

Case Study

Tofaş

»Fujitsu was most knowledgeable about High Performance Computing systems, providing all the information we needed to get started quickly, and with fast response time. Fujitsu took the time to analyze our business needs to provide a system design which is scalable for the future and will help us stay competitive.«

Hakan Korkmaz, Information and Communication Technologies Director, Tofaş



The customer

Country: Turkey
Industry: Automotive
Founded: 1968
Employees: 6,500
Website: www.tofas.com.tr

TOFAŞ TÜRK OTOMOBİL FABRİKASI A.Ş.

The challenge

Tofaş needed a High Performance Computing (HPC) platform to carry out the increasingly complex algorithms that help it to design the kinds of vehicle that people want to purchase.

The solution

Following a comprehensive benchmarking process, the company selected a PRIMEFLEX for HPC cluster solution comprising FUJITSU PRIMECENTER, PRIMERGY and ETERNUS systems plus consultancy and services.

The customer

Tofaş is Turkey's largest automotive manufacturer and produces over 400,000 vehicles per year for brands including Fiat, Citroën, Peugeot, Opel and Vauxhall. The company achieved accolades from the World Class Manufacturing organization for its factory in Bursa, whose infrastructure can compete internationally in the field of vehicle development. Tofaş' R&D center tests vehicle concepts and elements such as style, interior design, suspension and engine configuration.

The challenge

The question of what sells, and at what price, is an urgent one for vehicle producers. The high cost of materials and the time required to build an automobile demands considerable investment for manufacturers. In addition, elements such as color, style and other features can influence the purchase decision of potential buyers. Knowing what those triggers are for customers requires a complex algorithm. And that, in turn, requires a High Performance Computing (HPC) solution.

Tofaş asked several major vendors to propose a HPC platform that would enable it to calculate complex algorithms cost-effectively. The company asked each vendor to run benchmarks with the same input files on their demo system and to provide output files and benchmark reports. The objective was to evaluate the performance of the hardware and software proposed for the HPC platform. Fujitsu's results were significantly ahead of the closest competitor.

Fujitsu was selected because it had the best-performing technology combined with the most insightful understanding of the challenges involved. This led to Fujitsu becoming a trusted partner from the outset of the relationship. Fujitsu is at the forefront of the supercomputing space with more than 30 years' experience in the successful development of HPC systems and their deployment is mature in emerging and high-growth markets such as Turkey.

The benefit

- The Tofaş R&D team can expand the system to meet future needs and to make increasingly complex analyses of different kinds of vehicle models to stay ahead in a competitive market
- The HPC platform improves operating efficiency because Fujitsu's PRIMEFLEX for HPC cluster solution works hand-in-hand with Tofaş' optimized design, tooling and engineering in R&D
- Fujitsu's PRIMEFLEX for HPC cluster solution will provide Tofaş with a competitive edge in a demanding marketplace, and in doing so will make a key contribution to the Turkish economy
- The end-to-end, turn-key design of the PRIMEFLEX for HPC cluster solution enables easy installation and use by the Tofaş R&D team

Products and services

- FUJITSU PRIMECENTER M1 Rack 742S 42U-1050x700
- FUJITSU Server PRIMERGY CX400 chassis 24x2.5"standard
- FUJITSU Server PRIMERGY CX250 compute nodes
- FUJITSU Server PRIMERGY RX300 cluster head nodes
- FUJITSU Storage ETERNUS DX80 S2
- HPC Cluster Suite: 256 core

The solution

To meet customers' individual requirements today while being scalable for tomorrow's growing needs, Fujitsu offers HPC architectures ranging from x86 CELSIUS high-end workstations to x86 PRIMERGY industry-standard servers all the way up to the PRIMEHPC FX100 supercomputer. Considering that hardware is only part of an effective solution, Fujitsu's HPC offering also includes consulting and integration services.

Fujitsu's PRIMEFLEX for HPC cluster solution comprises FUJITSU PRIMECENTER, PRIMERGY and ETERNUS systems plus consultancy and services. Now, Tofaş' R&D team can expand and develop the system up to 1,024 cores to meet future needs and to make increasingly complex analyses of different kinds of vehicle models to stay ahead in a competitive market.

The benefit

Fujitsu provides Tofaş with the local resources it needs – such as technical, heavy engineering, design and R&D, in order to reduce production costs. It also improves operating efficiency as Fujitsu's HPC cluster solution works hand-in-hand with Tofaş optimized design, tooling and engineering in R&D.

Fujitsu's PRIMEFLEX for HPC platform now provides valuable insights and makes Tofaş more competitive. The end-to-end, turn-key design of the HPC cluster solution enables easy installation and use by Tofaş R&D team. Fujitsu's HPC platform will give Tofaş the edge in a demanding marketplace, and in doing so will make a key contribution to the Turkish economy.

Conclusion

"Tofaş has realized that High Performance Computing provides great benefits in areas such as R&D. The enhanced computer processing power and computer-based modelling speeds up development by analyzing multiple sources of big data and customers' buying behavior to reveal competitive market advantages."

Hakan Korkmaz, Information and Communication Technologies Director, Tofaş

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