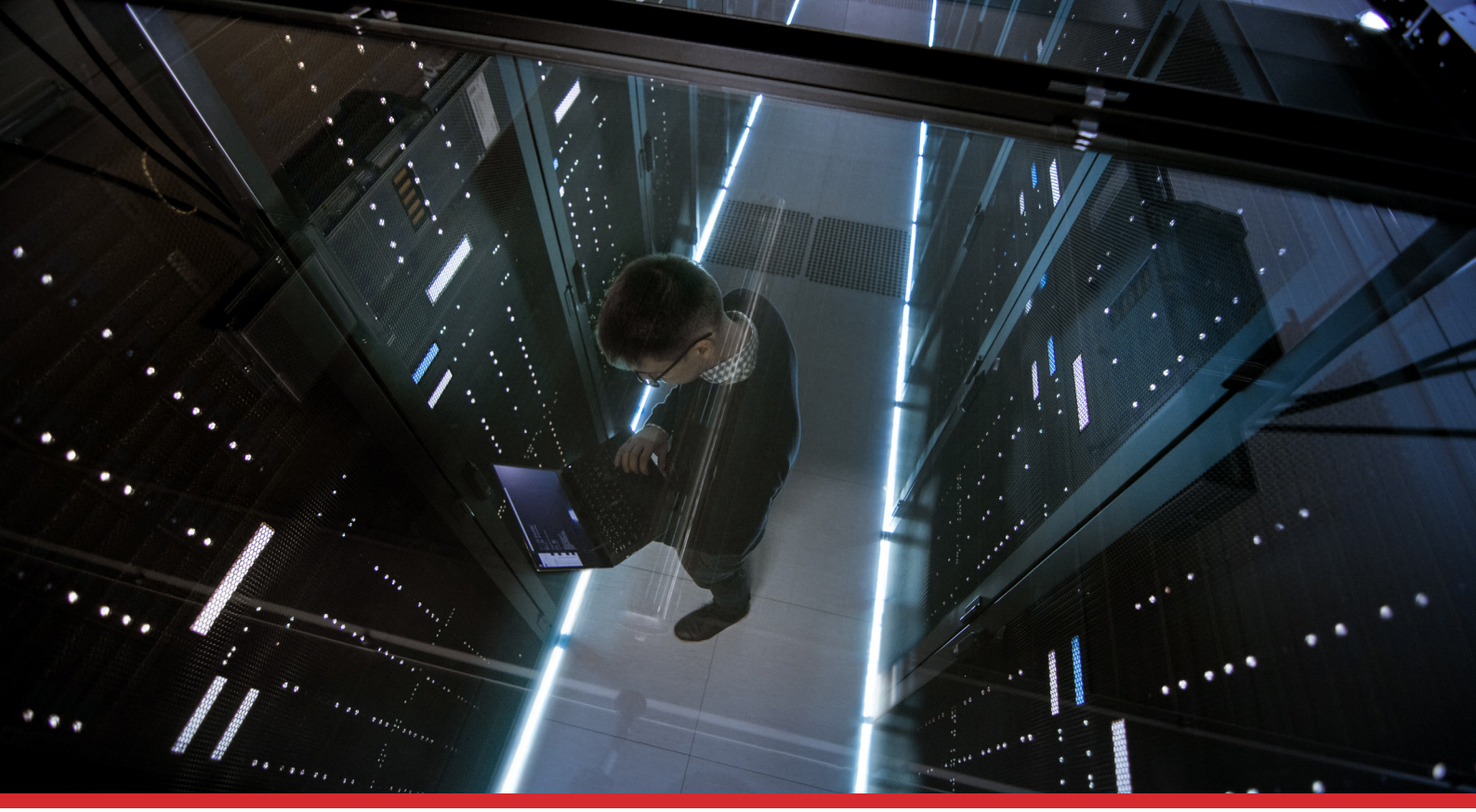

Bytemark Hosting

Case Study

About

Bytemark Hosting has been the "geek hosting outfit of choice" for the UK since 2002, because it's run by programmer, Matthew Bloch, and network engineer, Peter Taphouse. They have built it from scratch with a goal of technical excellence, writing most of their own software and tools to run the business exactly the way they want. With a staff of software engineers, they are continuing on that trajectory. Their hosting spans £10 per month servers to multi-site managed projects with high uptime guarantees.

Bytemark run a comprehensive managed hosting service, and have hosted for big national brands like ASDA and Bostik, government departments such as the Department of Health and Central office of Information. Additionally they have also hosted for hi-tech businesses such as travel site dooplr.com and international humanitarian-aid NGO, Médecins Sans Frontières.

The Brief

Bytemark already has two large hosting spaces in Manchester, with its core network spread over a further three data centres in Manchester and London with multiple internal and external ten gigabit connections.

The new data centre, built in York, will enable Bytemark to significantly increase their capacity and enhance service delivery. This is over-provisioned compared to similarly-sized hosts, with a goal of being robust in the face of random disconnections or abuse.

The Project

Bytemark were looking to construct a new data centre facility within the warehouse space of their new property in York.

Sudlows' innovative proposal included a modular design utilising a DX/Fresh Air cooling system and double conversion UPS units, connected in parallel; located within the adjacent electrical switchroom.

The new data centre now holds a 75 x rack data hall, consisting initially, of a single 14 x rack cold-aisle with an average IT load of 6kW per rack.

The main electrical infrastructure installed during this initial phase included the construction of a sub-station building and switchgear to handle the 1MVA supply.

The new data centre contains an energy efficient cooling design which includes; an Airedale SmartCool DX/Fresh Air downflow air-conditioning solution, to provide low/medium density cooling at an initial average 6kW per cabinet via CRAC units located on the perimeter of the data centre hall. As required, this solution provides up to 10kW of cooling to selected racks within the building.

Both the cooling and the UPS provision have been reduced to an initial 100kVA N+1 solution, with a capability to allow for a future upgrade to 500kVA N+1 of IT load.

A single 550kVA generator set has been installed, but the Sudlows innovative design has incorporated enough future capacity to enable the installation of two additional set to increase the standby capacity in line with the maximum 1000kVA utility supply i.e. 1100kVA with N+1 redundancy.

The cooling consists of an initial 100kW N+1 and will provide a highly efficient solution, offering a potential annualised PUE of circa 1.1 – 1.2 depending on both load and local.

The Conclusion

The new data centre facilities at Bytemark will now provide a fast and energy efficient platform upon which this rapidly expanding hosting business can continue to provide dyanmic hosting and support services to their clients operations.

Testimonial

Peter Taphouse, Technical Director at Bytemark said;
"Sudlows have delivered a fantastic data centre at our York facility. Our strategy for growth and expansion of our services to all our clients now had the perfect platform to deliver these services."

Sudlows added;
"The new facility at York is the perfect solution for Bytemark, its engineered modular layout is both cost effective and technically advanced.

"Our experience of delivering award winning energy efficient data centres means that all our clients benefit from our unique technical design perspective and bespoke engineering techniques for creating resilient and flexible data centres."

Location:
York, UK

Size:
100m²

Value:
£650,000