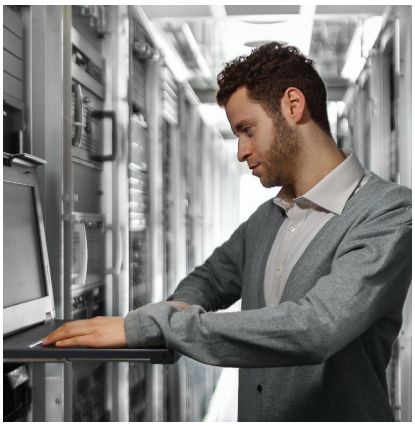
SUCCESS BRIEF

Intel® Xeon® Processor E5 Product Family

High-Performance Computing

Driving optimal modeling performance

Dörrer + Broßmann cuts the time to model car parts from seven days to five hours with Intel® Xeon® processor-based clusters



Dörrer + Broßmann Konstruktionen

"When you're running engineering simulations, processing time is everything. The Intel® Xeon® processor E5 product family can complete for us what used to be a week's processing work in a single day."

Stephan Dörrer
Master of Technical Management (CCI)
Dörrer + Broßmann

COMPANY

Founded in 1992, Dörrer + Broßmann offers structural design and simulation services to automotive suppliers. The small but specialized company calculates the design of tools needed to manufacture (stamp) certain parts of cars, a compute-intensive process that requires highly precise modeling (less than 1mm margin of error).

CHALLENGE

Dörrer + Broßmann uses workstations to run simulations in its Autoform* software. Although the machines have eight cores, running a simulation takes 24 hours. The results must then be refined by the end customer using LS-DYNA* software. It's not feasible for Dörrer + Broßmann to use LS-DYNA itself, because it could take up to a week of computing time per run on its current hardware.

SOLUTION

Dörrer + Broßmann carried out a proof of concept to see how a cluster based on the Intel® Xeon® processor E5 product family can enable it to carry out more sophisticated engineering simulations more quickly. It ran LS-DYNA on a Fujitsu PRIMERGY* BX400 S1 Blade Server, which incorporates the Intel Xeon processor E5 product family. It features eight compute nodes, with two sockets each and eight cores per socket, a total of 128 cores.

BENEFITS

The company saw a significant improvement in performance and its internal measurements show it was able to cut the time for a simulation using LS-DYNA from seven days to five hours. Because Dörrer + Broßmann can deliver more precise designs using LS-DYNA than it could using Autoform, customers no longer need to refine the designs themselves, which saves them time and increases the value of the service that Dörrer + Broßmann is able to offer. The more precise simulation services also open up opportunities for Dörrer + Broßmann to pitch for business that was previously too compute-intensive for the company to carry out.

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