Switch Configuration

Imagine you're in charge of building a company's network. This company has three major departments: IT, Finance, and HR. Each of these departments needs its own space to work without interference, but they also need to communicate with each other when necessary. That's where the concept of VLANs comes in.

Creating Separate Spaces (VLANs)

To keep things organized, we set up Virtual Local Area Networks (VLANs). Each department gets its own VLAN, which is like giving them their own digital workspace:

- VLAN 10: IT Department

- VLAN 20: Finance Department

- VLAN 30: HR Department

These VLANs are crucial because they ensure that each department's data stays separate, much like how office walls separate teams in a building. IT doesn't see Finance's data, and HR doesn't interfere with IT's operations.

Connecting the Networks (Trunk Ports)

While VLANs keep things separate, there are moments when departments need to share information. To make sure the data can flow between these VLANs, we use something called trunk ports. Think of these as hallways that connect the different spaces, allowing traffic from all VLANs to move between them.

On our switches, we configure specific ports as trunk ports. These ports allow multiple VLANs to send data over the same cable, but without losing the separation between departments.

Assigning Devices to Their VLANs (Access Ports)

Now, it's not just about creating the VLANs. We also need to make sure that each device in the company is correctly placed in its respective VLAN. We do this through access ports. Access ports are like dedicated doors that only connect to one VLAN.