VPN Tunneling

Subject Name: Computer Networking
Subject Code: 17CS52
Sem/Sec: V / B

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Project Description: A 'Virtual Private Network(VPN)' is private network, that ensures only authorised person can access the network. This type of network is created to provide security. The information transferred between two location via the encrypted tunnel cannot be read by anyone. And all the subnetworks that comes within the two connected network are hidden for the third party.

Software Specification: Cisco Packet Tracer version 7.2

Difficulties faced during project:
1. Configuration of router, switches and end devices was quite confusing.

2. Type of connection that has to be between end-user-devices and switch, between switch and router, and router to router was difficult to find out at the beginning of the project.

3. As Cisco environment was new, few basic commands were not working, still escape sequence cmd which is used to terminate tracing process is not working as it is accepted do.

4. As information required for build the project was not available at single place, gathring souces and requirments and learning how to work in Cisco environmen took time.

Project Code:

```
Router>
Router>en
Router#
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface tunnel 1
Router(config-if)#
//%LINK-5-CHANGED: Interface Tunnel1, changed state to up ip add 7.7.7.1
% Incomplete command.
Router(config-if)#ip add 7.7.7.1 255.255.255.0
Router(config-if)#tunnel source serial 0/0/0
Router(config-if)#tunnel destination 13.0.0.3
Router(config-if)#
//%LINEPROTO-5-UPDOWN: Line protocol on Interface Tunnel1, changed state to up
Router(config-if)#exit
```

Screen Shots:

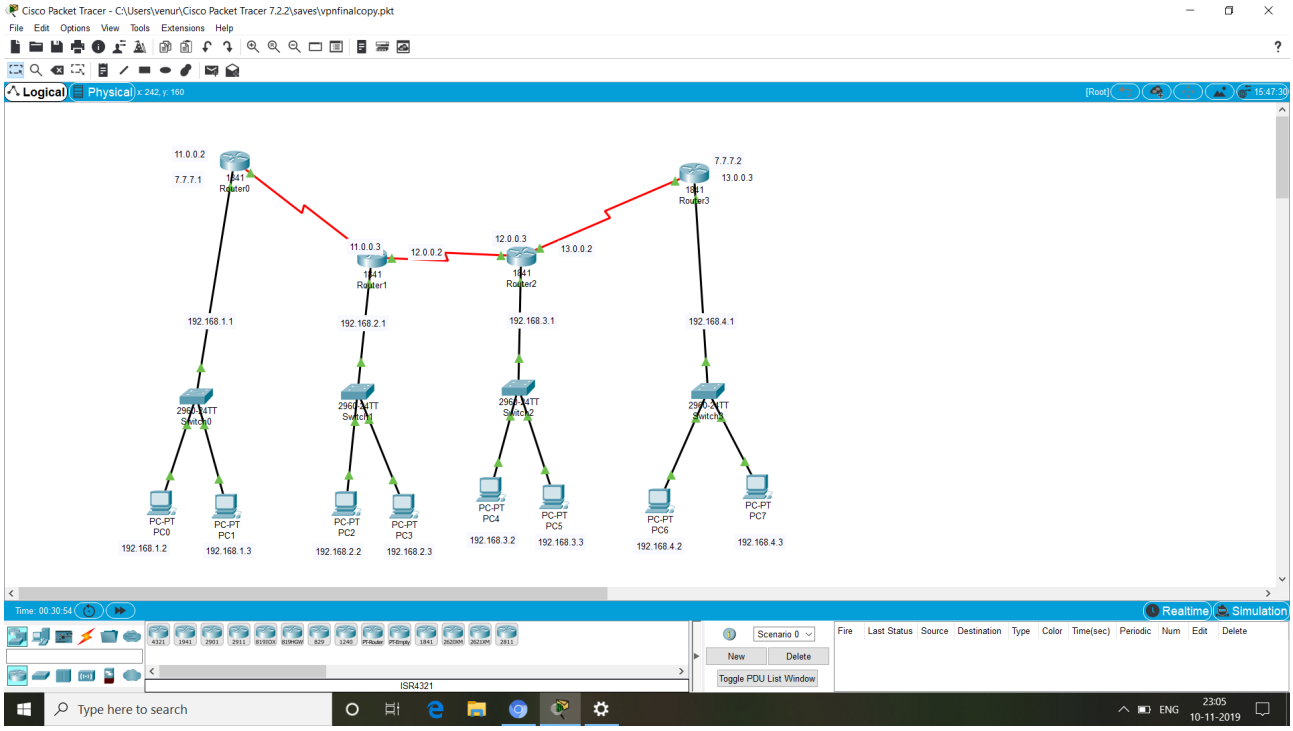

Figure 1: Set up of network and configuration of devices in network.

