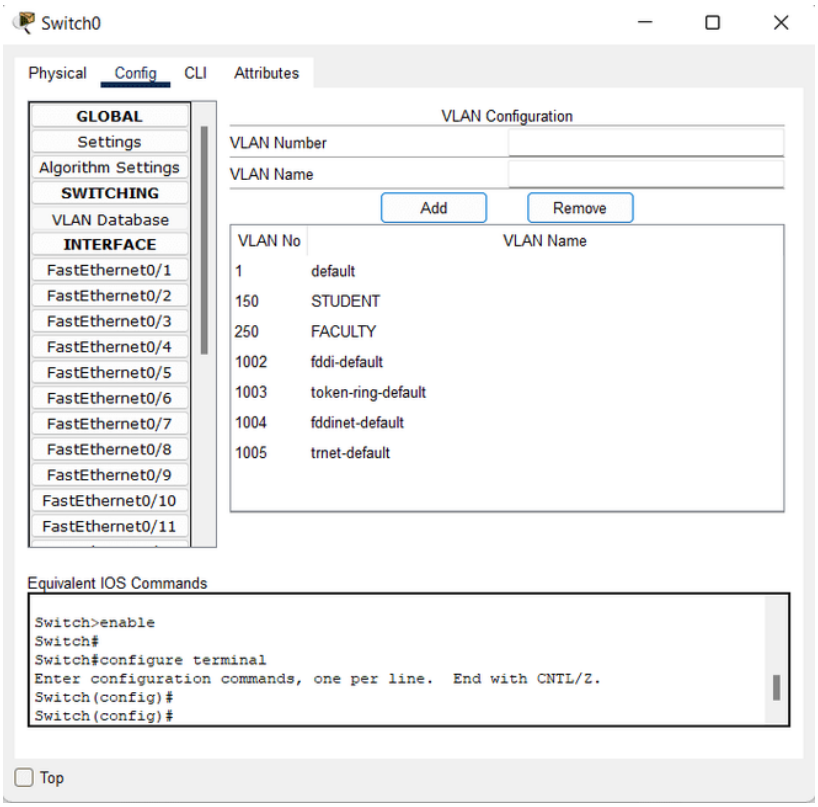
LAB 4 VLANs

In this Lab we will create a network in Cisco Packet Tracer and configure VLAN in it. Here we create 2 LANs with 6 hosts each of them and in each LAN we create 2 VLANs and try to communicate between them.

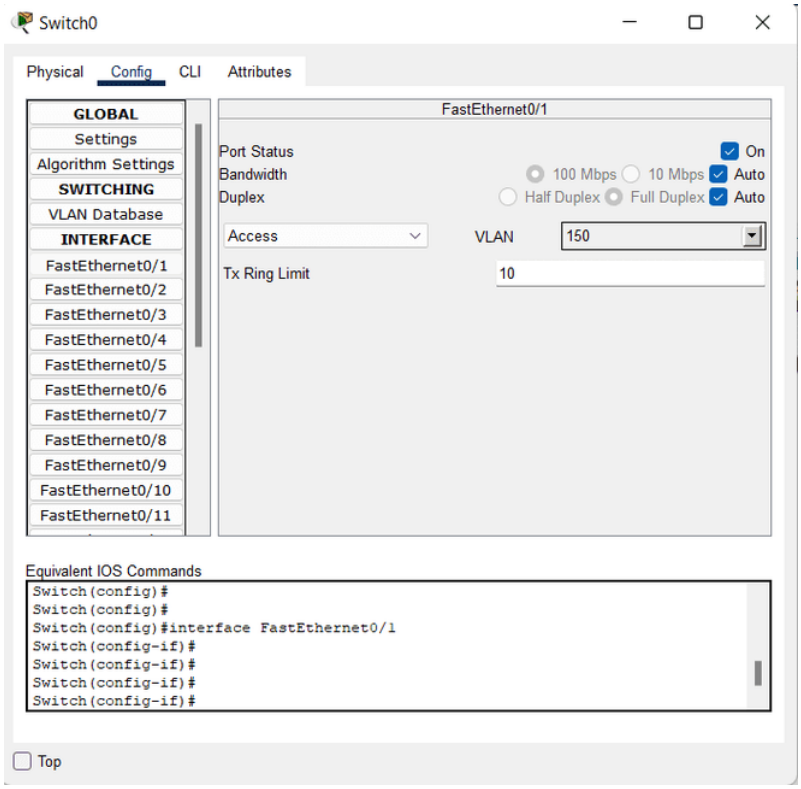
Step 1: At first, we create a LAN, LAN-A with 6 hosts. To create a LAN we need one Layer 2 switch Switch0 and 6 end devices. Now we provide IP addresses to the hosts starting from 192.168.10.1 (you can provide any valid IP addresses).

