**Inter-VLAN Routing Project**

A diagram of a computer network

AI-generated content may be incorrect.

**Addressing Table**

| **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 |

**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 |

**Scenario**

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

**Tasks**

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.

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

·         Verify connectivity. R1, S1, and all PCs should be able to ping each other and the server.