Data Centre

A modular approach to data centre computing

Our data centre is a modular solution with an upgradable design. The hardware is more diverse to serve different applications and a range of needs.
Our data centre services span:

- GPU enabled virtual desktop infrastructure collaborative environments
- Fully hosted and managed private CI/CD Git repositories
- Segregated island hosting to ITAR and MOD compliance levels
- Pay on demand HPC simulation codes such as MOOSE, OpenMC, GEANT4, OpenFOAM, PARSIT, LOAFS
- Pay on demand CPU and GPU core hours for modelling, simulation and machine learning training and inference
- Bring your own software to execute on HPC
- Hardware in the loop or 'cloud to edge' capabilities
- Security vetted staff and system administrators

CFMS Core Compute Capability

Our core data centre capabilities consist of the following infrastructure:

- A flexible network providing up to **200gbit** Ethernet connectivity, RDMA enabled
- **3328 AMD EPYC9** CPU cores
- 384 ARM CPU cores
- **12.3 TiB of RAM** (~4GB/core)
- **1.8 PetaBytes of Ceph storage** - distributed, redundant and highly-scalable, including:
    - 130 TiB of fast storage (SSD)
    - 1670 TiB of bulk storage (HDD)
- 2 **NVIDIA HGX** AI training nodes each with **1536GB RAM** and a total of 16 **H100 SXM5** GPUs, each with:
    - 80GB **HBM3** memory
    - 16896 graphics cores
    - 528 tensor cores
    - 4th Generation **NVLink**
- 4 **NVIDIA Grace Hopper** GPU nodes
- 6 **NVIDIA A6000s** GPUs
- A range of multi-purpose GPU accelerator nodes:
    - **NVIDIA A16**
    - **NVIDIA L40S**
    - AMD Instinct MI210 GPUs
    - Intel Data Centre GPU MAX 1100 A4PP8M103P

Space Data Centre Capability

In addition to core data centre capabilities, we have also architected specific compute designed for the space community. The underlying server infrastructure has been selected so that additional GPU capability can be added as required.

The platform consists of the following:

- 3 NVIDIA L40S GPU
- NVIDIA Tesla A16 GPU
- 26TB of HDD storage
- 14TB of SSD storage
- NVIDIA Jetson AGX 64GB board

Want to discuss your needs?
Get in touch