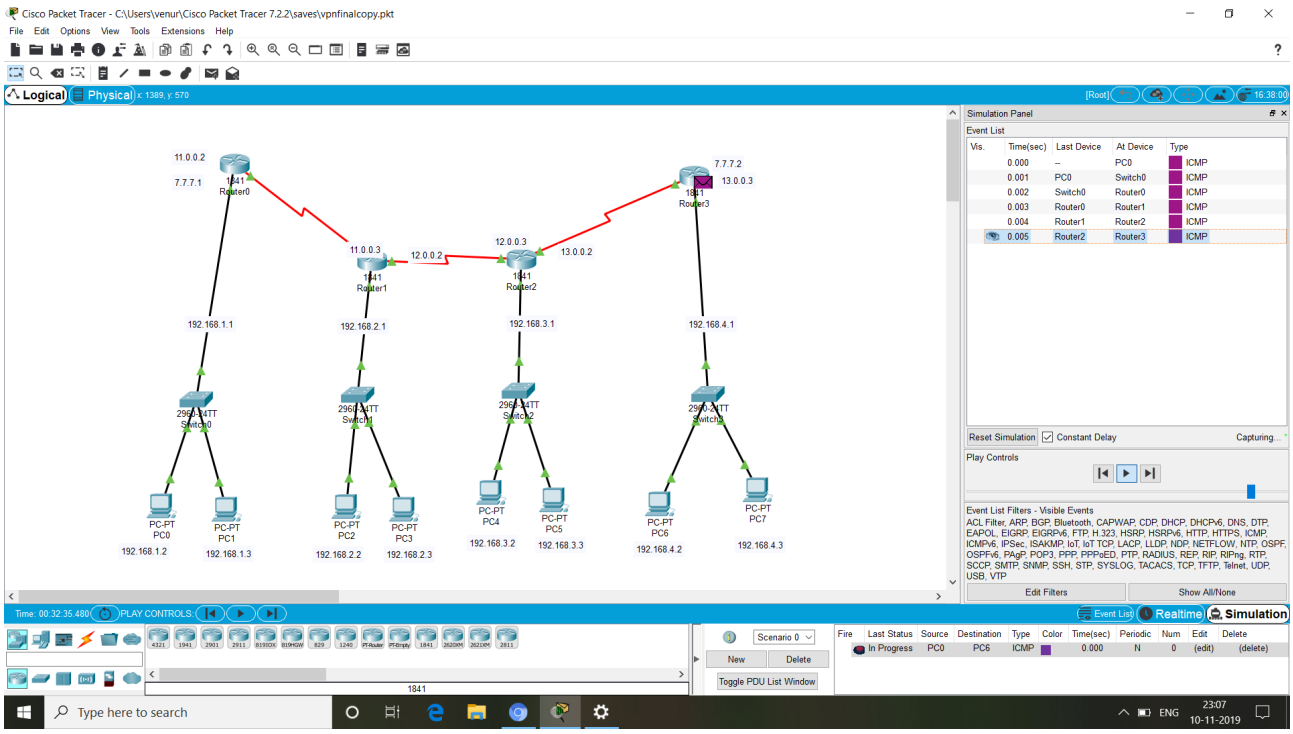

Figure 2: Demonstrating all the devices in network are connected and working properly.

