MultiPhysX Consulting – MPX
Newsletter n°2
February 2026

The reception of the EVEREST workstation from FRA-SYS (64 cores, 512 GB of RAM) marks a key milestone for me and MultiPhysX Consulting.

The objective was clear: **to evaluate the concrete time savings and their impact on productivity, both for my business and for my clients.**
I tested **Ansys CFX** (CFD*) **with and without HPC** Packs** on a complex model, comparing performance from 4 to 60 cores for static CFD. The results confirm **a significant reduction in calculation times.**

However, the main challenge concerns **transient CFD simulations**, often avoided due to the delays they cause. Without suitable equipment, delays accumulate and jeopardize meeting deadlines.

Thanks to the **EVEREST workstation** and **the HPC Packs**, I was able to quantify the gains for a simulation:

- For me: faster project execution, increased capacity to handle multiple projects simultaneously, and better optimization of allocated time.
- For you: deliverables that meet deadlines, with no compromise on the quality of results.

Simulation type	***Time without HPC (4 cores)***	***Time with 3 HPC Packs (60 cores)***	***Time Saved***
CFD Steady State (23,1M elements)	*1:42:08*	*0:26:00*	***75%***
CFD Transient (23,1M elements)	*72:30:47*	*15:06:26*	***80%***
CFD Steady State (42,2M elements)	*4:44:23*	*1:09:36*	***75%***
DOE - 21 simulations (42,2M elements)	*99:32:03*	*24:21:36*	***75%***

Performance, of course, depends on **the complexity of the model**, the **mesh**, the **input data**, but also on **the user's skills** 😊. This raises an essential question: **what about more demanding models (42 or 73 million elements) or a design of experiments (DOE***)?**

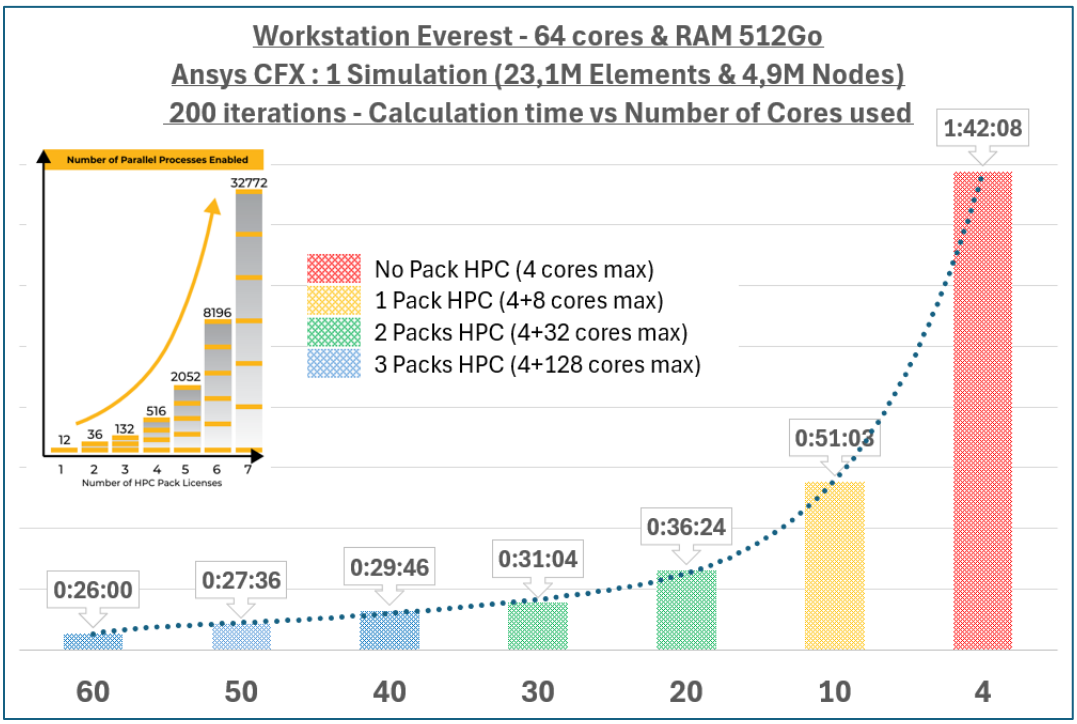
The combination of **HPC Packs** and the **EVEREST** workstation is not just about speeding up calculations—it makes simulations that were **once unfeasible within controlled timeframes possible.**

