

Linux Ethernet: Same Subnet Problem (Dual MAC)

- Why are none of the ping packets returning from the laptop?
- Follow the packets...
- Ping Req from eth1 on EVM to laptop.
- PC sends ARP to find MAC address of EVM.
- Since ARP is a broadcast, eth0 responds with its MAC address, which is incorrect for eth1.

eth0 [Wireshark 1.6.7]

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Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.5	192.168.0.4	ICMP	98	Echo (ping) request Id=0xd503, seq=0/0, ttl=64
2	0.000050	Dell 2b:76:96	Broadcast	ARP	42	Who has 192.168.0.5? Tell 192.168.0.4
3	0.000164	d4:f5:13:87:0b:0c	Dell 2b:76:96	ARP	60	192.168.0.5 is at d4:f5:13:87:0b:0c
4	0.000180	192.168.0.4	192.168.0.5	ICMP	98	Echo (ping) reply Id=0xd503, seq=0/0, ttl=64
5	1.000034	192.168.0.5	192.168.0.4	ICMP	98	Echo (ping) request Id=0xd503, seq=1/256, ttl=64
6	1.000089	192.168.0.4	192.168.0.5	ICMP	98	Echo (ping) reply Id=0xd503, seq=1/256, ttl=64
7	2.000210	192.168.0.5	192.168.0.4	ICMP	98	Echo (ping) request Id=0xd503, seq=2/512, ttl=64
8	2.000260	192.168.0.4	192.168.0.5	ICMP	98	Echo (ping) reply Id=0xd503, seq=2/512, ttl=64
9	3.000274	192.168.0.5	192.168.0.4	ICMP	98	Echo (ping) request Id=0xd503, seq=3/768, ttl=64
10	3.000325	192.168.0.4	192.168.0.5	ICMP	98	Echo (ping) reply Id=0xd503, seq=3/768, ttl=64

▶ Frame 4: 98 bytes on wire (784 bits), 98 bytes captured (784 bits)

▶ Ethernet II, Src: Dell 2b:76:96 (00:1c:23:2b:76:96), Dst: d4:f5:13:87:0b:0c (d4:f5:13:87:0b:0c)

▶ Internet Protocol Version 4, Src: 192.168.0.4 (192.168.0.4), Dst: 192.168.0.5 (192.168.0.5)

▶ Internet Control Message Protocol