

4-1-4 Ethernet II 擷取與分析 – Packet Tracer (一)

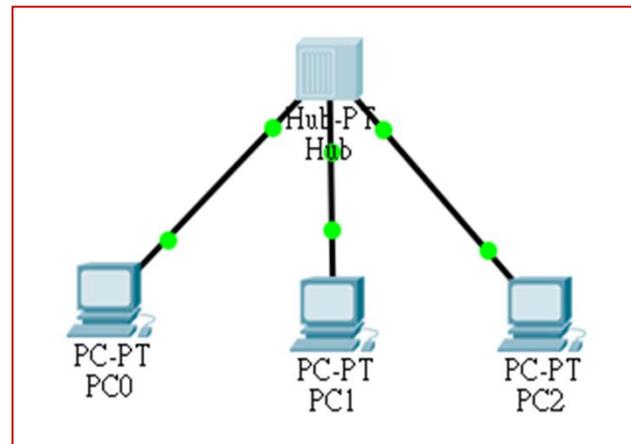


✦ 系統分析

◆ Ping 命令產生 ICMP 封包，利用 Ethernet 訊框傳送

✦ 網路規劃

網路區段	Gateway/DNS	名稱	IP 位址	連接埠口
192.168.0.0/ 255.255.255.0	192.168.0.254/ 168.95.1.1	PC0	192.168.0.1	HUB(Fa0)
		PC1	192.168.0.2	HUB(Fa1)
		PC2	192.168.0.3	HUB(Fa2)



4-1-4 Ethernet II 擷取與分析 – Packet Tracer (二)



✦ 擷取封包步驟

- ◆ Packet Tracer 採用 Simulation 模式
- ◆ 再由 PC0 上 ping 發送給 PC2

The screenshot displays the Packet Tracer interface. On the left, a network diagram shows a central 'Hub-PT Hub' connected to three 'PC-PT' devices labeled PC0, PC1, and PC2. The top menu bar includes options like 'Logical', 'Back', '[Root]', 'New Cluster', 'Move Object', 'Set Tiled Background', 'Viewport', and 'Environment: 01:28:30'. The right side features a 'Simulation Panel' with an 'Event List' table (headers: Vis., Time(sec), Last Device, At Device, Type, Info) and a 'Play Controls' section containing buttons for 'Back', 'Auto Capture / Play', and 'Capture / Forward'. Below this is an 'Event List Filters - Visible Events' section with a dropdown menu set to 'ICMP' and an 'Edit Filters' button. The bottom status bar shows 'Time: 00:00:50.721 | Power Cycle Devices | PLAY CONTROLS: Back | Auto Capture / Play | Capture / Forward | Simulation'. Several elements, including the 'Auto Capture / Play' button, the 'ICMP' filter, and the 'Simulation' button, are highlighted with red boxes.



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✦ Ethernet II 協定分析

The screenshot displays a network simulation in Packet Tracer. On the left, a central Hub is connected to three PC-PT devices labeled PC0, PC1, and PC2. On the right, the 'Simulation Panel' is open, showing an 'Event List' table. The table has columns for 'Vis.', 'Time(sec)', 'Last Device', 'At Device', 'Type', and 'Info'. The row for time 0.005 is highlighted with a red box, showing an ICMP packet from PC0 to the Hub. Below the event list, the 'PDU Information at Device: Hub' window is open, showing 'OSI Model' tabs and 'PDU Formats'. The 'EthernetII' format is selected, showing a byte-by-byte breakdown of the packet structure.

Vis.	Time(sec)	Last Device	At Device	Type	Info
	0.000	--	PC0	ICMP	
	0.004	--	PC0	ICMP	
	0.005	PC0	Hub	ICMP	
	0.006	Hub	PC1	ICMP	

PDU Information at Device: Hub

OSI Model Inbound PDU Details Outbound PDU Details

PDU Formats

EthernetII

0				4				8				Bytes
PREAMBLE: 101010..10				SF	DEST ADDR:0001.9636.							
				D	969A							
SRC ADDR:000		TYPE:0	DATA (VARIABL		FCS:0x000000							
B.BE1D.2DB9		x0800	E LENGTH)		00							

