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**Performance Concerns when Iterating Hybrid-Parallel
Kernels**

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Iterative algorithms are typically implemented by a sequence of calls to simple computational kernels, such as the BLAS or their sparse equivalent. Hybrid-parallelization of these kernels on clusters of nodes with multicore CPUs or GPGPUs has demonstrated performance gains for individual kernels. An iterative algorithm can realize a similar performance gain only if the programming model for calling a sequence of these kernels does not introduce significant overhead. Such a programming model for hybrid-parallel kernels has been implemented in Trilinos ThreadPool library. A simple CG iterative solver is implemented using the ThreadPool library and its hybrid-parallel performance is assessed.