

CSA0734-COMPUTER NETWORKS FOR SERVER MANAGEMENT

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EXPERIMENT 8

Data Link Layer Traffic Simulation using Packet Tracer Analysis of ARP

Aim:

Traffic simulation of Data link layer using Packet Tracer.

Tools Required:

- 1.End device - They are the devices through which we can pass message from one device to another and they are interconnected.
- 2.Switch/Hub - Interface Between two devices.
- 3.Cable - Used to connect two devices.
- 4.Server – Manages the end devices.

Procedure:

STEP 1: Click on end devices, select generic Pc's drag and drop it on the window. Click on SWITCH drag and drop it on the window.

STEP 2: Select the straight through cable and connect all end device to switch. Assign the IP address for all end devices. (Double click the end device Select → desktop → IP configuration static)

STEP 3: Now set the IP address to Host A (192.168.1.1) in static mode. Similarly set IP address for Host B (192.168.1.2) and Host C (192.168.1.3) and other Hosts and server.

STEP 4: To view the IP address, give ipconfig command in command prompt. Using

ping command, we can establish communication between two host devices.

STEP 5: Now display the packet transmission in simulation mode.

Data Link Layer Traffic Simulation:

The screenshot displays the Packet Tracer interface. The main workspace shows a network topology with a central Hub (Hub-PT Hub0) connected to three devices: Server-PT Server0, PC-PT PC0, and PC-PT PC1. The interface includes a top toolbar with 'Logical' and 'Physical' tabs, a 'Simulation Panel' on the right, and a bottom toolbar with 'PLAY CONTROLS' and 'Scenario 0'.

The 'Simulation Panel' on the right shows an 'Event List' with the following data:

Vis	Time(sec)	Last Device
	1232.534	Hub0
	1232.534	-
	1232.535	PC0
	1232.536	Hub0
	1232.536	Hub0
	1232.537	PC1
Visible	1232.538	Hub0
Visible	1232.538	Hub0

Below the event list, there are 'Reset Simulation', 'Constant Delay', and 'Capturing' buttons. The 'Event List Filters' section lists various protocols like ACL, Filter, ARP, BGP, etc. The bottom toolbar shows 'Time: 00:29:19.338' and 'PLAY CONTROLS' with play, pause, and stop buttons. The 'Scenario 0' dropdown is set to 'New' and 'Delete' buttons are visible. The 'Toggle PDU List Window' button is also present.

Result:

Traffic simulation of Data link layer using Packet Tracer has been done successfully.