

CS4471 Physical and Logical Network Topology (ver 1.2)

Name _____

CIN _____

Date _____

Use Cisco Packet Tracer to perform the following activities.

1. In Cisco Packet Tracer's "Physical" view mode, go to a corporate office's wiring closet and add one rack and install two Cisco 2960 switches onto the rack. Interconnect the two switches's Gig0/1 ports with an Ethernet cable.
2. Add one Cisco 2901 router to the rack and connect an Ethernet cable from router's Gig0/0 port to the second switch's Gig0/2 port.
3. Add one server to the rack and connect an Ethernet cable from the server's Fast Ethernet port to the Gig0/1 port on the router.
4. (2pts) **Submit screenshot** of the rack containing two switches, one router, one server, and cables inter-connecting these devices.
5. Back up one level to the building floor plan and add one computer to each of the eight other rooms.
6. Go to Cisco Packet Tracer's "Logical" view mode and use Ethernet cables to connect four computers (PC0 thru PC3) to the first Cisco 2960 switch. Use additional Ethernet cables to connect the remaining four computers (PC4-7) to the other Cisco 2960 switch. Make sure that the port labels are shown by clicking checkbox "Always Show Port Labels" under menu Options > Preferences.
7. (2 pts) From Physical view mode, **submit a screenshot** of the resulting building floor plan (should show computers connected to wiring closet).
8. In Logical view mode, configure IP address 192.168.1.10 , subnet mask 255.255.255.0, and default gateway 192.168.1.1 on computer PC0 that is connected to the first Ethernet switch.
9. Configure IP address 192.168.2.100, subnet mask 255.255.255.0, and default gateway 192.168.2.1 on the server.
10. Configure IP address 192.168.1.1 and subnet mask 255.255.255.0 on router's Gig0/0 interface. Configure IP address 192.168.2.1 and subnet mask 255.255.255.0 on router's Gig0/1 interface.
11. Turn on both Gig0/0 and Gig0/1 interfaces on the router (port status of each interface should be on).
12. Verify that from computer PC0's command prompt, you can ping the IP address of the server.
13. (2pts) **Submit screenshot** of successful output of "ping 192.168.2.100" executed from PC0.
14. (2pts) **Submit screenshot** of successful output of "tracert 192.168.2.100" executed from PC0.
15. (2pts) In logical mode, **submit screenshot** of the logical network topology of the network comprising of 8 computers, two switches, one router, and one server. For documentation purposes, make sure that you have used Cisco Packet Tracer's "place notes" feature to add the IP addresses of PC0, both router interfaces, and server in your network topology drawing. All network interfaces should be automatically labelled with port numbers by clicking checkbox "Always Show Port Labels" under menu Options > Preferences.