

Re: [RFC PATCH] PCI MMCONFIG: add validation against ACPI motherboard resources

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On Tuesday, May 22, 2007, Robert Hancock wrote:

Jesse Barnes wrote:

On Tuesday, May 22, 2007, Robert Hancock wrote:

Eww. I don't see where we disable the decode at all while we probe the BARs on the device. That seems like a bad thing, especially with the way we probe 64-bit BARs (do the low 32 bits first and then the high 32 bits). This means the base address effectively gets set to 0xffffffff0 momentarily, which might cause some issues.

I'm a bit shocked that things work as well as they do without the disabling...

I'd try adding some code inside `pci_setup_device` (`drivers/pci/probe.c`) to disable `PCI_COMMAND_IO` and `PCI_COMMAND_MEMORY` on the device when probing devices with the standard header type and then restoring the previous command bits afterwards, and see what effect that has. It'll be interesting if it does, since obviously it seems to work as it is with non-MMCONFIG access methods. Maybe the base address being set like that interferes with MMCONFIG access itself somehow?

I tried that, and it seems to get past probing the graphics device at least, but it hangs a bit later. It could be that the enable/disable

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I added wasn't correct though, I didn't check to see which one I should disable in the command word, which may be a problem (just disabled them both every probe). I'll try again with more precise enable/disable semantics.

It'd be interesting to see at what access it ran into trouble next, at least if it's consistent. Could be that some device doesn't like having the decode disabled..

I think it actually gets through the probing but hangs elsewhere, but I'll have to test again to be sure.

Jesse

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