# ANSYS and NVIDIA Collaboration

Release	ANSYS Mechanical	ANSYS Fluent
13.0 Dec 2010	**Shared Memory Solvers; Single Node/ Single GPU**	
14.0 Dec 2011	**+ Distributed ANSYS; Multi-node / 1 GPU/node**	**Radiation Heat Transfer (beta)**
14.5 Nov 2012	**+ Multi-GPU / node; + Hybrid PCG;**	**+ GPU AMG Solver (beta), Single GPU**

ANSYS Mechanical 14.5 Preview

Results for Distributed ANSYS 14.5 Preview and Xeon 8-Core CPUs
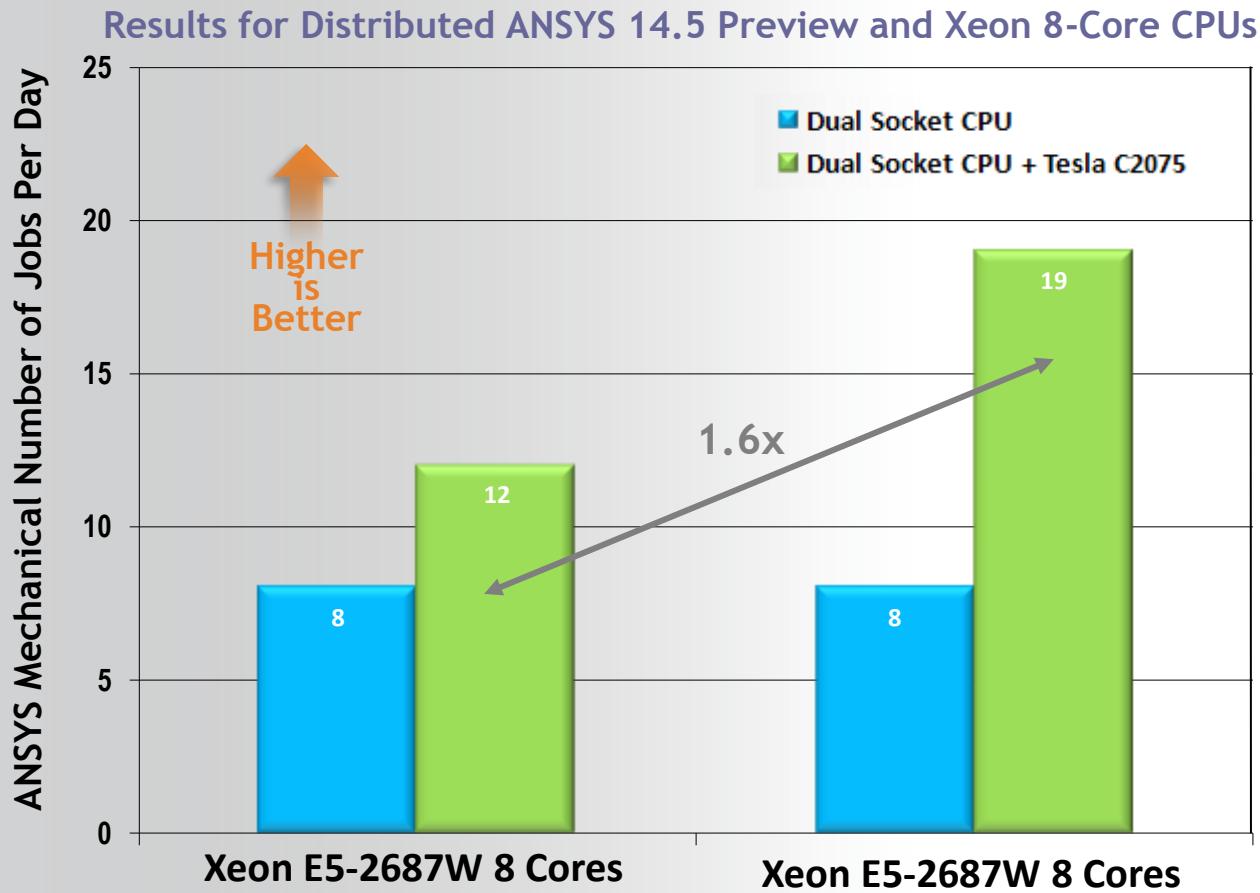

V14sp-5 Model
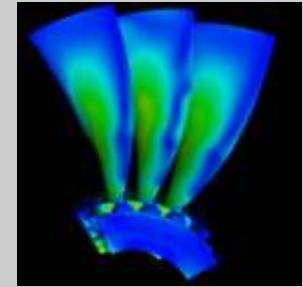
- Turbine geometry
- 2,100 K DOF
- SOLID187 FEs
- Static, nonlinear
- One iteration
- ANSYS Mechanical14.5
- Direct sparse solver

