VANTAGE™
DATA CENTERS

HPC USE CASE

Major Insurance Firm Selects Colocation Data Centre

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Insurance companies have some unique requirements for risk modelling as a result of immense regulatory, competitive and stakeholder pressures. This has led to an increasing need for enhanced financial modelling, robust quantitative analysis and greater transparency in risk management. Faced with this challenge many insurance companies are now looking for faster and more powerful modelling systems which is driving demand for HPC environments and the data centre infrastructures capable of supporting them.

One such major international insurance firm recently selected Vantage's purpose-built mega data centre in South Wales having recognised the advantages of using a colocation data centre over building their own on premise facility.

The HPC Requirement:

The company required a 40kW rack configuration including liquid cooling to ensure optimised PUE (Power Usage Efficiency).

The main drivers for the firm's decision to outsource their requirements to a modern colocation data centre were the engineering complexities of the HPC deployment and the significant investment involved in building and operating their own high density data centre facility. In addition to removing the requirement for major Capex investment the company recognised that HPC applications could be run more cost-effectively in data centre environments capable of supporting server racks consuming 30kW or more.

The Solution:

After an extensive evaluation of the colocation market, Vantage was selected. The primary reasons for this were not only the physical space and abundant power to rack capacities available, but also the high calibre of technical expertise on site. This solution not only offered a future-proofed data centre infrastructure to accommodate further expansion, but also provided the essential engineering skills necessary for the design and build of the highly bespoke environment with energy efficiency being a top priority.

Working closely with the company, Vantage's engineering team designed, built and installed the 40kW HPC rack environment, including bespoke direct liquid cooling system, in less than three weeks. The liquid cooling allows highly efficient heat removal and avoids on board hot spots, therefore removing the problems of high temperatures without using excessive air circulation which is both expensive and very noisy.

This innovative design, combined with Vantage's policy of using 100% green power, has enabled the delivery of a world class, highly cost-effective HPC solution.

The HPC is maintained by a 24/7 on site team.

Benefits:

- Unconstrained power to rack capacity for scalable, future-proofed HPC expansion
- Space and power savings through deployment of high density racks
- Industry leading PUE energy efficiency
- High security environment
- High calibre on-site engineering resources for bespoke design and installation

Summary

With HPC capabilities increasingly becoming a prerequisite for ensuring accuracy, speed and competitive advantage, in both commercial and research environments, the capacity of any data centre to support such applications has moved on from being "just" an IT issue to also include cost of ownership and lifecycle management for ensuring future competitiveness. This is making in-house data centres and legacy colocation facilities increasingly unviable.

Today, there are only a few colocation data centres which can combine sheer scale with the huge power supply necessary for providing organisations with flexible, resilient and highly cost-effective HPC infrastructure solutions.

About Vantage

Located in the Cardiff Capital Region, Vantage is a purpose-built carrier-neutral Tier 3 facility offering 750,000 sq feet (gross internal area) of highly secure and cost-effective space housing up to 22,000 racks. These can be arranged into self-contained and colocation data halls of various sizes all with independent services, resilient power and cooling systems. Vantage's environmentally-friendly high level technology infrastructure has been designed to meet and exceed the ever increasing demand for more computing power. Among its many features are a high capacity 180 MVA power supply direct from the super grid and sourced from 100 per cent renewable energy; and a variety of on-site high-speed, low latency carrier interconnects.