
Protocol off-loading vs on-loading in high-performance networks

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Question 1

- *Do you think that network off-loading is a good or a bad idea ?*

It depends.

Yes, mostly, but don't abuse it.

Question 2

- *Will network off-loading play an important role in high-performance networks ?*
- Network latency is going to bottom down.
 - speed of light.
- Network bandwidth is going to bottom up.
 - cable/optic economics.
- Competitive advantage ? Network added value ?
=> Off-loading

Question 3

- *Is Moore's law on the side of network off-loading ?*
- In 1998, Lanai 4 core at 33 MHz, everything in firmware.
- In 2005, Lanai ZE8 core at 333 MHz, 50% processing completely in hardware.
- A lot of room for Moore's law for network off-loading.
- Entropy is infinite, Moore's law will never give you enough.

Question 4

- *What kind of programmability would you expect in the network interface ?*
- That's the real question !
- What do you want to off-load ?
 - Common case of packet processing.
 - Reliability ? No. Reassembly/reordering ? No.
 - Zero-copy ? Maybe. Today, yes.
 - Application/middleware specific support ? YES !