

# UNM plans to buy 'supercluster'

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The University of New Mexico's supercomputer center is leaping to the forefront of a promising new kind of high performance computing, buying a "supercluster" of fast computers for scientific simulations.

University officials said Wednesday they will spend more than \$1.5 million to buy the computers from IBM.

Tying together 256 desktop computers, each running the upstart Linux operating system, is a cost-

effective way to give scientists access to fast computers for research simulations, said David Bader, a professor in UNM's Department of Electrical and Computer Engineering.

Researchers will use the new machine for simulations ranging from re-creating virtual ecosystems to modeling weather and climate.

The project, funded by the National Science Foundation's National Computational Sciences Alliance, is part of a national effort to give

researchers access to the fast machines needed for modern scientific simulation.

Clusters of Linux computers have become a popular solution to the problem because of their cost and the quality of the operating system, designed by a group of volunteers and distributed for free.

The largest such cluster currently in operation, located at Sandia National Laboratories, is currently rated the 44th fastest computer in the world, and Sandia is in the midst of expanding it.

Los Alamos National Laboratory also is running several large Linux clusters.

Scientists use the machines by dividing up a single large research problem into many small pieces, parcelling them out to the computers that make up the cluster to solve.

The new UNM cluster will have 256 computers, each with two 733 Mhz Intel chips. The university is also buying high-speed networking hardware to connect the computers — a key piece of the new cluster architecture.