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Status of OpenMP Target Offloading in Grid

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I will give a status update of using OpenMP target offloading in the Grid library. As part of the US Exascale Computing Project, we have been investigating the possibility of using a portable programming model in Grid to support execution on different architectures. OpenMP, a directives-based programming model, supports both CPU multithreading and different GPU architectures through appropriate compilers. After some success of using OpenMP target offloading in GridMini, a reduced version of Grid, we have implemented OpenMP target offloading in the full version of Grid. I will report recent benchmark results on NVIDIA, AMD and Intel GPUs and also discuss some issues encountered.

Topical area

Software Development and Machines

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