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SGI Readies Linux for High-end DB Aps

SGI has unveiled a new computing platform based on industry standards designed to carry out the most complex, demanding, data intensive computing tasks. "We have fully embraced the forces of commoditization and are pushing them to a higher level," said Andy Fenselau, the director of marketing for the SGI Altix 3000 system. With the Altix 3000, SGI has positioned itself as the leading 64-bit Linux-based system for large-scale data-intensive applications. In a four-year research and development effort, SGI has been able to apply many of its most advanced supercomputing concepts to an Intel/Linux platform, including SGI's NUMAlink built-in high-bandwidth, low-latency interconnect and NUMAFlex, its third generation, modular supercomputing architecture. "The challenge was to do that without messing with the kernel," Fenselau said. "This is not another flavor of Linux. It is an industry-standard platform."

SGI has been able to shatter many of the common industry myths about the Linux/Intel platform. For example, while Linux is often faulted for its poor I/O, the Altix 3000 can achieve an I/O throughput of three gigabytes per second and has conducted tests in which it has achieved I/O marks of seven gigabytes per second. It also has global shared memory technology that allows the system to share four terabytes of memory across 64-processor "fat nodes." Moreover, memory can be shared across four "fat nodes," resulting in a shared memory of up to 16 TB. The ability to load entire databases into memory can rapidly speed up specific applications. According to James Tuleya, strategic alliances manager at SGI, there are several areas in which he anticipates strong synergies between SGI and Sybase based on the Altix. "We have interest from our common customers in the government and defense communities," he said.