

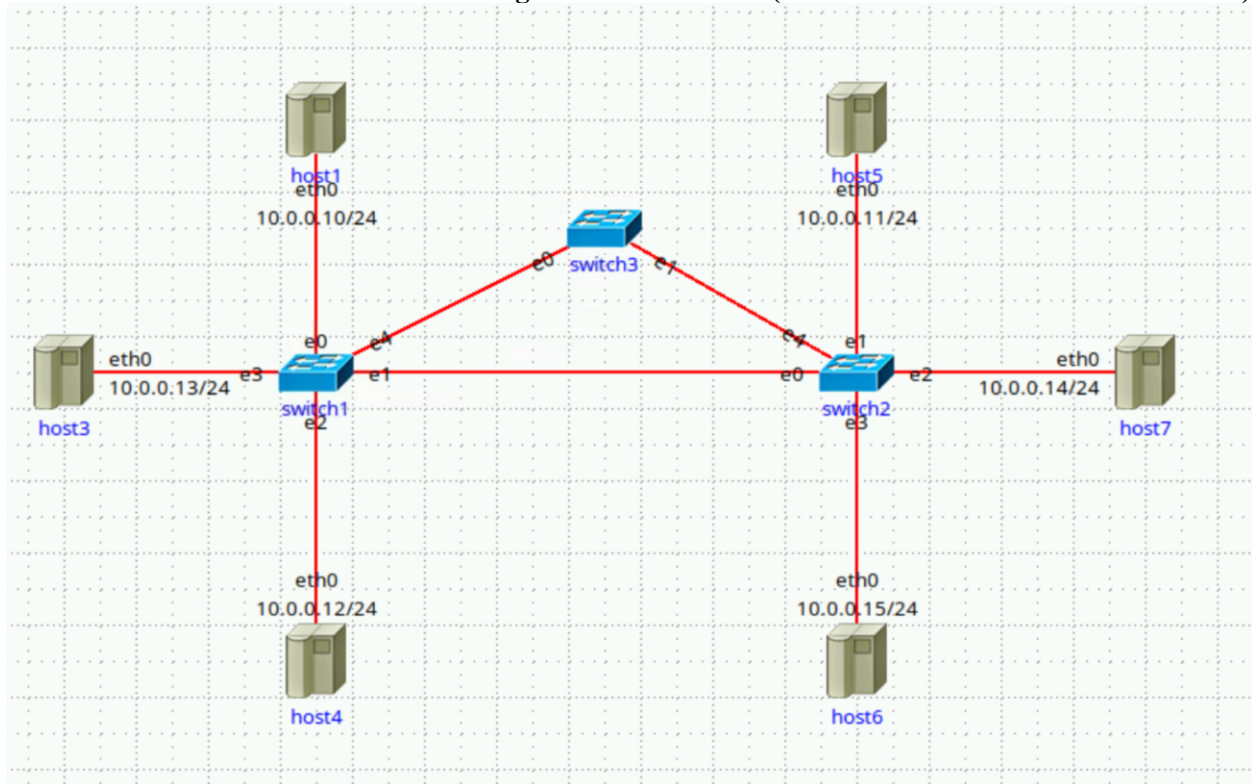


Access Networks and Shared Media

Lab evaluation – 2023/24

RULES:

- Perform the actions described in the boxes and answer the questions below in the quiz in Aula Global.
- You can use the material in aula global / the Internet (no ChatGPT or similar tools allowed)



Open the topology “two-switches.imn” in the Cloud_Networks_Lab folder, add a third switch and the links to create a topology like the one represented in the Figure above.

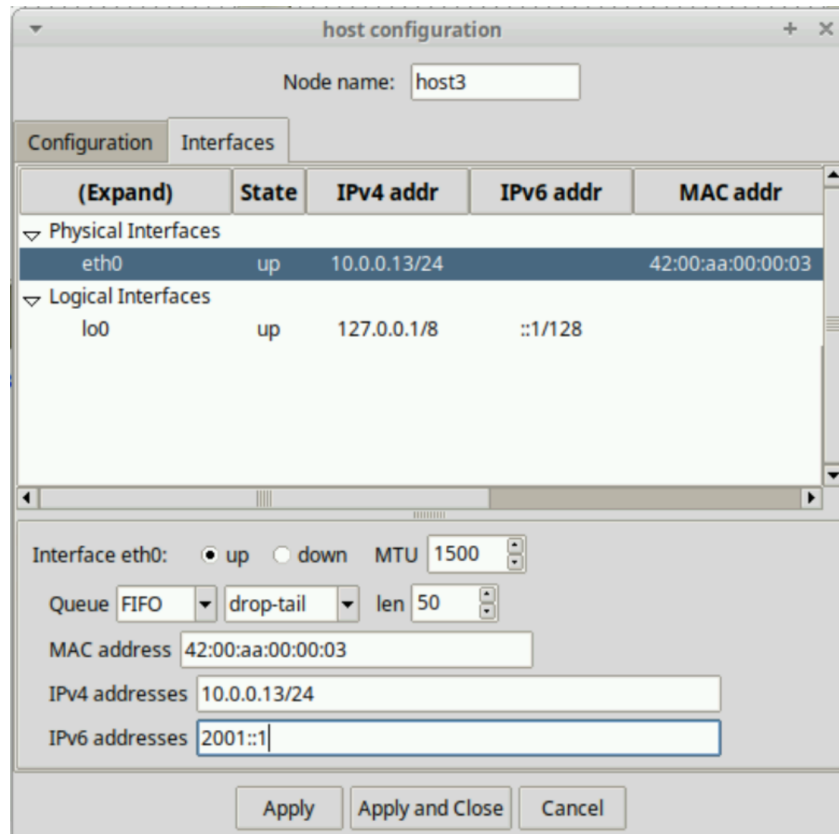
Execute the network and answer the following questions:

1. (5 points) Configure the spanning tree protocol. Configure it such that switch 3 (on the top) is the root of the tree and switch 1 (on the left) has less priority than switch 2 (on the right). Run the command `sudo ovs-vsctl list port id_experiment-n2-e0`. What is the **stp-role** of that port?



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Terminate the simulation. Open again the same topology (that is, without the extra switch) and re-execute the simulation. Right-click on host3 and select “Configure”. In the tab Interfaces add in the IPv6 addresses textbox the value “2001::1/64”. Click Apply and Close. Repeat the same in host7 configuring “2001::2/64”.

2. (2 points) Open a terminal in host3. Execute the following command: **ping6 2001::2**. Perform a Wireshark capture in the eth0 interface. Select an echo request frame:
 - a. What is the source MAC address?
 - b. What is the destination MAC address?
 - c. What is the Type field?

Terminate the network. Close the file and reopen it again. Execute the network. Configure switch1 ports e0 and e2 as access ports with tag 100 (VLAN1) and e3 with tag 200 (VLAN2).

3. (2 points) Drag and drop the markers to identify the hosts belonging to VLAN1 and VLAN2

The command for creating a trunk port is the following:

sudo ovs-vsctl set port switch-port-id trunks=tag1,tag2,...,tagN
Configure switch1 and switch2 such as host7 us on VLAN2 and hosts5 and 6 are on VLAN1.

4. (1 point) Open a Terminal in host1 and issue the command “**ping6 -c 2 ff02::1%eth0**”. For the sequence number 1, how many responses are marked with “DUP!”?