ANSYS And NCSA Achieve Supercomputing Milestone

November 17, 2014

PITTSBURGH, Nov. 17, 2014 /PRNewswire/ **--** ANSYS (NASDAQ: ANSS) and the National Center for Supercomputing Applications (NCSA) announced today that they have scaled ANSYS® Fluent® to 36,000 compute cores – an industry first that could lead to greater efficiencies and increased innovation throughout manufacturers' product development processes.

As companies increasingly seek to minimize time, quality and cost pressures by using engineering simulation, they have been constrained by compute power. High-performance computing (HPC) has become a core strategic technology enabling enhanced insight into product performance and improving the productivity by considering more design variants.

The combination of the Blue Waters supercomputer and the Cray Inc. engineering team, the NCSA Private Sector Program technical team, and recent enhancements to the Fluent code enables organizations to study the most complex and realistic simulation cases. Blue Waters uses hundreds of thousands of computational cores to achieve peak performance of more than 13 quadrillion calculations per second. That advanced compute power is helpful for applications like Fluent software, an industry-leading computational fluid dynamics solution used by organizations around the world.

"We're connecting all the dots," said Ahmed Taha, the NCSA senior computational resource coordinator who led this extreme benchmarking project. "NCSA is unique in connecting the industrial users, the hardware and software vendors, and the domain expertise of our staff. In addition, this level of scalability for a commercial fluid dynamics solver is unprecedented on our system, especially considering the complexity of the model physics with transient, turbulent flow, chemical species transport and multiple non-reacting flows."

"Compute power has increased a thousand-fold over the last decade – enabling engineers to solve problems that were once unsolvable," said Wim Slagter, ANSYS HPC product manager. "While most organizations don't have access to 36,000 cores today, it won't be long before these extreme core counts are commonplace. And even today's users who are running at much lower core counts will see direct benefits through considerably greater efficiencies. The results will be more amazing products delivered to customers much faster than ever."

ANSYS and NCSA plan to continue exploring the limits of scale-out computing, including testing and improving the scaling of ANSYS fluid dynamics models involving even more complex physics. Other collaborative efforts include running Fluent on NVIDIA graphics processing units (GPUs), as well as testing the supercomputing limits for applications such as turbomachinery using ANSYS CFX®.

About ANSYS, Inc.
ANSYS brings clarity and insight to customers' most complex design challenges through fast, accurate and reliable engineering simulation. Our technology enables organizations — no matter their industry — to predict with confidence that their products will thrive in the real world. Customers trust our software to help ensure product integrity and drive business success through innovation. Founded in 1970, ANSYS employs over 2700 professionals, many of them expert in engineering fields such as finite element analysis, computational fluid dynamics, electronics and electromagnetics, embedded software, system simulation and design optimization. Headquartered south of Pittsburgh, U.S.A., ANSYS has more than 75 strategic sales locations throughout the world with a network of channel partners in 40+ countries. Visit www.ansys.com for more information.

ANSYS also has a strong presence on the major social channels. To join the simulation conversation, please visit: www.ansys.com/Social@ANSYS

About NCSA
The National Center for Supercomputing Applications (NCSA) provides computing, data, networking, and visualization resources and services that help scientists and engineers across the country better understand our world. NCSA is an interdisciplinary hub and is engaged in research and education collaborations with colleagues and students across the campus of the University of Illinois at Urbana-Champaign.

ANSS-T

Contact Media Tom Smithyman
724.820.4340
tom.smithyman@ansys.com

InvestorsAnnette Arribas, CTP
724.820.3700
annette.arribas@ansys.com

Logo - http://photos.prnewswire.com/prnh/20130430/NE03388LOGO

SOURCE ANSYS, Inc.