

How Computer Architecture Trends
May Affect Future Distributed Systems:
From InfiniBand Clusters to Inter-Processor Speculation

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Abstract

The design of distributed systems is and will be altered by the computer architecture innovations enabled by Moore's Law. I will survey some of these issues and how they might affect the design of distributed systems. Topics will include ideas for merging of clusters and large shared-memory multiprocessors, the emerging InfiniBand system area network standard, the effect of simultaneous multithreading, and the potential for softening the memory wall through inter-processor speculation.