

Packet Tracer - Troubleshoot Inter-VLAN Routing

# Addressing Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Device** | **Interface** | **IP Address** | **Subnet Mask** | **Default Gateway** | **VLAN** |
| R1 | G0/1.10 | 172.17.10.1 | 255.255.255.0 | N/A | VLAN 10 |
| G0/1.30 | 172.17.30.1 | 255.255.255.0 | N/A | VLAN 30 |
| PC1 | NIC | 172.17.10.10 | 255.255.255.0 | 172.17.10.1 | VLAN 10 |
| PC3 | NIC | 172.17.30.10 | 255.255.255.0 | 172.17.30.1 | VLAN 30 |

**Objectives**

**Part 1: Locate Network Problems Part 2: Implement the Solution**

**Part 3: Verify Network Connectivity**

# Scenario

In this activity, you will troubleshoot connectivity problems caused by improper configurations related to VLANs and inter-VLAN routing.

# Instructions

## Part 1: Locate the Network Problems

Examine the network and locate the source of any connectivity issues.

Commands you may find useful include:

R1# **show ip interface brief** R1# **show interface g0/1.10** R1# **show interface g0/1.30** S1# **show interface trunk**

* Test connectivity and use the necessary **show** commands to verify configurations.
* Verify that all configured settings match the requirements shown in the Addressing Table.
* List all of the problems and possible solutions in the **Documentation Table**. **Documentation Table**

|  |  |
| --- | --- |
| **Problems** | **Solutions** |
| PC3 default gateway is misconfigured | Change the default gateway from 172.17.10.1 to 172.17.30.1 |
| Interface G0/1 is not configured as a trunk port in S1 | Switchport mode trunk to interface G0/1 |
| In R1 subinterface G0/1.10 is administratively down | Give no shutdown to the subinterface G0/1.10 |

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| --- | --- |
| **Problems** | **Solutions** |
| Subinterface vlan are swapped on R1 for G0/1.10 and G0/1.30 | Remove and assign correct encapsulation and assign correct ip address for the subinterfaces. |

## Part 2: Implement the Solutions

Implement your recommended solutions.

## Part 3: Verify Network Connectivity

Verify the PCs can ping each other and R1. If not, continue to troubleshoot until the pings are successful.