

## Packet Tracer - Troubleshooting Challenge

### Addressing Table

Device	Interface	IP Address / Prefix	Default Gateway
R1	G0/0	172.16.1.62 /26	N/A
		2001:db8:cafe::1/64	
		fe80::1	
	G0/1	172.16.1.126 /26	N/A
		2001:db8:cafe:1::1/64	
		fe80::1	
	G0/2	172.16.1.254 /25	N/A
		2001:db8:cafe:2::1/64	
		fe80::1	
	S0/0/1	10.0.0.2 /30	N/A
		2001:db8:2::1/64	
		fe80::1	
Main	S0/0/0	209.165.200.226 /30	N/A
		2001:db8:1::1/64	
		fe80::2	
	S0/0/1	10.0.0.1 /30	N/A
		2001:db8:2::2/64	
		fe80::2	
S1	VLAN 1	172.16.1.61 /26	172.16.1.62
S2	VLAN 1	172.16.1.125 /26	172.16.1.126
S3	VLAN 1	172.16.1.253 /25	172.16.1.254
IT	NIC	172.16.1.1 /26	172.16.1.62
		2001:db8:cafe::2/64	fe80::1
		fe80::2	
Marketing	NIC	172.16.1.65 /26	172.16.1.126
		2001:db8:cafe:1::2/64	fe80::1
		fe80::2	
R&D	NIC	172.16.1.129 /25	172.16.1.254
		2001:db8:cafe:2::2/64	fe80::1
		fe80::2	

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Device	Interface	IP Address / Prefix	Default Gateway
Web	NIC	64.100.0.3 /29	64.100.0.1
		2001:db8:acad::3/64	fe80::1
		fe80::2	

### Objectives

- Troubleshoot common issues in a LAN.

### Background / Scenario

After an update to the network, some devices were misconfigured. You must correct the configurations and verify that all the PCs can access the Web server, R1, and the switches. In addition, all PCs should be able to access R1 using SSH. You should verify connectivity for both IPv4 and IPv6 except for the switches.

### Instructions

Router R1 and all the switches have been preconfigured with the following:

- Enable password: **Ciscoenpa55**
- Console password: **Ciscoconpa55**
- Admin username and secret for SSH: **Admin1/Admin1pa55**

Required number of hosts per subnet:

- IT: 50 hosts
- Marketing: 50 hosts
- R&D: 100 hosts

If all configuration problems have been fixed, all devices should be able to ping each other and the web server.

### R1 Configuration

Login R1 with passwords:

Console password: Ciscoconpa55

Enable password: Ciscoenpa55

```
interface GigabitEthernet0/1
ip address 172.16.1.126 255.255.255.192
username Admin1 secret Admin1pa55
line vty 0 4
transport input ssh
```

### S1 Configuration

No Change

## S2 Configuration

### Login S2 with passwords:

Console password: Ciscoconpa55

Enable password: Ciscoenpa55

```
interface Vlan1
```

```
ip address 172.16.1.125 255.255.255.192
```

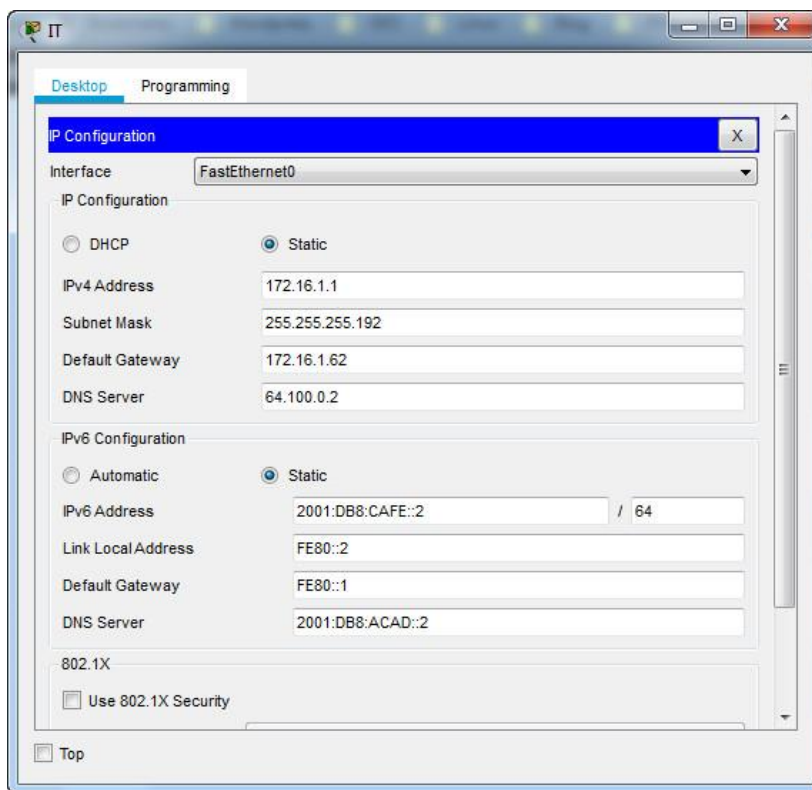
## S3 Configuration

No Change

## IT PC Configuration

Incorrect IPv4 address ~~change to~~> 172.16.1.1

Incorrect default gateway ~~change to~~> 172.16.1.62



## Marketing PC Configuration

No Change

## R&D PC Configuration

Incorrect IPv6 address ~~change to~~> 2001:db8:cafe:2::2/64

The screenshot shows a window titled "R&D" with two tabs: "Desktop" and "Programming". The "IP Configuration" window is open, showing settings for the "FastEthernet0" interface. The "IP Configuration" section has two radio buttons: "DHCP" (unselected) and "Static" (selected). Below this, the "IPv4 Configuration" section contains four text boxes: "IPv4 Address" (172.16.1.129), "Subnet Mask" (255.255.255.128), "Default Gateway" (172.16.1.254), and "DNS Server" (64.100.0.2). The "IPv6 Configuration" section also has two radio buttons: "Automatic" (unselected) and "Static" (selected). Below this, the "IPv6 Configuration" section contains four text boxes: "IPv6 Address" (2001:db8:cafe:2::2 / 64), "Link Local Address" (FE80::2), "Default Gateway" (FE80::1), and "DNS Server" (2001:DB8:ACAD::2). At the bottom, there is a section for "802.1X" with a checkbox "Use 802.1X Security" which is unchecked. A "Top" button is located at the bottom left of the window.

Interface	FastEthernet0
IP Configuration	
<input type="radio"/> DHCP <input checked="" type="radio"/> Static	
IPv4 Address	172.16.1.129
Subnet Mask	255.255.255.128
Default Gateway	172.16.1.254
DNS Server	64.100.0.2
IPv6 Configuration	
<input type="radio"/> Automatic <input checked="" type="radio"/> Static	
IPv6 Address	2001:db8:cafe:2::2 / 64
Link Local Address	FE80::2
Default Gateway	FE80::1
DNS Server	2001:DB8:ACAD::2
802.1X	
<input type="checkbox"/> Use 802.1X Security	

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