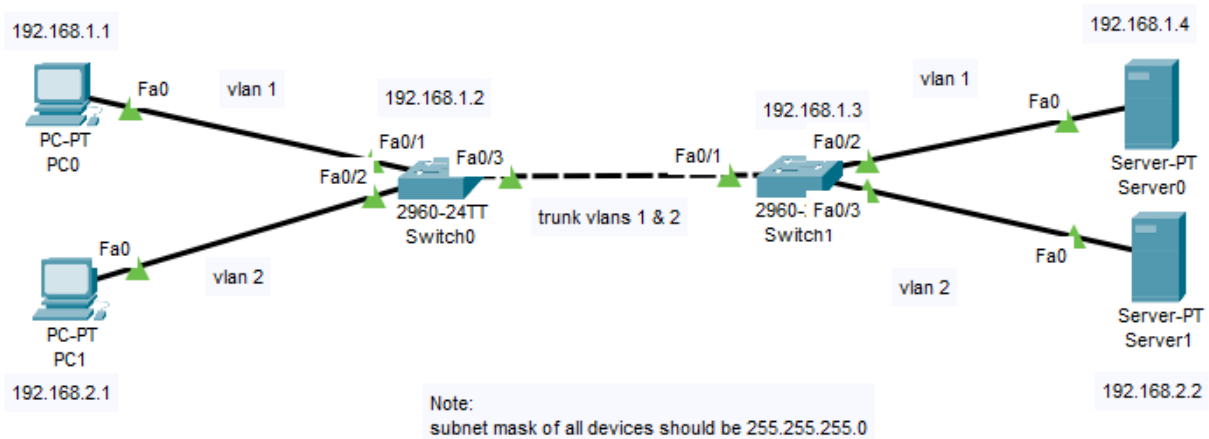


CS4471 Layer 2 Switching & Trunking (ver 1.1)

Use Cisco Packet Tracer to create the following network with 2 vlans. Configure IP addresses as shown on each device. Subnet mask of each device should be 255.255.255.0. IP address of each switch should be configured on its interface vlan 1.



- (1 pt) Verify that PC0 can successfully ping Switch0. From command prompt of PC0, submit output of "ping 192.168.1.2"
- (1 pt) Create vlan2 on the switches. Configure the link between Switch0 and Switch1 as a trunk. Verify that PC0 can successfully ping Switch1. From command prompt of PC0, submit output of "ping 192.168.1.3"
- (1 pt) . Verify that PC0 can successfully ping Server0. From command prompt of PC0, submit output of "ping 192.168.1.4"
- (3 pts) Verify that PC1 and Server1 are on vlan2. From command prompt of PC1, verify that you can continuously ping Server1(192.168.2.2). In Simulation mode, capture and decode the frame header of one of these ping packets as they traverse the trunk link.
 - Submit a screenshot of this frame header with the 802.1q field circled.
 - What is the value of the tag protocol identifier (TPID)? What does this value signify?
 - What is the value of the tag control information (TCI)? What does this value signify?
- (2 pts) On switch0 and switch1,
 - submit output of "show vlan" and "show interfaces trunk"
 - What is the value of the native vlan on the two switches? What does this mean?
- (1 pt) From command prompt of PC1, try to ping Server0 (192.168.1.4). Explain why the ping packets fail. Suggest what modification is needed to the network in order that PC1 can ping Server0 (192.168.1.4) .
- (1 pt) Submit entire output of "show running-config" on Switch0 and Switch1.