

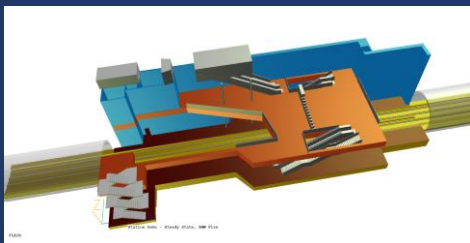
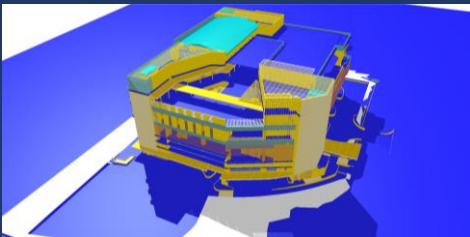
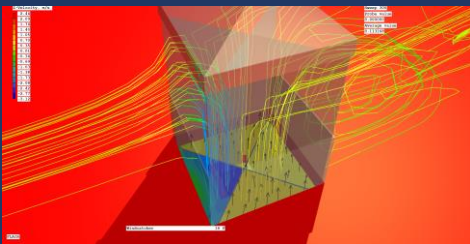
PHOENICS-OTC (On the Cloud)



CHAM

Experts in CFD Software and Consultancy

PHOENICS: The Original, All-Inclusive, Cost-Effective, Enterprise-Driven CFD Package, Available on the Cloud



PHOENICS is 40. It has been available to solve any, & all, fluid-flow problems for 4 decades. This seems a good time to say what it is, & what it does.

PHOENICS is an all-inclusive CFD package assisting enterprises to drive from design concepts towards innovative, cost-effective, solutions themselves or via CHAM's expert & skilled consulting team.

PHOENICS is flexible, accurate & reliable. It can be scaled to meet small-business requirements & sharpen their competitive edge by its use.

PHOENICS is the original general-purpose CFD Code. It was conceived by Professor Brian Spalding, founding father of CFD, & has been developed, tested, validated & extended over the past 4 decades – until 2016 by its originator with his team at CHAM & since then, by said team – in particular John Ludwig & Michael Malin. It has the longest history in CFD & a large, diverse, international user base.

PHOENICS can be used, with ease, by all - Engineers, Developers, Students, R&D personnel, Others. It has:

- 1) Expert modelling features for multiphase flows, particle tracking, free-surface modelling, chemical reaction, moving grids, fine-grid embedding and fluid-solid interactions
- 2) An extensive battery of built-in turbulence models for great flexibility when modelling complex systems
- 3) Ability to expand via user-defined inputs made easy by built-in features, ie InForm, MOFOR, PARSOL
- 4) Expert user-support assistance for all maintained users

Find out about flexible, cost-effective PHOENICS licence arrangements for Academic, R&D, & Commercial Users. Check out software solutions, consulting services, training, & technical support by emailing sales@cham.co.uk.

Pay only for what you use or need, with PHOENICS-OTC (On The Cloud) on Virtual Machines (VMs) ranging from dual- to 120-core options via the Microsoft Azure Marketplace:

<https://azuremarketplace.microsoft.com/en-us/marketplace/apps/concentrationheatandmomentumlimited1616154387047.phoenics>

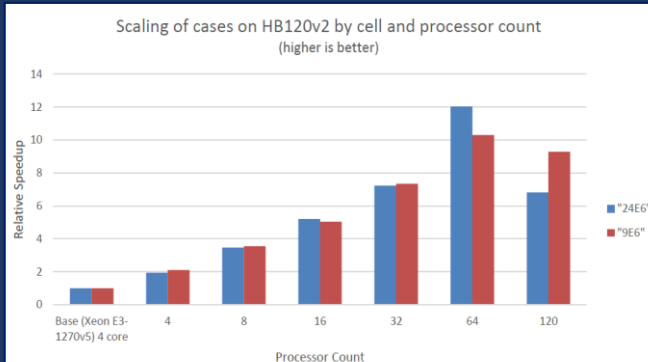
Concentration, Heat and Momentum Limited (CHAM)

