

Realtek 8111c weirdness problems, apic/msi, and normal bug

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Hello.

I have a Gigabyte-X48-DQ6 motherboard which contains two realtek 8111c pci express gigabit ethernet controllers.

The driver for these are r8169

To cut to the results that matters(IMO) most, is that on .25-rc8-git3, the driver detects these cards, both of them, on different interrupts, however, none of the nics work if i have both msi and apic enabled. If i boot with pci=noms, and apic is enabled, both ports work (however one "insignificant" bug remains), if i boot with noapic boot parameter, but msi is enabled, both controllers are again found, and they work, however that insignificant bug is also present here.

The insignificant bug is, that one of the interfaces appears to always report as link up, despite me not having any cable in it.

So apparently the conflict is if i have BOTH apic and msi.

That leads me to a question, until this is resolved, which configuration do i want? apic with no msi, or msi with no apic?

I also have some more information, however i do not know if its useful at all: On a .23 livecd, which has both msi and apic, something different happens. What happens is that both controllers are detected, however only 1 of them works, ethtool reports that the working controller properly detects link up/down, and that its TP with 1gbit. This is the ethtool output for the .23 livecd with apic and msi:

Settings for eth0:

Supported ports: [TP]

Supported link modes: 10baseT/Half 10baseT/Full

100baseT/Half 100baseT/Full

1000baseT/Full

Supports auto-negotiation: Yes

Advertised link modes: 10baseT/Half 10baseT/Full

100baseT/Half 100baseT/Full

1000baseT/Full

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Advertised auto-negotiation: Yes
Speed: 1000Mb/s
Duplex: Full
Port: Twisted Pair
PHYAD: 0
Transceiver: internal
Auto-negotiation: on
Supports Wake-on: pumbg
Wake-on: g
Current message level: 0x00000033 (51)
Link detected: yes

Settings for eth1:
Supported ports: [FIBRE]
Supported link modes: 1000baseT/Full
Supports auto-negotiation: Yes
Advertised link modes: Not reported
Advertised auto-negotiation: Yes
Speed: 1000Mb/s
Duplex: Full
Port: FIBRE
PHYAD: 0
Transceiver: internal
Auto-negotiation: on
Supports Wake-on: pumbg
Wake-on: g
Current message level: 0x00000033 (51)
Link detected: no

and as you can see, eth1 is completely messed up, thinking its fibre, and stuff..

it appears that on this configuration, both nic's were registered in /proc/interrupts as IO-APIC-fasteoi.

I realize that more information will probably be needed to fix this bug, however, as you probably will want to cc linux-netdev or apic/msi or what it is, i will refrain from posting that now.

However, i can pretty much provide/try anything, so what would you want me to get?

/proc/interrupts, dmesg, ethtool on .25 apic/nomsi?

/proc/interrupts, dmesg, ethtool on .25 msi/noapic?

/proc/interrupts, dmesg, ethtool on .25 msi/apic?

i also saw a strange message with .25 msi/apic, where when i rmmmod r8169 and modprobe it again, it couldnt parse something, should i try get this again?

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In any case, just let me know what information you want, or patches you wish me to test, and it will be done.

mvh.

Kasper Sandberg

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