Packet Tracer - Inter-VLAN Routing Challenge

Cisco Systems, Inc.

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# Addressing Table

Diagram

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| Device | Interface | IP Address | Subnet Mask | Default Gateway |
| --- | --- | --- | --- | --- |
| R1 | G0/0 | 172.17.25.2 | 255.255.255.252 | N/A |
| R1 | G0/1.10 | 172.17.10.1 | 255.255.255.0 | N/A |
| R1 | G0/1.20 | 172.17.20.1 | 255.255.255.0 | N/A |
| R1 | G0/1.30 | 172.17.30.1 | 255.255.255.0 | N/A |
| R1 | G0/1.88 | 172.17.88.1 | 255.255.255.0 | N/A |
| R1 | G0/1.99 | 172.17.99.1 | 255.255.255.0 | N/A |
| S1 | VLAN 99 | 172.17.99.10 | 255.255.255.0 | 172.17.99.1 |
| PC1 | NIC | 172.17.10.21 | 255.255.255.0 | 172.17.10.1 |
| PC2 | NIC | 172.17.20.22 | 255.255.255.0 | 172.17.20.1 |
| PC3 | NIC | 172.17.30.23 | 255.255.255.0 | 172.17.30.1 |
| Server | NIC | 172.17.50.254 | 255.255.255.0 | 172.17.50.1 |

Blank Line - no additional information

# VLAN and Port Assignments Table

| VLAN | Name | Interface |
| --- | --- | --- |
| 10 | Faculty/Staff | F0/11-17 |
| 20 | Students | F0/18-24 |
| 30 | Guest(Default) | F0/6-10 |
| 88 | Native | G0/1 |
| 99 | Management | VLAN 99 |

Blank Line - no additional information

# Scenario

In this activity, you will demonstrate and reinforce your ability to implement inter-VLAN routing, including configuring IP addresses, VLANs, trunking, and subinterfaces.

# Instructions

Complete the Addressing Table by filling in the highlighted cells.

Configure the devices to meet the following requirements.

* Assign IP addressing to R1 and S1 based on the Addressing Table.
* Configure the default gateway on S1.
* Create, name, and assign VLANs on S1 based on the VLAN and Port Assignments Table. Ports should be in access mode. Your VLAN names should match the names in the table exactly.
* Configure G0/1 of S1 as a static trunk and assign the native VLAN.
* **All** ports that are not assigned to a VLAN should be disabled. Explain how this is done and why?

At gigabit Ethernet 0/2, use the command 'shutdown' to disable the ports on interface range f0/1–f0/5. If the port is allocated to a VLAN that does not exist, the port is disabled until the VLAN is formed.

Table

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* Configure inter-VLAN routing on R1 based on the Addressing Table.

Which type of inter-VLAN routing is implemented in this network?

Inter-VLAN Routing on Switch.

* Check and ensure all PCs have been configured with the necessary IP addressing information according to the Addressing Table.
* Verify connectivity. R1, S1, and all PCs should be able to ping each other and the server.

PC1 -> R1

Text

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PC1 -> S1

Text

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PC1 -> PC2

Text

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PC1 -> PC3

Text

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S1 -> R1

Text, letter

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R1 -> PC2

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