PHOENICS on the Cloud (PHOENICS – OTC)

CHAM

Experts in CFD Software and Consultancy

PHOENICS-On-the-Cloud

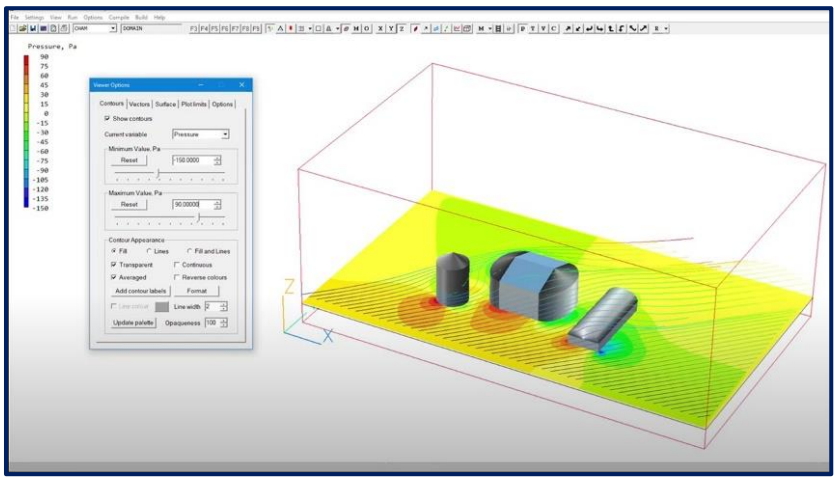
PHOENICS, & CFD, are used to model any and all types of fluid flow by creating digital prototypes which enable environmental and industrial impacts to be checked, and ensure health and safety compliance, without needing expensive, time-consuming, physical testing.

PHOENICS-OTC provides on-demand deployment and rapid-scaling capabilities via the Microsoft Azure Marketplace. It is cost-effective – especially for large-scale simulations - which benefit from the multi-core, parallel-processing facilities offered by Virtual Machines (VMs) on the Azure Cloud

It is a valuable tool for new customers who wish to make short-term, or project-based, use of PHOENICS without needing to download software or make the up-front financial commitment associated with a formal licence.

It is valuable for existing customers as an extra resource to supplement in-house copies when there is a need to perform large, number-crunching, or computer-intensive simulatoions.

PHOENICS is reliable and extensively validated. It is the original Computational Fluid Dynamics (CFD) simulation package, pioneered by Professor D Brian Spalding FRS, at his team at CHAM. That team is now responsible for keeping the software updated, andoffering skilled and informed user support.



PHOENICS-OTC went live in November 2021 and CHAM was pleased to receive its first 5 review almost immediately. If you have used the product please send us a review:*

> *"**Easy and Efficient: Katarzyna Bozek:** I found working with PHOENICS On The Cloud easy and very efficient. I could definitely see ourselves using it in the future as cost and time effective option over the standard license with limitations of our own machine specifications. I think the option to control the cost to a degree by the 'size' of the machine you are willing to pay for depending on demands of your project would be very appealing to our clients too. As with every new approach, there is a learning curve as to which machines are best for the size and type of your model. Once understood, the site is easy to navigate and upgrade your quota to suit your needs. Overall very positive experience."*

