

Multithreaded CPU program

CPU

GPU

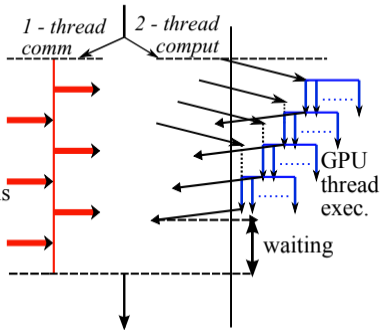
CPU thread creation

1 - Synchronous internode CPU comms

MPI comms

CPU thread synchronization barrier

CPU main thread next instructions



2 - Async. CPU \rightarrow GPU data transfers on streams

2 - Async. GPU parallel computations on streams

2 - Async. GPU \rightarrow CPU data transfers on streams

Automatic resynchronization on each stream