

Exp 9.

21/9/21

Experiment - 9.

Multiple subnet with suitable number of hosts

Aim:

Implementation of SUBNETTING in CISCO

PACKET TRACER SIMULATOR

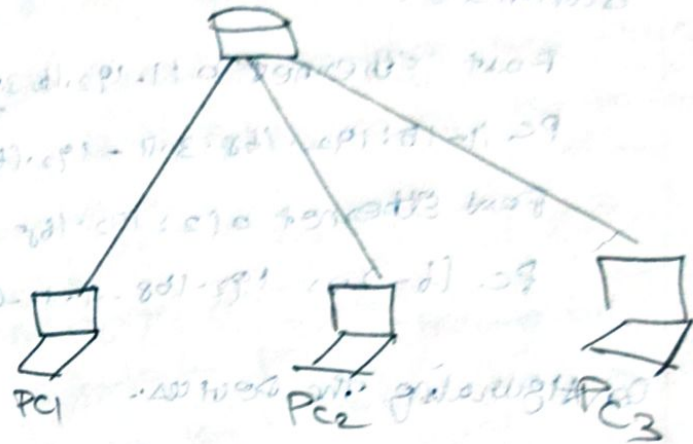
classless IP subnetting is a technique that allows for more efficient use of IP address by allowing for subnet masks that are not just the default masks for each IP class. This means that we can avoid ~~use~~ our IP address space into smaller subnets which can be useful when we have a limited number of IP addresses but need to create multiple networks.

~~Creating~~ a Network topology

The first step in implementation of classless IP subnetting is to create a network topology in

Packet Tracer. To Create a
 a Network Topology in
 packet Tracer select the New
 button in top left corner
 then select "Network" and
 "Greenfield" this will create a
 blank network topology that
 we can use to add devices
 adding the devices.

here we have created our
 network topology we can
 add device to it. Here we will
 be adding routers, switches,
 PCs to add a
 the device from the bottom left
 corner and drag it onto
 network topology. Then connect
 the device by dragging a cable
 from one device port to another
 device port



The IP addressings for network
 shown

Router R1

- Gigabit ethernet 0/0: 192.168.1.1

Gigabit ethernet 0/1: 192.168.2.1

Switch S1:

Fast ethernet 0/1: 192.168.1.0

PC 1-5: 192.168.1.1 - 192.168.1.5

Fast Ethernet 0/2: 192.168.2.0/24

PC 6-10: 192.168.2.1 - 192.168.2.10

Router Ethernet 0/0: 192.168.3.1

Fast Ethernet 0/1: 192.168.4.1

IP address { IP address } { Subnet mask }
no shutdown
exit

Testing the Network:

If the Ping is successful
then the network is functioning
Properly we can also use the
"Ping" Command to test connectivity
between the router and the PCs

Result:

Thus the program is executed
successfully and the output is
Verified