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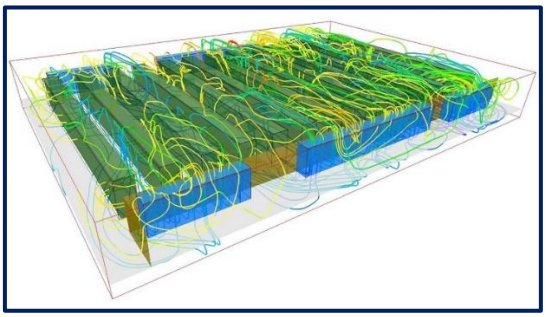
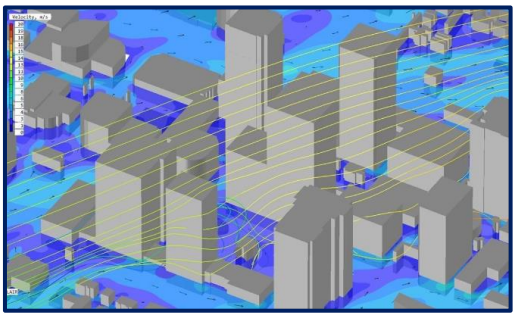
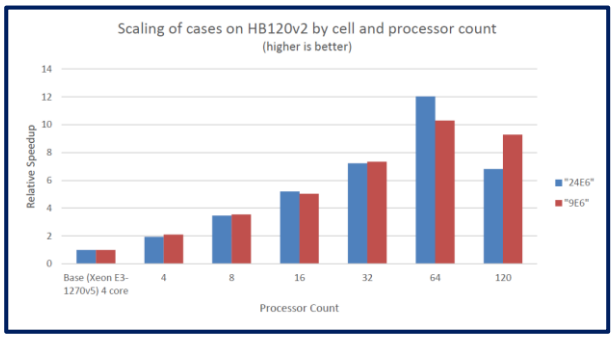
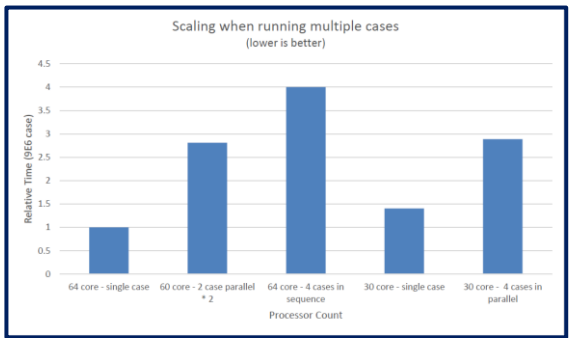




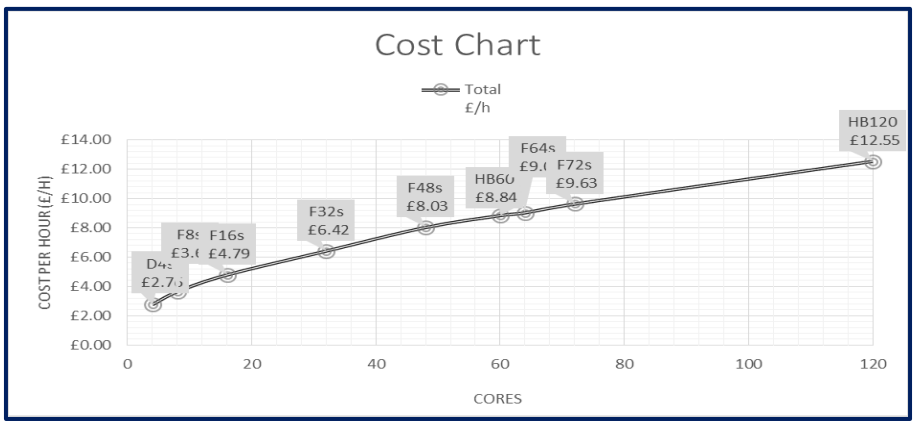
The graph shows scaling achieved for 2 sample cases of 9 million computational cells and 24 million cells when run on various multi-processor systems.

Similar benefits can be achieved when running cases simultaneously. The graph gives performance figures for running several cases on a 120-core VM.





Whilst a 120-core VM can provide quick results for a single case, running 2 cases concurrently using (say) 60-cores each, or 4-cases using 30 cores each, achieves cost savings of >25%. Consequently, although the cost-per-hour is notionally higher when using larger multi-core VMs, they can be particularly cost-effective for running multiple variations of a simulation (eg investigating multiple-wind conditions over a cityscape).



PHOENICS is accessible licence-free via the Internet via: https://azuremarketplace.microsoft.com/en-us/marketplace/apps/concentrationheatandmomentumlimited1616154387047.phoenics. *This is a pay-to-use basis, on a selection of Virtual Machines (VMs) ranging from dual- to 120-core VM options using the Microsoft Azure Marketplace:*

Try it via the link created by CHAM: PHOENICS on the Cloud (cham.co.uk). For help contact sales@cham.co.uk.