Results from HP Z820; 2 x Xeons (16 Cores, use of only 8) 128GB memory, Win7; 2 x Tesla C2075

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ANSYS Fluent AMG Solver on GPUs
Work-in-Progress

NVAMG Project – Preview of ANSYS Fluent 14.5 Performance
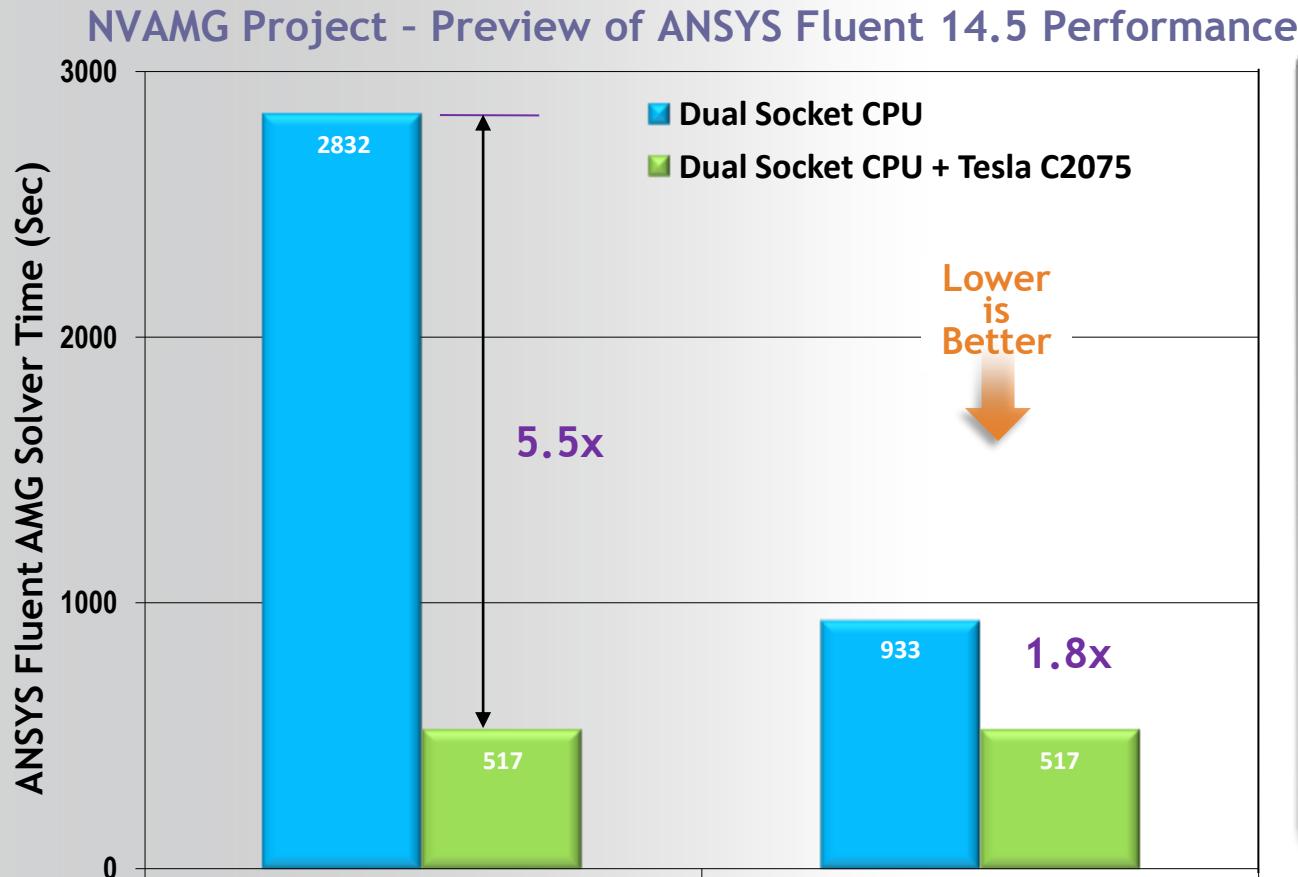
Helix Model
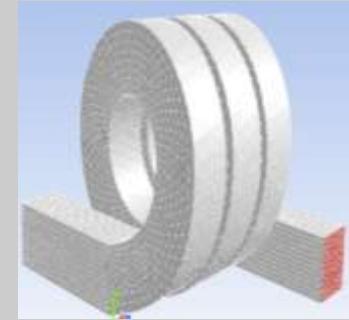
- Helix geometry
- 1.2M Hex cells
- Unsteady, laminar
- Coupled PBNS, DP
- AMG F-cycle on CPU
- AMG V-cycle on GPU
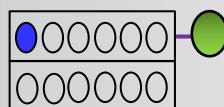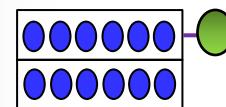
NOTE: All jobs solver time only, ~65% of total time