🖸 define tech

OIL & Gas Measurement Limited

"We found Define Tech to be made up of a team of professionals that treat us as partners rather than customers. 100% reliable and always striving to deliver workable, technical and business solutions. As a group, Define Tech is not limited by any bureaucracy or politics.

We worked with them, as a team and collaborated to solve budgetary, technical and business problems together effectively – and the whole process has been delightful!""

> Wes Maru Director of Product & Technology OGM

OIL AND GAS MEASUREMENT (OGM), A MEMBER OF THE OIL AND GAS HOLDINGS LTD. (OGHL) GROUP OF COMPANIES, PROVIDES THE HIGHEST QUALITY OF PRODUCTS FOR OIL & GAS CUSTODY TRANSFER APPLI-CATIONS. IT ALSO OFFERS FRONT-END CONSULTANCY, PROTOTYPING, IN-HOUSE TESTING AND ACCOMPA-NIES THESE SERVICES WITH CUTTING-EDGE SCIENTIF-IC RESEARCH. STAFFED BY A WHOLLY INDEPENDENT TEAM OF ENGINEERS AND SCIENTISTS, OGM PROVIDES PRODUCTS TO MEET BOTH THE CURRENT AND FUTURE NEEDS OF THE PETRO-CHEMICAL INDUSTRIES

Modern engineering design workloads in the Oil & Gas industry ubiquitously use simulation technologies. Simulation lead design using computational fluid dynamics (for example rapid digital prototyping) is hugely prevalent in oil & gas applications or indeed any applications involving complex fluids.

Outside of CFD, other applications which OGM research depends on include Multi-phase turbulent flow, which is a flow consisting of different solution phases such as gas, liquid and solid particles. Multiphase turbulent flow can be a very challenging area of research, in all fields, and in oil and gas in particular it is considered the holy grail of applications.

At OGM, the team develops and deploys multiphase turbulent flow models that involve oil, water, gas and sand into their High-Performance Cluster so as to solve practical mixing, blending, flow measurement and production monitoring problems

LIMITATIONS OF A LEGACY SYSTEM

To begin with, an HPC infrastructure was non-existent. Over time, the team at OGM had deployed a

FEATURES

Bare-metal provisioning Container provisioning Highly available control plane API-driven infrastructure Web based GUI Central Authentication Monitoring & Telemetry Centralised logging GPU & vGPU support

GET IN TOUCH

www.define-technology.com +44 (0)20 3034 5550 info@define-technology.com High Performance Computing (HPC) infrastructure to power their CFD research and with continually growing datasets and simulation requirements, comes the continual need for more and more compute power. As the team at OGM works with many visualisation tools, the legacy platform limited their ability to work with the large files generated by these visualisation applications.

THE SOLUTION

Finding a compromise between cost and research requirements was important when deploying the new HPC infrastructure, which now thanks to LMX, is a densely heterogeneous computing platform, with both CPUs and GPUs integrated to help maximise workload acceleration. One of the main benefits of the platform is the boost in memory and performance.

Define Tech's LMX for HPC Stack allows OGM to focus on its mission critical research rather than the administration of the underlying IT systems. Our platform enables users to interface with the environment via an easy-to-use Web GUI which includes support for remote visualisation as well as GPU rendering for pre/post processing of CFD applications. The GUI has made the system more usable and easier to manage in comparison to the legacy CLI only environments. The system was handed over fully integrated, validated ready for use and resulting in immediate productivity.

If you are interested in simplified IT management, scalable HPC resources, accelerated workloads and faster time to insight, talk to us about JedAI today.

