

FLUENT Support for AMD Opteron Hardware

The FLUENT 6.1.22 release in October 2003 includes certification on the 64-bit Opteron processor from AMD, running under the SUSE Linux OS. This certification confirms that Fluent's standard 32-bit executable performs well on the Opteron system, taking advantage of Opteron's on-board 32-bit capability. Work on the 64-bit port for Opteron is in progress and is expected with the release of FLUENT 6.2 later next year. Early indications are promising, and a prototype may be available earlier in the year for interested clients to try.

The advantage of a 64-bit processor is that it can handle processes with huge memory demands. By contrast, 32-bit machines are limited to processes that, together, require less than 4GB of RAM. On most PCs, processes are limited to 3GB in size. This restriction limits FLUENT simulations to problems with 2 to 3 million cells (per processor), depending on the number of auxiliary equations (for turbulence, heat transfer, species transport, or multiphase, for example) being solved. The 64-bit architecture lifts the process size limit by several orders of magnitude. ■

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