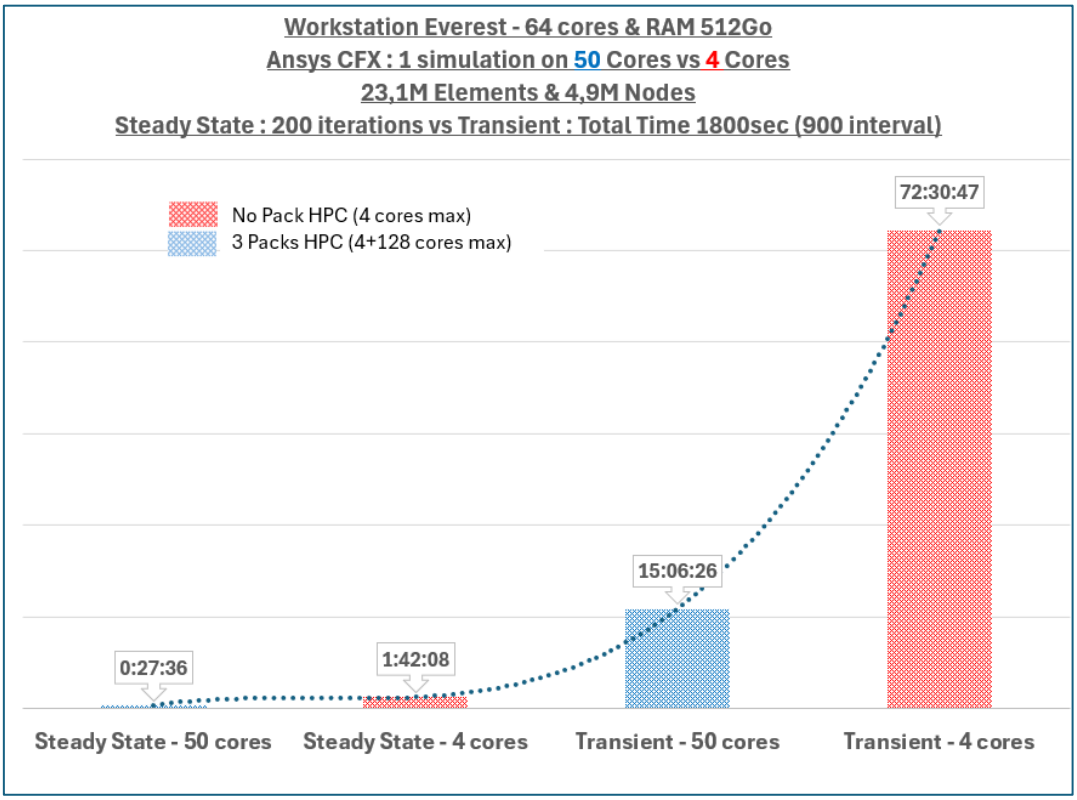
In summary: an investment that ensures projects are delivered on time, enhanced credibility, and the ability to meet increasingly precise technical requirements. And finally, two criteria that are particularly important to me for my daily comfort with the **FRA-SYS EVEREST** workstation: **a quieter environment and better heat management!**

Thanks to the FRA-SYS Team 😊

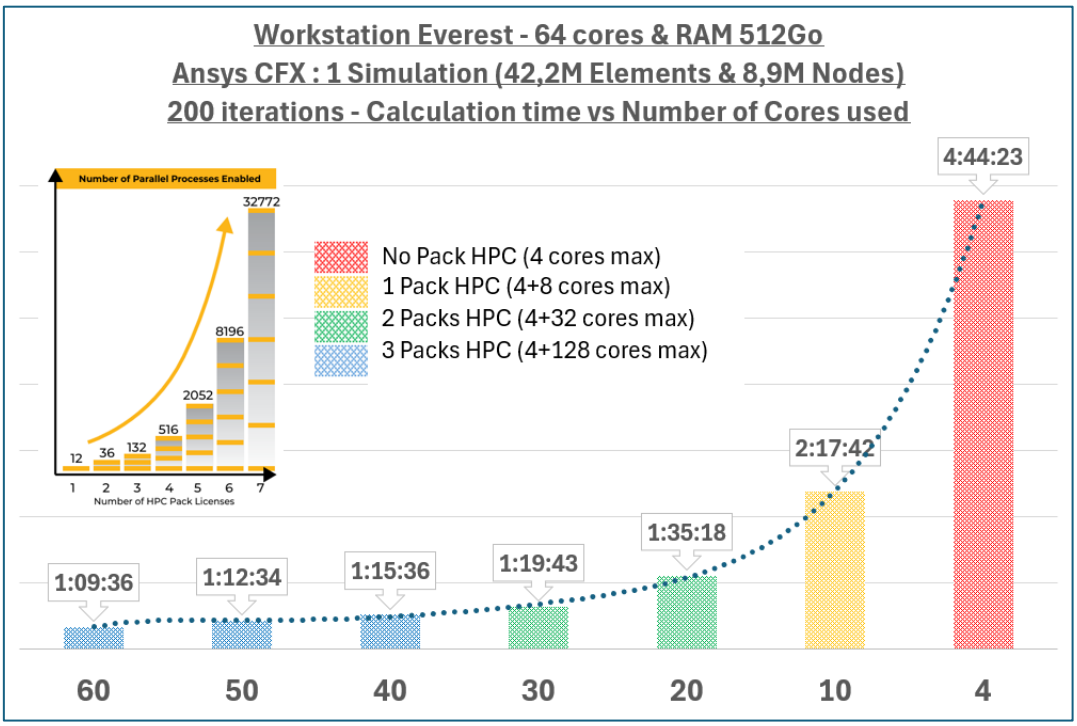
Ready to step up with Me and MultiPhysX Consulting! 🚀

