

Re: [RFC PATCH] PCI: remove initial bios sort of PCI devices on x86

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- *From:* Matt Domsch <Matt_Domsch@xxxxxxxx>
 - *Date:* Wed, 13 Feb 2008 23:07:53 -0600
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On Wed, Feb 13, 2008 at 03:40:29PM -0800, Greg KH wrote:

We currently keep 2 lists of PCI devices in the system, one in the driver core, and one all on its own. This second list is sorted at boot time, in "BIOS" order, to try to remain compatible with older kernels (2.2 and earlier days). There was also a "nosort" option to turn this sorting off, to remain compatible with even older kernel versions, but that just ends up being what we have been doing from 2.5 days...

Unfortunately, the second list of devices is not really ever used to determine the probing order of PCI devices or drivers[1]. That is done using the driver core list instead. This change happened back in the early 2.5 days.

Relying on BIOS ording for the binding of drivers to specific device names is problematic for many reasons, and userspace tools like udev exist to properly name devices in a persistant manner if that is needed, no reliance on the BIOS is needed.

Matt Domsch and others at Dell noticed this back in 2006, and added a boot option to sort the PCI device lists (both of them) in a breadth-first manner to help remain compatible with the 2.4 order, if needed for any reason. This option is not going away, as some systems rely on them.

This patch removes the sorting of the internal PCI device list in "BIOS" mode, as it's not needed at all anymore, and hasn't for many years. I've also removed the PCI flags for this from some other arches that for some reason defined them, but never used them.

This should not change the ordering of any drivers or device probing.

Good plan. I'll be glad when the vestigial internal PCI device list is gone too.

Thanks,

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Matt

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