Packet Tracer - Troubleshoot Inter-VLAN Routing

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# 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 |
| R1 | 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

## Locate the Network Problems

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

Open configuration window

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 |
| --- | --- |
| **GigabitEthernet0/1.10 administratively down** |  |
| **No trunk port set up** |  |
| **PC3 default gateway does not match VLAN 30 subinterface IP address** |  |
| **Encapsulation 802.1Q Virtual LAN, VLAN IDs are switched** |  |

## Implement the Solutions

Implement your recommended solutions.

Close configuration window

## Verify Network Connectivity

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

## Post your screenshots

Close Configuration Window for S2

On the PT Activity window, make sure that the completion grade is **100%**. Click on the **Check Results** button and select the **Assessment Items** tab. Take a screen shot of the whole window, showing the table of assessment items, and the score/item count. Own your photo by placing a watermark on your photo with your name and USC ID Number. Paste your screenshot below:

Graphical user interface, text, application, Teams

Description automatically generated

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