**CFD : Computational Fluid Dynamics*
***HPC : High-Performance Computing*
****DOE : Design Of Experiment*

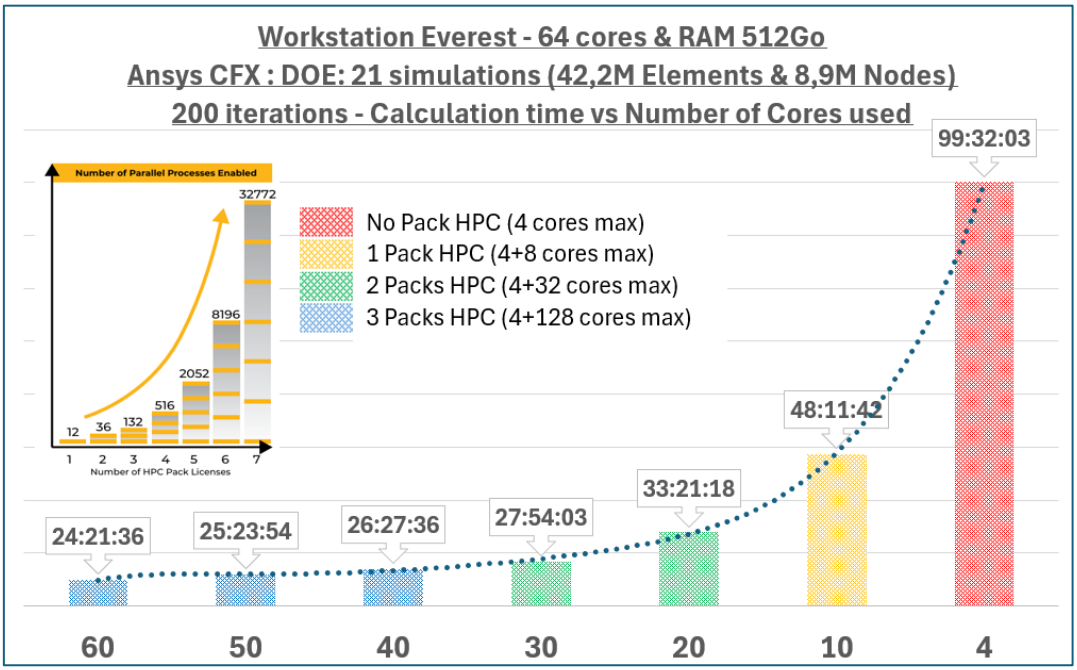




"Go from 3 days to 15 hours on transient simulations, with no compromise on accuracy."



“Same model and under the same conditions, but with a finer mesh: 42.2 million elements compared to 23.1 million previously.”



*" For projects requiring **Design of Experiments (DOE),** such as design or material optimization, the EVEREST workstation combined with HPC Packs drastically reduces calculation times. Below, a comparison for 21 simulations (42.2M elements):*

- **Without HPC Pack** : 99h32 (4 cores)
- **With 3 HPC Packs** : 24h21 (60 cores)

*A time saving of **75%,** allowing for faster iteration and delivering results sooner. You gain 3 days to innovate!"*

Need support or expertise?

Do you have a project, questions, or would you like to benefit from the expertise of a Multiphysics Simulation specialist? **Contact me.**

And if, like me, you are passionate about **Multiphysics Simulation**, subscribe to **MultiPhysX Consulting – MPX** to stay updated on our latest news and innovations.

Frederic BONNIN
MultiPhysX Consulting - MPX
78000 Versailles
www.multiphysx.com
Mobile : +33 (0) 6 81 53 45 80
Email : Frederic.Bonnin@multiphysx.com