Scaling of WAVEWATCH on parallel computers

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Wave models like WAVEWATCH III are run on routinely run on supercomputers with distributed computing and memory. Efficiency and scaling requirements vary greatly with the applications, ranging from hard wall-clock time requirements for climate runs and coupled modeling, to high capacity computing for ensembles, to high capability computing (scalability) for high-resolution deterministic runs. The paper addresses efficient ways to run the model for this range of applications. It introduces hybrid parallelization approaches that allows running large high-resolution models efficiently on tens of thousands of compute cores.