Step 2: Let us create 2 VLANs where the name of the first VLAN is VLAN-STUDENT and the second VLAN is VLAN-FACULTY. To configure VLANs we have to go to the switch Switch0 and move to Config → SWITCHING → VLAN Database. Now let us take the VLAN Number for STUDENT is 150 and for FACULTY is 250 and add these numbers to VLAN Database.



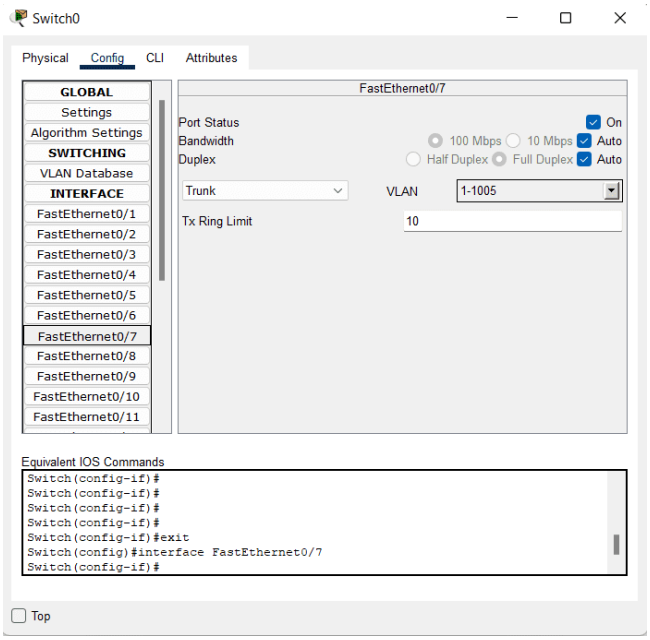
Step 3: Next we have to select the hosts under VLAN-STUDENT. Here I have put hosts with IP addresses from 192.168.10.1 to 192.168.10.3 under VLAN-STUDENT. To do so we have to select the switch Switch0 → Config → INTERFACE, here we choose FastEthernet0/1 corresponding to the host 192.168.10.1 which we consider to be in VLAN-STUDENT. Now we select the down arrow beside VLAN and select 150:STUDENT, which is for student VLAN.

Similarly, we do this same process for FastEthernet0/2 and FastEthernet0/3.

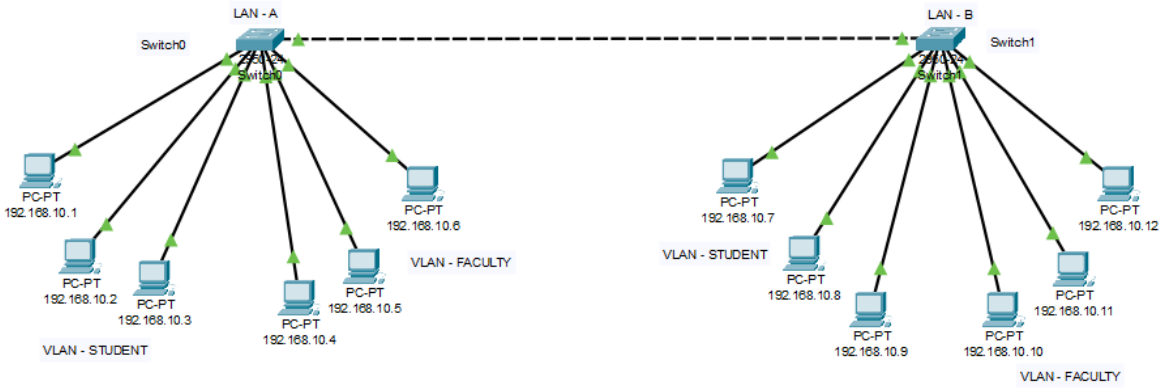


Step 4: Now we have to configure the hosts under VLAN-FACULTY. Here I have put hosts with IP addresses 192.168.10.4 to 192.168.10.6 under VLAN-FACULTY. To do so, just follow the process mentioned in Step 3, but instead of selecting the VLAN Number 150:STUDENT, select 250:FACULTY for FastEthernet0/4, FastEthernet0/5, and FastEthernet0/6.

Step 5: Lastly, just change the switch port mode from Access to Trunk for FastEthernet0/7.



You can create LAN-B similarly by following these steps and connect LAN-A and LAN-B by using a Cross-Over cable. And your end network will look like this:



Now our VLAN configuration is ready, and we can check this by sending data packets from one host to another under LAN-A. Let us ping from 192.168.10.1 to 192.168.10.3. To do so, we have to select the host with IP 192.168.10.1 and then select Desktop → Command Prompt. Now run the following command to ping 192.168.10.3.

ping 192.168.10.3

You can get the Request timed out at first but don't worry, if you followed all the steps mentioned properly then run the command again to ping, and it'll do the job.