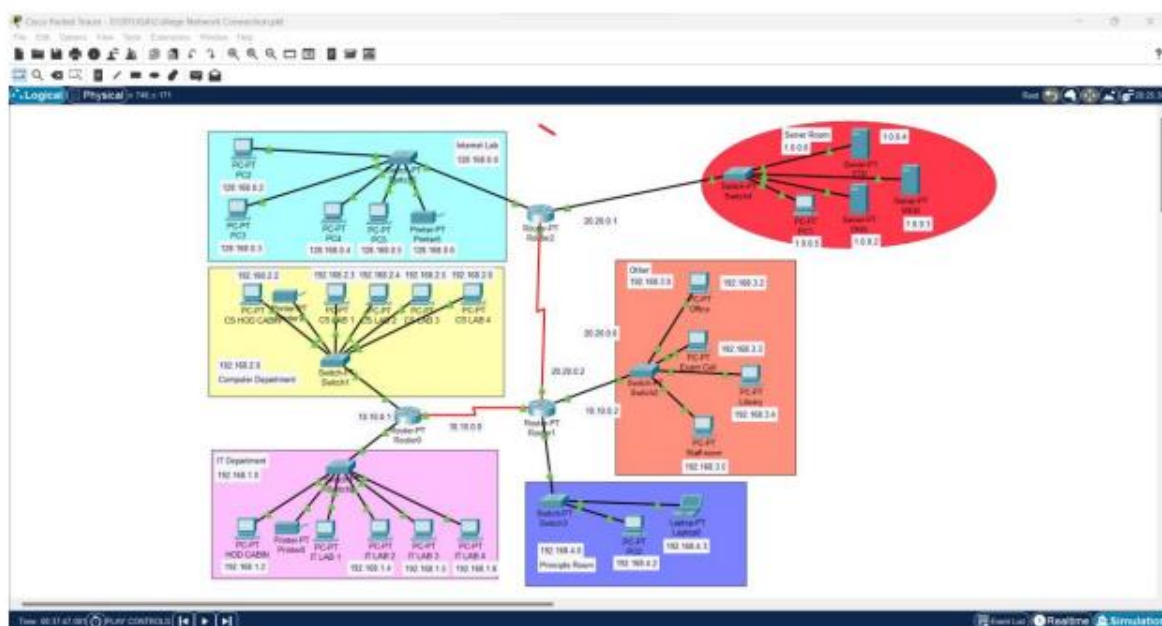


ENTERPRISE NETWORK USING CISCO PACKET TRACER

This Enterprise Network Scenario is about designing a topology of a network that is a LAN (Local Area Network) for an office in which various computers of different departments are set up so that they can interact and communicate with each other by interchanging data. To design a networking scenario for an office which connects various departments to each other's, it puts forward communication among different departments. CNS is used to design a systematic and well-planned topology, satisfying all the necessities of the college (i.e., client). CNS comes up with a network with good performance.

DESIGN TOPOLOGY: STAR TOPOLOGY

Alternatively referred to as a star network, star topology is one of the most common network setups. Every node connects to a central network device in this configuration, like a hub, switch, or computer. The central network device acts as a server, and the peripheral devices act as clients. In a star topology setup, either a coaxial or RJ45 network cable is used, depending on each computer's type of network card. The image shows how this network setup gets its name, as it is shaped like a star.



ADDRESSING MODE: IP ADDRESSING

IP address is an address having information about how to reach a specific host, especially outside the LAN. An IP address is a 32-bit unique address having an address space of 232. Generally, there are two notations in which IP address is written, dotted decimal notation and hexadecimal notation.

Classful Addressing The 32 bit IP address is divided into five sub-classes.

These are: • Class A • Class B • Class C • Class D • Class E

PROTOCOLS USED: ICMP PROTOCOL

The Internet Control Message Protocol (ICMP) is a network layer protocol used by network devices to diagnose network communication issues. ICMP is mainly used to determine whether

or not data is reaching its intended destination in a timely manner. Commonly, the ICMP protocol is used on network devices, such as routers.

Outcome:

With the use of Cisco Packet Tracer, enterprises can build a secure and reliable network for their operations. It is an essential tool for network engineers to design, configure, and troubleshoot networks. The software allows users to simulate the conditions of a real-world network with virtual devices such as routers, switches, PCs, and other networking tools. It also provides features such as interactive simulations that allow users to visualize how their networks will work in different scenarios. By using Cisco Packet Tracer, enterprises can develop a robust and efficient network architecture that meets their business needs.

-Jatin Tiwari

-Amit Vishwakarma