ANSYS, HLRS And Cray Set New Supercomputing Record

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PITTSBURGH, Nov. 15, 2016 /PRNewswire/ -- ANSYS (NASDAQ: ANSS), the High Performance Computing Center (HLRS) of the University of Stuttgart and Cray Inc. have set a new supercomputing world record by scaling ANSYS® Fluent® to over 172,000 computer cores on the HLRS supercomputer Hazel Hen, a Cray® XC40™ system – enabling organizations to create innovative and groundbreaking complete virtual prototypes of their products faster and more efficiently than ever.

ANSYS, HLRS and Cray have pushed the boundaries of supercomputing by achieving a new supercomputing milestone by scaling ANSYS software to 172,032 cores on the Cray® XC40™ supercomputer, hosted at HLRS, running at 82 percent efficiency. This is nearly a 5x increase over the record set two years ago when Fluent was scaled to 36,000 cores.

By leveraging high performance computing (HPC), companies can rapidly iterate their products. Even though most organizations do not have access to this extreme core count level yet, users across all computing platforms from HPC clusters over Cloud to engineering desktops can take advantage of the breakthroughs that speed up computing at all levels.

"Our high-performance computing technology partnership with HLRS is delivering cutting-edge simulation capabilities," said Wim Slagter, director of HPC and cloud marketing at ANSYS. "With the state-of-the-art resources and support from Cray, as well as access to government, industry and academia, we can use HPC to solve even more complex and challenging problems across any industry."

Since announcing their partnership in 2015, ANSYS has worked with HLRS and Cray to profile and benchmark ANSYS' simulation software for extreme HPC scalability and capability. The partnership not only ensures that ANSYS' simulation software scales to extreme loads, but also broadens the scope of simulations, allowing for applicability to a much broader set of real-world problems and products.

"We see the role of HLRS as vital for industrial innovation," said Michael M. Resch, HLRS director. "We not only provide the HPC platforms for industrial companies and scientific organizations but also support them in developing solutions for their research and their business based on extreme HPC capabilities. This partnership is a prime example that supercomputing can be brought to bear on some of the most pressing technical challenges of the day."

The new record is critical as the demand for HPC to solve large-scale simulation challenges is growing across industries, especially in the aerospace and automotive industries, where product simulation models are becoming larger and more complex. We can now tackle more complex and broader systems level simulation needed to develop the smarter and greener products of tomorrow.

"This record-setting scaling of ANSYS software on the Cray XC40 supercomputer at HLRS proves that close collaborations with customers and partners can produce exceptional results for running complex simulations," said Fred Kohout, senior vice president and chief marketing officer at Cray. "The highly-integrated architecture of the Cray XC40 and its Aries interconnect are designed for applications at any scale, and allow scientists and engineers to push the boundaries of advanced simulations."

About ANSYS, Inc.

ANSYS is the global leader in engineering simulation. We bring clarity and insight to our customer's most complex design challenges through the broadest portfolio of fast, accurate and reliable simulation tools. Our technology enables organizations in all industries to imagine high-quality, innovative product designs that are sustainable and have an accelerated time to market. Founded in 1970, ANSYS employs almost 3000 professionals, more than 700 of them with PhDs 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 and development locations throughout the world with a network of channel partners in 40+ countries. Visit http://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 HLRS:

The High Performance Computing Center Stuttgart (HLRS) of the University of Stuttgart is one of the three German supercomputer institutions forming the national Gauss Centre for Supercomputing. HLRS supports German and pan-European researchers as well as industrial users with leading-edge supercomputing technology. The HLRS supercomputer Hazel Hen is currently registered at position 9 in the *TOP 500*, which lists the world's most powerful HPC systems world-wide. The HPGMG benchmark identified Hazel Hen as the second best system in the world regarding its performance under real application conditions. The Cray XC40 system is capable of more than 7 petaflop/s, or seven thousand trillion calculations per second, of computing power. It has 185,088 processing cores housed in 7,712 dual-socket nodes with Intel Xeon E5-2680 v3 processors.

HLRS press materials can be found here.

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