



Leading-Edge HPC Cluster Cooling System Innovated by Ace Computers

Ace Computers announces breakthrough HPC cluster with direct-to-chip hot water liquid cooling system.

Tuesday, September 11th 2018, 1:24 pm EDT



CHICAGO, ILL., U.S., September 11, 2018 -- Ace Computers continues to be one of the most innovative HPC technology developers in the world. The most recent breakthrough was an HPC cluster with a direct-to-chip hot water liquid cooling system for a long-term client.

Ace Computers worked closely with Intel on this 176-node HPC cluster for CFD. This is one of the first implementations using this cooling technology. It involved installing dry coolers to circulate hot air from the servers and instead of cooling hot air, the system exchanges it. In addition to significantly more effective cooling, this also makes the system more energy efficient.

InRackCDU is a warm water CDU (cooling distribution unit) capable of providing up to 80kW of cooling capacity. It removes heat from the hottest components in servers through a highly efficient all-liquid path. This allows deployment of maximum power processors in clusters with high interconnect density and reduces cooling costs.

When deployed with D2C (direct-to-chip) cooling loops, the system provides a hot water liquid cooling solution that captures 60% to 80% of server heat, allowing rack level processor power densities up to 80 kW.

The client, a U.S. defense contractor, provides computational physics analysis, such as fluid dynamics, shock wave physics, and structural mechanics, to support the defense and automotive industries. They maintain a 5,000-CPU parallel supercomputer system, much of it developed by Ace Computers, capable of conducting a massive amount of large-scale computations annually.

Ace Computers CEO John Samborski said, "They liked that we worked closely with companies they respected, such as Intel, and that we are cost competitive. We were on the same page from the start they trust us to provide exactly what they want and we have a good sense of what they are looking for."

The client's CEO agrees, "The collaborative relationship that we have with Ace is very important to us," he said. "While cost/performance is imperative, we appreciate being able to rely on Ace Computers and we know that they really listen. One of the benefits of working with a smaller custom technology manufacturer is that that you tend to work with the same people for a long time you don't get a different team with every order. I know that if I have a question about one of the components and I call the manufacturer, I'll be on hold for a long time. But I can give Ace Computers a quick call and they will have the answer to me right away."

In addition to being an Intel Platinum Partner, Ace Computers is one of a select group of HPC supercomputer developers that have achieved Intel HPC Data Center Specialist status. Specialists have access to a number of value-adds from Intel that differentiate them from competitors and lead to better solutions for their clients.

With high performance technology orders from industries that include chemistry, physics, energy, biology and mechanical engineering, 2018 continues to be a banner year for Ace Computers.

Ace Computers has been serving the high performance computing market since 1983 and is one of the most established and respected custom technology builders in the world. The company is a Woman-Owned Small Business manufacturer and reseller for the public sector as well as the commercial sector with a stellar record of outstanding customer service, engineering expertise and on-time delivery. Ace Computers is a multi-year CES Award winner and HPCwire Readers' Choice Award finalist. In addition to some of the finest academic institutions in the U.S., long-term clients include the U.S. Department of Energy and the U.S. Department of Defense. Contracts include GSA, NETCENTS 2 and SEWP V. Headquartered in Greater Chicago, additional locations include New York, New Jersey, Florida, Virginia, Nevada, Arizona, Colorado and Washington. To contact Ace Computers, call 1-877-223-2667 or 1-847-952-6900 or visit <http://www.acecomputers.com/TopProducts.asp>