**IP Config Exercise**

**Determine the IP addresses, port assignments, trunk port assignments.**

Diagram

Description automatically generated

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **IP Subnets** | | | | | |
| Department | VLAN ID | Subnet Size Needed | IP Subnet ID | First Assignable IP | Last Assignable IP |
| Marketing | 5 | 64 | 192.168.2.0/26 | 192.168.2.1 | 192.168.2.62 |
| Sales | 6 | 64 | 192.168.2.64/26 | 192.168.2.65 | 192.168.2.126 |
| HR | 7 | 64 | 192.168.2.128/26 | 192.168.2.129 | 192.168.2.190 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Connections to Switch Access Ports** | | | | | |
| Department | Switch # | # Hosts on this switch | Assigned Ports | | Access VLAN ID |
| Marketing | S1 | 46 | Gi0/2 – Gi0/47 | | 5 |
| Marketing | S2 | 4 | Gi0/2 – Gi0/5 | | 5 |
| Sales | S2 | 40 | Gi0/6 – Gi0/45 | | 6 |
| HR | S3 | 32 | Gi0/2 – Gi0/33 | | 7 |
| HR | S3 | 1 | Gi0/48 | | 7 (Router Gi0/1 – no tagging needed) |
|  |  |  |  | |  |
| **Switch Trunk Port Connections** | | | | | |
| Switch # | Port | Connects to Device | Port | |  |
| S1 | Gi0/48 | S2 | Gi0/1 | |  |
| S1 | Gi0/1 | Router | Gi0/0 | | Router Gi0/0 needs tagged packet has subinterfaces |
| S2 | Gi0/48 | S3 | Gi0/1 | |  |
|  |  |  |  | |  |
| **Inter-VLAN Routing** | | | | | |
| Router Int. | VLAN | Connects to Switch Int. | Switch Link Type | Default Gateway IP | |
| Gi0/0.5 | 5 | S1 Gi0/48 | Trunk | 192.168.2.1 | |
| Gi0/0.6 | 6 | S1 Gi0/48 | Trunk | 192.168.2.65 | |
| Gi0/1 |  | S3 Si0/48 | Access | 192.168.2.129 | |