

TotalCAE Amcor Case Study

Company Overview

Amcor serves as one of the world's top global packaging companies. Although it humbly began as a small Australian paper manufacturer in the 1860's, today, Amcor boasts over 300 sites in 43 countries. Most of these locations specialize in specific sectors of the packaging market. As a global packaging company, Amcor offers customers the highest standards in innovative packaging solutions, reliable service and partnerships built on excellence. For well over 100 years the activities of AMCOR, and its place in the Australian community, have been characterized by a genuine respect for the laws of the land, as well as a respect for the rights of their customers and consumers.

Challenges

As Amcor emphasizes sustainability in their packaging, they needed to ensure that their packaging (particularly their plastic containers) was as lightweight as possible and utilized materials in the most efficient manner. In order to achieve this goal, designers and manufacturing engineers performed numerous simulations and computational fluid dynamic calculations in order to discern the most sustainable and cost effective packaging models. It was also imperative to perform these simulations to find any potential design flaws, as a difference of few additional grams of materials utilized in one bottle could increase the cost by millions of dollars. These computations and simulations were essential for providing their customers more design options and retain their competitive edge.

Using AMCOR's previous system, these computations could take as much as 3 days. The extended licensing fees needed created significant costs for AMCOR, and preoccupied the scientists and engineers' time that could have been spent working on other designs and solutions.

Solution

TotalCAE implemented a complete turnkey HPC compute cluster optimized for the Amcor Abaqus model. The TotalCAE Web Portal and license optimization tools were also deployed for implementing custom workflow and job automation.

Results

Amcor was able to achieve a much faster turnaround on jobs, including a simplified job submission workflow compared to their previous solution.

The TotalCAE cluster and tools allowed us to perform the fluid dynamic calculations in 6 hours instead of 3 days. This has really empowered the AMCOR team with the ability to quickly create many more options of sustainable, high-performance containers for our customers. Suresh Krishnan, AMCOR