Applied Industrial Internet of Things

Abin Joel
5BTME
2361403

Configuration of ARP.

* **Aim:**

To design and implement a simple local Area Network using Cisco packet tracer, and to study the concept of the Address Resolution Protocol (ARP) for communication between devices on the same network.

* **Problem Statement:**

In a LAN environment, devices communicate using IP addresses but actual data delivery is based on MAC addresses. The ARP protocol is responsible for mapping IP addresses. The problem is to design a simple LAN in cisco packet Tracer, configure PC's and demonstrate ARP operation by generating ARP requests and replies.

* **Scope of the Solution:**

- Demonstrates LAN design using Cisco Packet Tracer.
- Explains how ARP works in resolving IP-to MAC mapping.
- Provides hands on practice with PC configuration and switch connectivity.
- Helps understand network troubleshooting using ARP tables and simulation tools.

- Using Cisco packet Tracer simulation, packet flow and ARP Requests/Replies can be visualized.

* Required Components to develop the Solution

- Software

  Cisco Packet Tracer

- Hardware (simulated inside Packet Tracer)

  2 or more PC's (to act as end devices in LAN)

  1 switch (8-port switch)

  Straight-through LAN cables

* Simulated Circuit