HPC Fluid Flow Simulations: Interactive Cross-Section Visualisation

Project Characteristics

Modeling:	★★★☆☆
Mathematics:	★☆☆☆☆
Programming:	★★★★★

Setting:

- The chair develops a massive parallel Fluid Flow Simulation Code
- The code utilizes an interactive visualization scheme during a running simulation
- The user may select a region of interest on a Front-End node through a Paraview plugin
- A collector process on the simulation Back-End selects the fitting data and sends it to the Front-End

Your Tasks:

Extent the existing visualization scheme by:

- Incorporate the Paraview Slice filter into the visualization plugin on the Front-End
- Implement a suitable data selection algorithm on the Back-End
- Test the implemented functionality on a chosen engineering application.

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