TotalCAE
Private Cloud
Case Study

TotalCAE

BENEFITS

- Completely managed HPC appliance enabled simple migration from a workstation environment to HPC.

- Increased user productivity through faster job turnaround, and more cost effective use of solver licensing.

- Ability to do more designs through optimized scheduling, and enabled design optimization jobs.

- Simple to use interface allowed non-experts to access HPC resources.

Company Overview

A major tier-1 auto supplier that produces a wide range of automotive components.

Customer Challenges

The customer was facing the following challenges:

1. Pressure to turn around more design experiments per day.
2. Could not control and prioritize simulation workload.
3. Inability to run simulations 24x7.
4. Wanted to make more efficient use of their existing Abaqus solver tokens.
5. IT did not have the specialized background to migrate from their currentworkstation environment to a new HPC environment.

Solution

The TotalCAE Private Cloud solution was implemented to achieve the desired goals. TotalCAE Private Cloud is a turn-key fully managed HPC cluster that TotalCAE manages in the customers data center.

TotalCAE migrated their SIMULIA portfolio to the TotalCAE HPC cluster appliance allowing for batching of jobs based on license availability to run around the clock, automatic job prioritization and implemented workflow automation. TotalCAE identified several optimizations for their model to reduce run times through benchmarking. A license analysis for the customers job identified 96 CPU core runs as the sweet spot and resulted in a 40% per-job license cost savings compared to the previous workstation configuration the customer was running with before engaging with TotalCAE.

"TotalCAE has been a great CAE IT partner that has helped our engineers be more productive through effective management of our HPC cluster"

– Larry Zhu, O-I CAE Manager

The customer HPC environment is regularly tuned and optimized to changing project and customer demands keeping engineering staff and resources at peak productivity.

Results

Customer seamlessly migrated from a workstation to a TotalCAE managed HPC cluster environment which resulted in more design trials, faster turnaround on simulation jobs, and a 40% job license cost savings by running in an optimal configuration through the use of TotalCAE Private Cloud.

TotalCAE

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