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For more information about High Performance Computing support available for companies visit
www.epcc.ed.ac.uk

Big Data Handling and Analysis

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Big Data Handling & Analysis

Large data sets are now generated by almost every activity in science, society, and commerce. But data generation and collection is only half the story, to leverage value from this data then analysis must be performed to turn it into information. Therefore, the challenge lies in how to efficiently utilise and harness these vast streams of data in order gain real value and insights from them.

Companies working with academics from The University of Edinburgh engage in research across a wide range of disciplines. This work is underpinned by the strength of the data infrastructure which can unlock value from the data, allowing companies to gain real insights into their data and establish important correlations, patterns and relationships.

EPCC has been around for over 25 years and-so we have considerable experience working with vast computational resources. But it is not enough to just have access to the hardware, one must also have the experience and expertise to leverage this most effectively. This is especially relevant with large datasets, where the amount of data is so significant that well directed, processing power is needed to most appropriately handle it and gain the maximum value from it.

EPCC: THE UK'S LEADING SUPERCOMPUTING CENTRE

Based at The University of Edinburgh, EPCC has gained an enviable reputation for leading edge capability in all aspects of High Performance Computing (HPC), Big Data and novel computing.

EPCC is built on three key foundations:

- The hosting, provision and management of high performance computing and data facilities;
- Research and consultancy to support the computing activities of organisations;
- The creation of novel and high performance software solutions for industry and commerce.

The EPCC facilities and expertise are unmatched in Europe. With over 80 highly qualified permanent staff, EPCC has an exceptional pool of talent. Our engineers and technical staff have a balanced blend of theoretical, academic and practical knowledge and many have worked in industry before joining EPCC

Spanning the spheres of hardware and software, we offer a skills-rich, imaginative environment where industrial, academic and other organisations can collaborate to drive new ideas forward, test concepts and assess the market potential of innovative products and services.

SERVICES & SOLUTIONS FOR BUSINESS

HPC On-Demand: Access to HPC and Data Facilities

Cost of entry is arguably the biggest barrier restricting the uptake of HPC. Our HPC on-demand service eliminates the requirement for capital expenditure by giving you access to our supercomputing and associated facilities, as and when you need them. Known as "Accelerator", this service is fully scalable and its fully flexible "pay as you go" pricing model provides an affordable entry point to capabilities that have the potential to transform your business.

Collaboration

As well as working for you, we're always looking for opportunities to work with you – to collaborate on new codes, applications and other innovative projects that can contribute to the ongoing development of the high-tech, knowledge led economy. Spanning the spheres of hardware and software, we offer a skills-rich, imaginative environment where industrial, academic and other organisations can collaborate with us and each other to drive new ideas forward, test concepts and assess the market potential of innovative products and services.

Data Management and Analytics Services

Our supercomputers have vast storage space and their multi-core processing power means that they can quickly convert your data into meaningful business intelligence. We have expertise in distributed computing as well as data integration and data analytics. We can also give honest and impartial advice on the best available commercial and open-source solutions.

Computational Modelling and Simulation

Modelling and simulation are popular methods of designing, developing and testing tomorrow's products and services. Analysis using FEA or CFD application packages has become standard for most manufacturing companies. However, many simulation codes do not scale beyond a few tens of processors, meaning that attempts to run them on HPC systems will either fail completely or result in the code running slower. Indeed, the problem of scaling is a key challenge worldwide. We are experts in tackling scaling problems. We can improve the scaling of in-house and ISV codes through optimisation and re-engineering so that companies can undertake faster and larger simulations.

Software Development and Optimisation

One of our core objectives is to develop, demonstrate and deploy software that can scale to the largest new and next generation computing architectures. Whether writing new algorithms or optimising existing code, we open the door to the handling of ever vaster datasets and the exploitation of unprecedented sophisticated modelling and simulation capabilities. We can help you to enhance your existing software and push new products and services forward.

HPC Training

Users, developers and business managers can all benefit from EPCC's highly regarded training courses. We are Europe's leading HPC training centre and our courses can be tailored to suit your particular requirements. All our training courses are delivered by highly experienced HPC experts and provide both theory and practical sessions to maximise learning.