!
interface FastEthernet0/3
  switchport trunk allowed vlan 5,10-18
  switchport mode trunk
!
interface FastEthernet0/4
  switchport trunk allowed vlan 5,10-18
  switchport mode trunk
!
interface FastEthernet0/5
  switchport trunk allowed vlan 5,10-11,18
  switchport mode trunk
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
```

```
interface FastEthernet0/10
!
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet1/1
!
interface GigabitEthernet1/2
!
interface Vlan1
  no ip address
  shutdown
!
interface Vlan5
  ip address 5.5.5.1 255.255.255.0
!
line con 0
!
line vty 0 4
  login
line vty 5 15
  login
end
```

## S2

Current configuration : 1824 bytes

```
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S2
!
vtp mode transparent
spanning-tree mode pvst
!
vlan 5
vlan 10
vlan 11
vlan 18
!
interface FastEthernet0/1
    switchport trunk allowed vlan 5,10-11,18
    switchport mode trunk
!
interface FastEthernet0/2
    switchport trunk allowed vlan 5,10-11,18
    switchport mode trunk
!
interface FastEthernet0/3
    switchport trunk allowed vlan 5,10-11,18
    switchport mode trunk
!
interface FastEthernet0/4
    switchport trunk allowed vlan 5,10-11,18
    switchport mode trunk
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
    switchport access vlan 10
    switchport mode access
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
    switchport access vlan 11
    switchport mode access
    switchport port-security
    switchport port-security mac-address sticky
```

```
switchport port-security mac-address sticky 00D0.BCE8.0B8A
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
switchport access vlan 18
switchport mode access
switchport port-security
switchport port-security mac-address sticky
switchport port-security mac-address sticky 00D0.BA7A.299D
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet1/1
!
interface GigabitEthernet1/2
!
interface Vlan1
no ip address
shutdown
!
interface Vlan5
ip address 5.5.5.2 255.255.255.0
!
line con 0
!
line vty 0 4
login
line vty 5 15
login
end
```



## S3

Current configuration : 1458 bytes

```
!  
version 12.2  
no service timestamps log datetime msec  
no service timestamps debug datetime msec  
no service password-encryption  
!  
hostname S3  
!  
vtp mode transparent  
!  
spanning-tree mode pvst  
!  
vlan 5  
!  
vlan 10  
!  
vlan 11  
!  
vlan 18  
!  
interface FastEthernet0/1  
  switchport trunk allowed vlan 5,10-11,18  
  switchport mode trunk  
!  
interface FastEthernet0/2  
  switchport trunk allowed vlan 5,10-11,18  
  switchport mode trunk  
!  
interface FastEthernet0/3  
  switchport trunk allowed vlan 5,10-11,18  
  switchport mode trunk  
!  
interface FastEthernet0/4  
  switchport trunk allowed vlan 5,10-11,18  
  switchport mode trunk  
!  
interface FastEthernet0/5  
!  
interface FastEthernet0/6  
!  
interface FastEthernet0/7  
  switchport access vlan 10  
  switchport mode access  
!  
interface FastEthernet0/8  
!  
interface FastEthernet0/9  
!  
interface FastEthernet0/10  
!
```

```
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet1/1
!
interface GigabitEthernet1/2
!
interface Vlan1
  no ip address
  shutdown
!
interface Vlan5
  ip address 5.5.5.3 255.255.255.0
!
!
line con 0
!
line vty 0 4
  login
line vty 5 15
  login
!
!
end
```