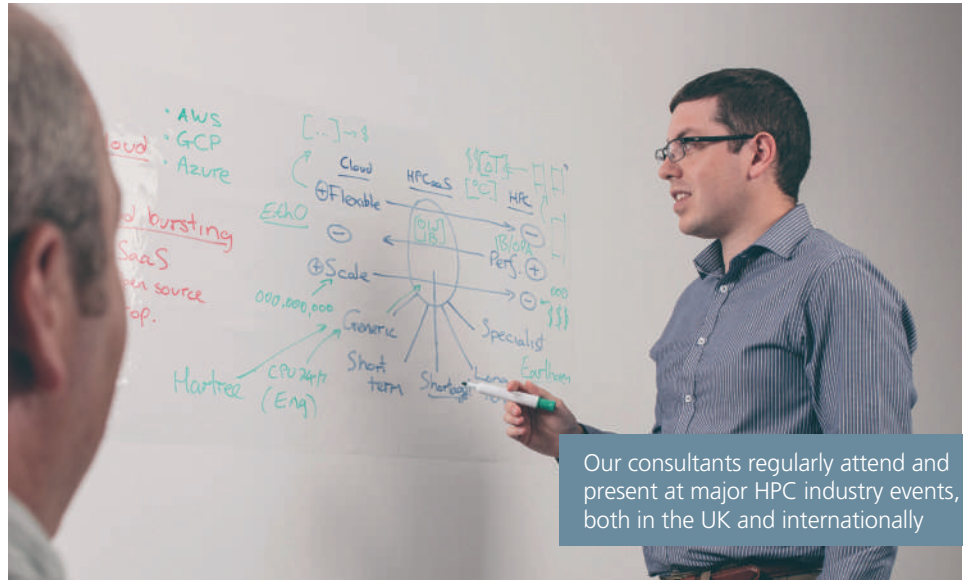


Red Oak Consulting



Owen Thomas, senior partner and co-founder, has a wealth of experience spanning in excess of 30 years within the world of HPC technology



Our consultants regularly attend and present at major HPC industry events, both in the UK and internationally

FACTS ABOUT RED OAK CONSULTING

- » Senior partner and co-founder: Owen Thomas
- » Established in 2004
- » Based in Alton, Hampshire and Cheltenham, Gloucestershire
- » Services: Include consulting for high-performance computing and cloud life cycle
- » No. of employees: 10
- » Became a supplier on the Crown Commercial Services framework under Technology Services TS2 in 2017
- » Both ISO 9001 and Cyber Essentials accredited
- » www.redoakconsulting.co.uk

Having been instrumental in over 30 large-scale HPC (high-performance computing) procurements and over 100 HPC projects, it is no wonder Red Oak Consulting, only 14 years old, is recognised as the UK's leading consultancy for HPC. Involved in the installation of two of the world's top 20 supercomputers, Red Oak Consulting, led by senior partner and co-founder Owen Thomas, stands unmatched in service excellence and looks eagerly to the technological challenges of the future.

Red Oak Consulting, with our team of industry-renowned IT consultants, leads the way in the provision of unique customer solutions. Our diverse skill set enables us to meet our customers' ongoing IT requirements. Unrivalled in our field, our reputation is one of professionalism, expertise, trust and reliability. We continue to be instrumental in assisting numerous sectors on their HPC journeys, including government, public, academia and commercial. Whether your business requires support with defining strategy, analysis for total cost management or project management, we can provide services that will cover the whole of the HPC and cloud life cycle.

What is high-performance computing?

What makes HPC "high performance" is the use of many CPUs all connected in parallel, all working and communicating with each other, solving numerous parts of the same problem at once. HPC is used as a tool to attack difficult problems – those which a desktop or laptop would struggle to handle in a reasonable timeframe.

Despite the ability to process data faster, HPC can be deemed hard to get right, due to the frequently complex systems involved. Software is an additional issue – getting a high number of CPUs to co-ordinate on the same problem is easier conceptually than it is in practice. That is why HPC as a discipline matters.