Bakery House, 40 High Street, Wimbledon Village, London, SW19 5AU, England

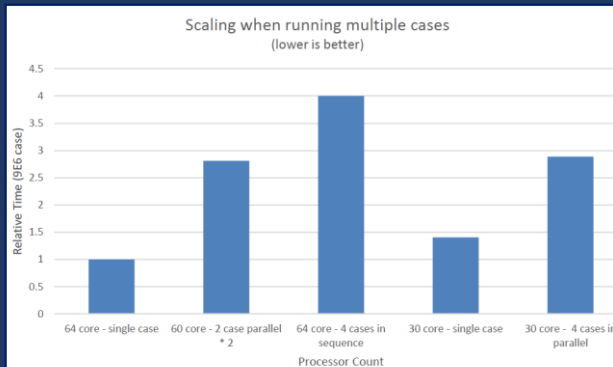
Tel: +44 (0)20 8947 7651 Email: phoenics@cham.co.uk Web: www.cham.co.uk

PHOENICS-OTC

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



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

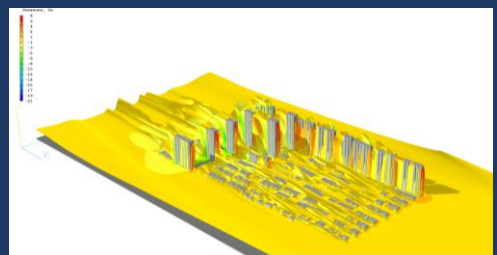
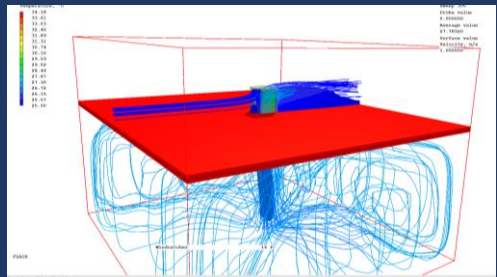
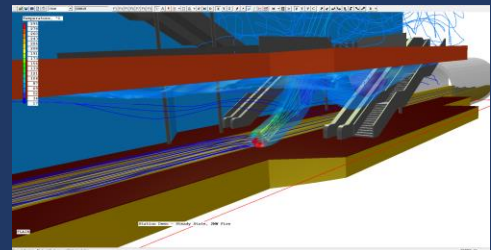


Whilst a 120-core VM provides quick results for a single case, running 2 cases concurrently using (say) 60-cores, or 4-cases using 30 cores, achieves cost savings of >25%. Consequently, although cost-per-hour is notionally higher when using larger multi-core VMs, they can be particularly cost-effective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

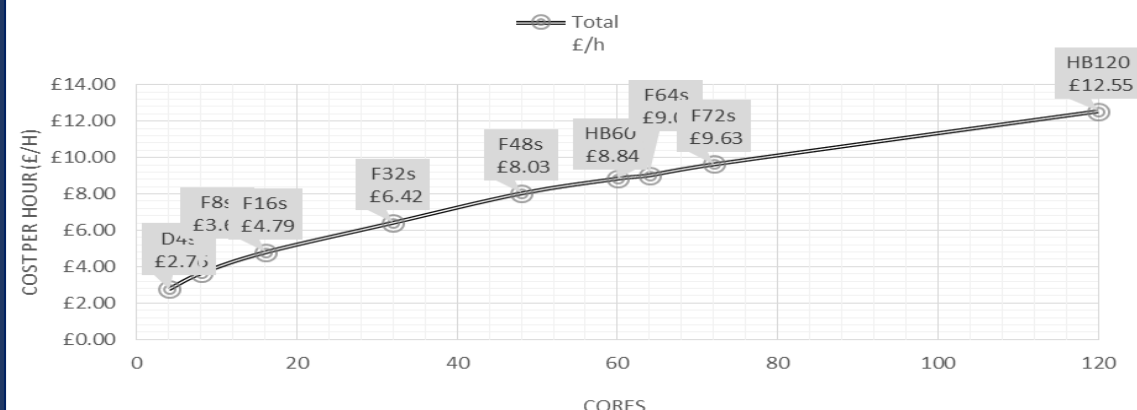
Who Uses PHOENICS?

Those in the following Industries (and more):

- ✓ Environmental
- ✓ Building Services
- ✓ Electronics Cooling
- ✓ Fire/Smoke Hazard
- ✓ Risk Analysis
- ✓ Nuclear & Power Generation
- ✓ Academics
- ✓ Researchers & Developers



Cost Chart



To try PHOENICS-OTC use this link: [PHOENICS on the Cloud \(cham.co.uk\)](https://cham.co.uk). For matters relating to PHOENICS-Azure services contact: PHOENICS.cloud@cham.co.uk or call +44 (0)20 8947 7651.