Jaguar supercomputer helps develop new nuclear power capabilities

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While the Jaguar supercomputer at the Department of Energy's Oak Ridge National Laboratory recently ceded its rank as the world's most powerful supercomputer - dropping to No. 2 - it is still performing world-class science.

Jaguar is virtually paving the way toward the development of a new generation of nuclear power reactors.

"We're building what we call a virtual reactor," said Jeff Nichols, ORNL's associate laboratory director for computing and computational sciences. "We have the ability to virtually examine how a reactor can be made so it will last longer and burn at a higher energy efficiency rate with less waste. This research will show us how our existing fleet of nuclear reactors can last longer and continue providing clean energy."

Jaguar holds its position as DOE's most powerful supercomputer.

"It can still perform at very high capabilities on computational chemistry , materials, climate modeling, fusion, fission and astrophysics," Nichols added. "It sustains a very high performance on these applications and allows us to do science that nobody else in the world can do."

Provided by Oak Ridge National Laboratory

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