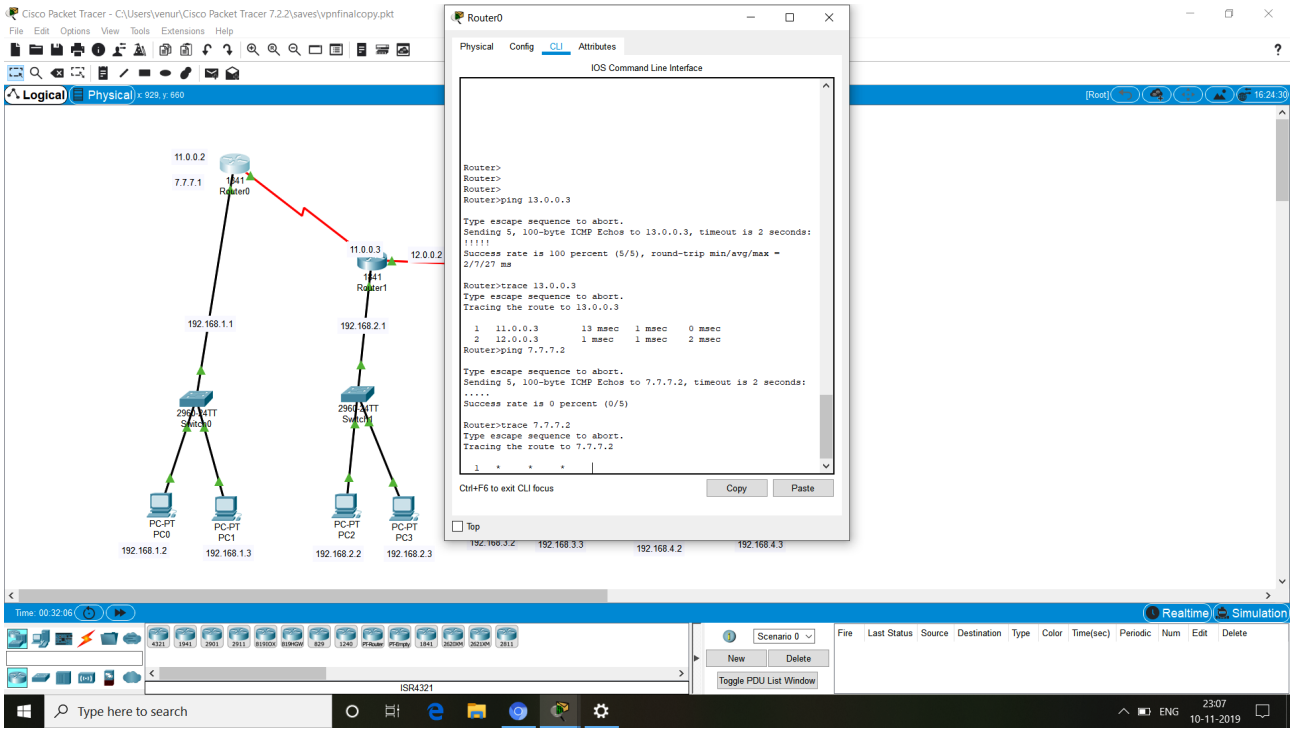

Figure 3: Creating tunnel between two router using VPN.

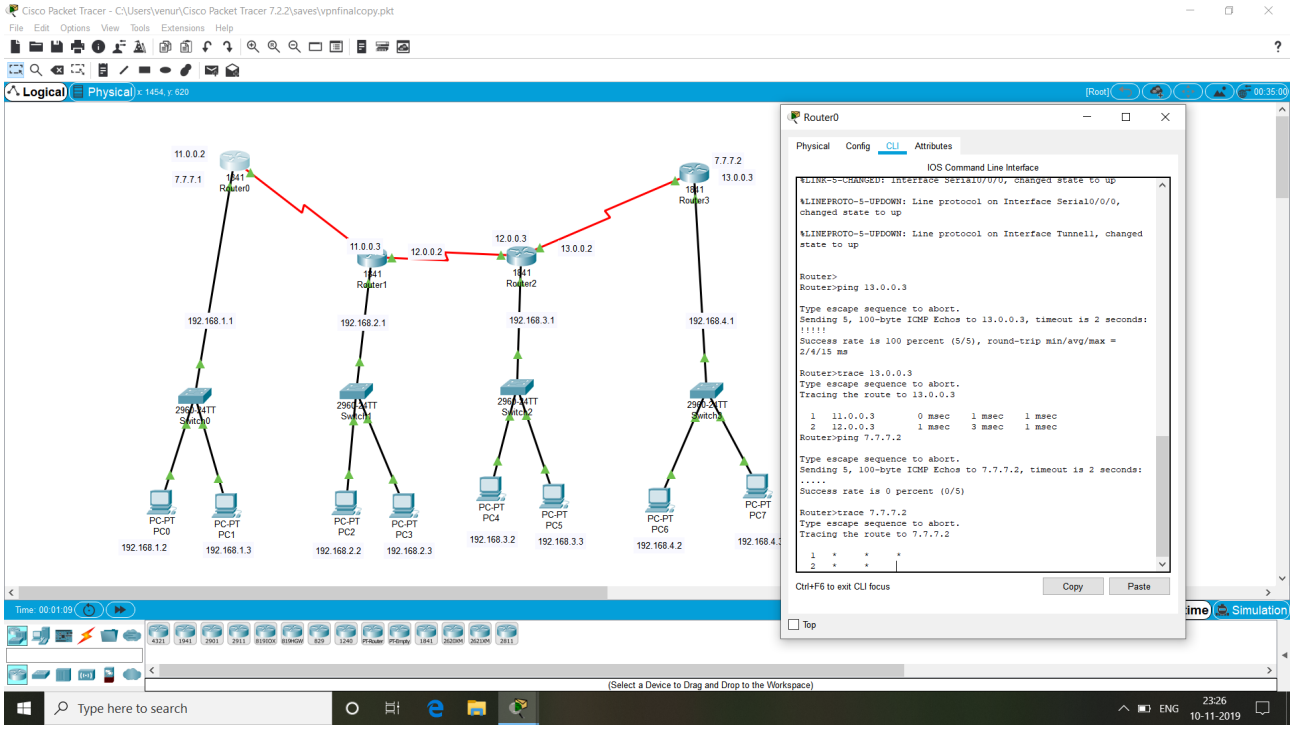

Figure 4: Demonstration of working VPN tunnel (check Router0 CLI, tracing of 7.7.7.2 router is hidden).