

Protocol Off-loading vs On-loading in High-Performance Networks

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PANELISTS

- ▶ Diego Crupnicoff (Mellanox)
- ▶ Lloyd Dickman (Qlogic)
- ▶ Patrick Geoffray (Myricom)
- ▶ Jeff Mogul (HP)
- ▶ Gary Montry (NetEffect)
- ▶ Greg Regnier (Intel)
- ▶ James Sterbenz (Kansas University and University of Lancaster, UK)

- ▶ Bios available at
 - http://www.hoti.org/hoti14/program/p1_bios.html

On-loading vs Off-loading

- ▶ Network offloading has been successfully adopted by many high-performance networks for cluster computing over the last decade. For example, early versions of Myrinet and Quadrics QsNET can efficiently overlap the MPI tag-matching protocols with the computation on the host, and can use the processing capability of the NIC to implement fast collective communication.
- ▶ More recently, network offloading has moved to the Ethernet world, with a few examples of TCP/IP Offload Engines. Perhaps more revealing is the fact that some of the latest network interfaces are dual-protocol, supporting both Ethernet and proprietary protocols.
- ▶ In the panel we will discuss the pros and cons of protocol offloading. All the panelists bring to the table very important experiences, with experts on both sides of the technical issue.

Open Issues

- ▶ Do you think that network offloading is a good or a bad idea?
- ▶ Will network offloading play an important role in high performance (supercomputer and Ethernet) networks?
- ▶ Multicore processors and network offloading. What are the future trends?
- ▶ Is Moore's law on the side of network offloading?
- ▶ What kind of programmability would you expect in the network interface?