

Q9) Try Inter VLAN routing with Router:

Inter-VLAN Routing is a method that allows communication between different VLANs. By default, devices in one VLAN cannot communicate with devices in another VLAN because VLANs logically separate network traffic at Layer 2 (Data Link Layer). To enable communication between VLANs, we need a **Layer 3 device** like a **Router** or a **Layer 3 Switch**.

Why is Inter-VLAN Routing Needed?

1. **VLAN Segmentation:** VLANs improve security and network efficiency by isolating traffic. However, sometimes devices in different VLANs need to communicate.
2. **Multi-Department Networks:** If departments (e.g., Finance in VLAN 10 and HR in VLAN 20) need to share resources, Inter-VLAN routing is required.
3. **Voice and Data Traffic:** VoIP phones and PCs are often in separate VLANs (Voice VLAN 20, Data VLAN 10). Inter-VLAN routing allows them to connect.



