How to use EPIC to run OpenFOAM at scale in a simple and cost effective way

Instructor: Mike Turner

Training type: Introductory, Intermediate and Advanced

Session type: Hands-on

Software stack:

- ParaView 4.4
- Up-to-date Chrome or Firefox

EPIC website: http://epic.zenotech.com

Full description

Hands-on session to set up and run OpenFOAM jobs with the EPIC cloud platform. We will cover the available resources and the financial benefits of on-demand computing, plus how to access both standard and customised versions of OpenFOAM. The session will include data upload / download, automatic checking of control files, remote visualisation and options for more advanced users.

We are also developing a support market place via EPIC for expert developers and service providers in the OpenFOAM community, and will include a sneak preview.

Session Schedule:

1. Introduction to concept

    o Background of EPIC. Why might you need more resource and why cloud providers might not be the most cost effective solution.

2. Introduction to resources and applications available in EPIC.

    o What computing resources can be accessed via EPIC and what applications are available.

3. Overview of costs and savings

    o How much does this cost and does it actually save me money?

4. **Activity 1** - Setup an account and logon

5. Where EPIC fits into the OpenFoam workflow.

o How can you use EPIC as part of your OpenFoam and how do we try and simplfiy things for the end users.

6. **Activity 2** - Upload an OpenFoam test case

7. How it works

o Overview of how EPIC gets your job and data to the remote clusters for you.

8. **Activity 3** - Submit an OpenFoam job

9. **Activity 4** - Job monitoring

10. Visualising your results

o Since your data is in the cloud, EPIC provides tools to visualise it without having to download large datasets.

11. **Activity 5** - Visualise via Paraview and EPIC.

12. The support market place, how can EPIC be used to help the OpenFoam community.

13. Custom clusters via EPIC

o If submitting single jobs is too restrictive for your use-case how can EPIC help you set up custom HPC clusters with multiple cloud providers.