

17.8.3 Packet Tracer – Troubleshooting Challenge (Instructor Version)

Instructor Note: Red font color or gray highlights indicate text that appears in the instructor copy only.

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 |

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| Device | Interface | IP Address / Prefix | Default Gateway |
|--------|-----------|-----------------------|-----------------|
| Web | NIC | 2001:db8:cafe:2::2/64 | fe80::1 |
| | | fe80::2 | |
| | | 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 password 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.

Correct Device Configs

R1 Configuration

```
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
```

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S2 Configuration

```
interface Vlan1  
ip address 172.16.1.125 255.255.255.192
```

S3 Configuration

No Change

IT PC Configuration

```
Incorrect IPv4 address  
Incorrect default gateway
```

Marketing PC Configuration

No Change

R&D PC Configuration

```
Incorrect IPv6 address
```