IBM Unveils Breakthrough 'Cool Blue' Datacenter Cooling Technology

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IBM today introduced "Cool Blue," a technology component that can use the existing chilled water supply for air conditioning systems already located in the majority of customer datacenters to reduce server heat emissions by up to 55 percent.

IBM is the first systems vendor to develop such a technology. "Cool Blue" can be deployed on any server, enabling customers to ease the burden on existing air conditioning units and potentially lower energy costs by up to 15 percent. It is available immediately.

Designed to easily fit on to the IBM eServer Enterprise rack, "Cool Blue," or the IBM eServerTM Rear Door Heat eXchangerTM as it is officially termed, is designed to help customers whose datacenters have reached the limits of cooling capacity, but still have space to add racks of systems. The improved cooling from the Heat eXchanger enables customers to fully populate individual racks, freeing valuable floor space without the need to purchase additional air conditioning units. The Heat eXchanger can also alleviate the issues caused by other vendors' servers in the datacenter where the customer might have cooling challenges.

"IBM has been addressing the cooling needs of customer datacenters for years and the new 'Cool Blue' technology is a giant leap forward in overcoming previously insurmountable air conditioning limitations," said Rod Adkins, vice president of development, IBM Systems and Technology Group. "As customers try to incorporate more processing power into the same datacenter footprint, this breakthrough technology

will help them win the war on heat."

HypoVereinsbank, the second largest bank in Germany, selected the Heat eXchanger to reduce heat temperature in their High Performance Computing environment.

"The Heat eXchanger is a very unique solution. It finally allowed us to get the density we've been aiming for, without increasing our cooling requirements or costs," said Volker Machmeier, technical director for HVBInfo. "In addition, the door is extremely easy to install and use. It fit right in to our existing infrastructure to quickly provide more cooling capacity to areas where it was most needed."

Inside the door of the Heat eXchanger, sealed tubes filled with circulating chilled water effectively remove up to 55 percent of the heat generated in a fully populated rack and dissipate it so it is not released into the datacenter. In fact, the Heat eXchanger can remove up to 50,000 BTU of heat generated by a full server rack, based on total rack output.

The updated IBM eServer Cluster 1350 system will be one of the first eServer technologies to deliver support for the Heat eXchanger. Leveraging this new technology, the Cluster 1350 will enable high performance customers to conquer thermal challenges in high-density IT environments and better utilize existing facilities.

IBM is the recognized leader in cooling technology and its rack servers are engineered with the cooling and efficiency needs of customers in mind. IBM breakthroughs in server cooling technology include features like Calibrated Vectored Cooling, the industry's most advanced systems-power and cooling architecture, which intelligently engineers the path of cool air flow through IBM server systems.

The Heat eXchanger can be easily installed by customers and moved to

different racks to address changing cooling requirements. Its unique design uses standard fittings and couplings and, because there are no moving or electrical parts, helps increase reliability. It can be opened like any rear cover, so serviceability of racks fitted with a Heat eXchanger is as easy as a standard air cooled rack.

The IBM eServer Heat eXchanger is generally available today, with pricing starting at $4,299 in the United States. The Heat eXchanger is also available as part of the Cluster 1350, with prices varying per the configuration of the cluster.