Getting started – who we were yesterday

Owen Thomas says: “Having worked in the IT industry for over 30 years, I identified there was a gap in the market. With HPC being such a niche solution, it quickly became apparent that more highly skilled and specialist teams of consultants were required.

“Having identified this necessity, I established Red Oak Consulting in 2004, a unique consultancy firm that was focused solely on the challenging requirements of HPC. Through conviction, hard work and dedication we rapidly gained momentum, coming to position ourselves as a reliable source of expertise. To generate success, one must build a reputation for honesty and trust – stakeholders do not like surprises. This is a credential I am proud to say Red Oak Consulting has established and one our customers, such as the Met Office and Hull University, would deliver testament to.”

Having successfully obtained sustainability in the world of HPC, we ask: what is next for Red Oak Consulting? With the evolution of IT continuing and showing no signs of slowing down, our expansion continues – with the progression of cloud computing, AI and machine learning.

The cloud

Unlike traditional HPC, the idea behind the cloud is that you simply pay for the services that you need as and



Our consultants mitigate risk and uncertainty through their knowledge and expertise of HPC and cloud

when you need them. It is considered akin to having access to a tap of computational services which you can turn on and off whenever needed, and you must only pay when it is on. It is not as simple as that, however. While cloud offerings are maturing, the engagement model and in many cases the platform technology creates difficulties for organisations. It is recognised that the strategic, technical and business case for moving HPC into the cloud is still evolving. We do not evangelise the case for ubiquity in HPC moving to the cloud, but we recognise that there are economic drivers that will inevitably change the status quo.

This will, of course, change the marketplace for the viability of hardware vendors who previously provided HPC-optimised systems. Without prejudice, we can say the cloud is able to offer significant

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Our consultants will always work in partnership with our customers' IT teams, undertaking their business guidelines and business practices





Red Oak Consulting
Expert advice, exceptional delivery

Red Oak Consulting run regular seminars to help enhance business knowledge and skill set on HPC and cloud technology

opportunities for a wide set of workloads across a broad set of use cases, yet analysing the business case remains uneasy and requires an objective view of whole life, meaning all associated cost factors.

It is often wondered whether one can trust the cloud. How do the cloud vendors ensure your data is secure, and how cost-effective is it, really? It seems no matter how many people we talk to or how many presentations we give, the same questions and concerns keep arising. What are the three cloud giants doing about this situation – are they listening to these concerns, or relying on the strength of their brand to get them through? After all, who hasn't heard of Amazon Web Services, Google and Microsoft?

It is evident that the major cloud vendors recognise HPC and understand its value – but are they able to meet the unique criteria that are a requirement of what was traditionally on-premise HPC? It is fair to say they are developing and enhancing their services as the need for HPC solutions in the cloud is progressing. They do not have all the solutions, nor can they accommodate everything that traditional on-premise HPC can do, but that is only today – tomorrow will be a different story.

Planning for tomorrow today

Cloud technology is here to stay and the development of its ability to support HPC continues. We believe that in a few years a different story will be told. We will see a world where traditional on-premise HPC will be a thing of minority. Nobody likes change, but if we don't evolve we will be left behind. Our job is to make sure change runs smoothly, eradicating risk and exposure. Customers need to understand what the cloud can do, what choices are available and what are the true reflective costs associated with this technology. Customers need to be asking the right questions at the very inception of the thought process; otherwise, how else are they to make the right, informed decision? Obtaining total clarity and understanding is key and mission-critical for success.

This is advice that we are almost uniquely placed to offer. We remain committed to this area of technology and continue to make great strides forward in innovation, with Red Oak Consulting vigorously engaging with the major cloud vendors to ensure that what does eventuate tomorrow is more fit for purpose in HPC.

“Nobody likes change, but if we don't evolve we will be left behind”