



Ceremony Dedicates Linux Supercluster

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The National Computational Science Alliance (Alliance) introduced its first 128-processor workstation supercluster running the Linux operating system at an [April 8 dedication](#) at the Supercluster Computing Facility of the [Albuquerque High Performance Computing Center](#) (AHPCC), located on the University of New Mexico (UNM) campus.

The supercluster, called Roadrunner, is a 64-node AltaCluster™ by Alta Technology Corporation containing 128 Intel 450 MHz Pentium II processors. The supercluster runs the Linux operating system and the processors are interconnected via a Myrinet network for high-speed communications. Roadrunner will provide the scientific community with a shared, cost-effective production environment for solving computational tasks too large for individual workstations. Roadrunner is designed to support traditional high-performance computing applications and emerging national information infrastructure applications, such as scalable Web serving, interactive visualization and data exploration, information serving, and data mining.

The supercluster will also be used for computer science projects that compare software performance with other Alliance machines, such as the Windows NT Supercluster and the Silicon Graphics Origin2000™ array at NCSA, and the IBM RS/6000 SP at the Maui High Performance Computing Center (MHPCC). UNM, the Alliance, Alta Technology and Intel are working together and with others in the industry to further evolve Linux-based cluster technology. Plans are to grow the Roadrunner Supercluster to 512 processors over the next 12 months, subject to the availability of necessary resources.

About 150 people attended the dedication event, including U.S. Sen. Pete Domenici, University of New Mexico President William C. Gordon, Alliance and NCSA Director Larry Smarr, and VIP guests from Los Alamos and Sandia National Laboratories, the Air Force Research Lab, IBM, Silicon Graphics, Inc., Sun Microsystems, Alta Technology Corporation and Intel.

Sen. Domenici expressed his pride in the role New Mexico, UNM and AHPCC are playing in high-performance computing and research. Smarr stressed that the Roadrunner Supercluster is part of the overall vision of a nationwide computational infrastructure called the National Technology Grid, which is being prototyped by the Alliance. The Grid will be a distributed computing environment--accessible anywhere and at any time--that integrates high-performance computers, advanced visualization

environments, mass storage devices, and massive databases via high-speed networks.

For more on the Linux Roadrunner Supercluster dedication see our [April 5 article](#).

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Albuquerque High Performance Computing Center (AHPCC) Director and Alliance EC member Frank Gilfeather (far right) talks about the Linux supercluster with U.S. Senator Pete Domenici (second from left) and Alliance Director Larry Smarr (second from right) during the April 8 supercluster dedication ceremony.



Alliance Director Larry Smarr, University of New Mexico President William Gordon and U.S. Senator Pete Domenici plug the Linux supercluster into the National Technology Grid.

The Alliance introduced its first 128-processor workstation supercluster running Linux at a dedication ceremony at the Supercluster Computing Facility of the AHPCC. The supercluster, called Roadrunner, is a 64-node AltaCluster by Alta Technology Corporation containing 128 Intel 450 MHz Pentium II processors.



Alliance Director Larry Smarr (right), U.S. Senator Pete Domenici (second from right) and other distinguished guests get a taste of virtual reality at the AHPCC visualization facility.