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MPICH-CM: A communication library design for a P2P MPI implementation. (English)

[Zbl 1015.68727](#)

Kranzlmüller, Dieter (ed.) et al., Recent advances in parallel virtual machine and message passing interface. 9th European PVM/MPI users' group meeting, Linz, Austria, September 29-October 2, 2002. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 2474, 323-330 (2002).

Summary: The paper presents MPICH-CM – a new architecture of communications in message-passing systems, developed for MPICH-V – an MPI implementation for P2P systems. MPICH-CM implies communications between nodes through special Channel Memories introducing fully decoupled communication media. Some new properties of communications based on MPICH-CM are described in comparison with other communication architectures, with emphasis on grid-like and volunteer computing systems. The first implementation of MPICH-CM is performed as a special MPICH device connected with Channel Memory servers. To estimate the overhead of MPICH-CM, the performance of MPICH-CM is presented for basic point-to-point and collective operations in comparison with MPICH p4 implementation.

For the entire collection see [\[Zbl 1011.68745\]](#).

MSC:

[68U99](#) Computing methodologies and applications

[68M10](#) Network design and communication in computer systems

Software:

[MPICH-CM](#); [MPI/MPICH](#)

Full Text: [Link](#)