Subject: Re: Network virtualization/isolation Posted by ebiederm on Sat, 25 Nov 2006 23:16:06 GMT

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"Leonid Grossman" < Leonid. Grossman@neterion.com > writes:

- > I did not mean kernel bypass, just L2 hw channels that for
- > all practical purposes act as separate NICs -
- > different MAC addresses, no blocking, independent reset, etc.

Yes. Nearly all of what you need for safe kernel bypass.

- >> In the worst case I might need someone to go as far as the
- >> Grand Unified Lookup to remove all of the overheads. Except
- >> for distributing the work load more evenly across the machine
- >> with separate interrupts and the like I see no need for
- >> separate hardware channels to make things go fast for my needs.

>>

- >> Despite the title of this thread there is no virtualization
- >> or emulation of the hardware involved. Just enhancements to
- >> the existing hardware abstractions.

>

- > Right, I was just trying to say that IOV support (likely, from multiple
- > vendors since
- > virtualization is expected to be widely used) would provide an option to
- > export multiple
- > independent L2 interfaces from a single NIC even if only a subset of
- > IOV functionality would be used in this case.

Agreed, and I think I understood that. My basic point was that it doesn't look to me like I need the hardware support, just that I can use it when it is there.

The core advantage I see of the multiple queues, is in being able to split the processing of network traffic and interrupts among multiple cores.

Eric

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