'Painter' supercomputer comes to life at Louisiana Tech

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This is LONI's "Painter" supercomputer at Louisiana Tech University. Credit: Louisiana Tech University

The Louisiana Optical Network Initiative (LONI) gained another 4.77 teraflops of computing power recently with the activation of the "Painter" supercomputer housed in the Data Replication Center at Louisiana Tech University.

Painter is the fifth of six Dell Linux Clusters that comprise the LONI system, a state-of-the-art fiber optics network running throughout Louisiana, and connecting Louisiana and Mississippi research

universities to one another as well as National LambdaRail and Internet2.

"This supercomputer will help support scientific calculations and data processing by several different disciplines on the Louisiana Tech campus," says Dr. Zeno Greenwood, associate professor of physics. "Painter will give us much, much more and incredibly faster computing than we ever had previously."

Painter's 4.77 teraflops will contribute to the 85 teraflops of total computing power LONI will have upon activation of all its state-wide nodes.

Teraflops is an acronym meaning trillion floating point operation per second; a measure that describes how many multiplications can be performed within one second. To put it in perspective, Painter's performance power is nearly 500 times greater than that of an average desktop PC.

Louisiana Tech's research efforts, both on and off campus, will greatly benefit from the power and speed generated by Painter.

"[Tech's] high energy physics group will do theoretical simulations and perform large, complicated analyses with Painter," says Greenwood. "This will be in support of the giant ATLAS experiment coming on line this summer at CERN (European Organization for Nuclear Research)."

The Painter supercomputer is named in honor of Jack Painter, professor emeritus of civil engineering, who was instrumental in bringing the LGP-30, Louisiana Tech's very first computer, to the campus in the 1950's. With a clock rate of 120 kHz, the LGP-30 was a binary computer, performing without an operating system and at a rate of up to 400 additions per second, which is 12.5 billion times slower than the Painter supercomputer.

Source: Louisiana Tech University