

Nominee: Host Europe Group

Nomination title: Host Europe Group

Host Europe Group, a leading European provider of cloud computing services has successfully completed phase 1 of the 3MVA next generation data centre. Phase 1 of the facility supports 112 equipment racks with a further 112 racks planned as the project moves forward into phases 2 / 3 throughout 2014/15.

World Class Tier 3 Facility - Host Europe Group is proud to have designed a world class data centre facility with availability levels that reach well beyond that of a conventional Tier 3 solution.

Innovative Modular & Efficient Architecture - By using an innovative “modular architecture” Host Europe Group was able to create a scalable highly resilient facility. However unlike conventional Tier 3 facilities where 50% “over capacity” is typically required to achieve “concurrently maintainable” its design has been engineered to deliver true Tier 3 availability with less than 25% over provisioning.

Enhanced System Availability - The data centre includes “modular” architecture consisting of four independent 1MVA cooling and power paths supporting an N+1 concurrently maintainable solution. Not stopping at minimum Tier III technical requirements each sub module delivers internal N+1 resilience combined with cross module connectivity via static switch arrangements and shared alternate power path feeds. Each cooling module is supported via independent chilled water pipework and associated cooling technology. This design delivers Host Europe Group with exceptional levels of availability.

Exceptional PUE Performance - Typical PUE figures associated with perimeter based cooling are >1.4. This barrier has been successfully challenged by selecting highly efficient chilled water based Computer Room Air Conditioning (CRAC) units manufactured in the UK by GEA Heat Exchangers (formally GEA Denco).

Maximum Free Cooling - Careful sizing and selection of CRAC coils meant that cooling duties under normal mode operation could be achieved at 21°C chilled water flow temperatures. By combining CRAC’s with cooling tower technology, low energy pumps, high performance heat exchange module and EU fan technology Host Europe Group was able to ensure minimum energy and maximum free cooling was obtained. With a measured PUE3 reading of < 1.2 the design goals were easily achieved.

What tangible impact has your product/solution had on the market and your customers?

Redefining Tier 3 Architecture – This data centre has re-defined current thinking associated with Tier 3 data centre design. By developing the innovative “modular architecture” we can

now benefit from significant capital savings by reducing over provisioning to < 25% whilst maintaining Tier 3 support.

Renewing Interest in Cooling Tower Technology – Our use of modern cooling towers has enhanced the reputation that we have for exceptional energy performance. Modern cooling towers enable safe and efficient cooling enabling “free air cooling” to be achieved at wet bulb temperatures of up to 35°C - well beyond the capability of conventional dry coolers. No conventional dry-cooling technology can match this performance. Cooling towers are able to extend free cooling to over 99% of the year within the north of England.

Perimeter CRAC Units Live On -There are now many diverse cooling technologies all competing within the data centre space. Many commentators would suggest that the days are numbered for “conventional” perimeter cooling technology. However thanks to next generation engineering by GEA Heat Exchanges (Denco) for the traditional perimeter, CRAC units are still here to stay. Our CRAC units, manufactured in the UK, have been designed to support chilled water flow temperatures at 21°C.

Significant Operational Savings – The new facility now enables to Host Europe Group to centralise its assets into a single low energy data centre facility. In doing so the Group will benefit from significant operational savings

Premium Cloud Services - The new data centre now enables Host Europe Group to deliver premium cloud services for its global customer base..

What are the major differentiators between your product/solution and those of your primary competitors?

High Quality Engineering - Offering installation quality and engineering standards that will surpass industry standards.

Lateral Thinking - Delivering a combination of containerised and modular Tier 3 architecture combined with cooling tower technology.

Space Management - Delivering effective space management through the deployment of containerized power & mechanical pods to help overcome challenging space constraints of the site.

Expert In-house Data Centre Design Team - The internal project team left no stone unturned by implementing “what if” analysis strategy as part of the design phase. Working alongside our partners, Workspace Technology, we have ensured electrical and cooling design principles were correctly applied with appropriate discrimination and safety margins to deliver a robust data centre design.

Why nominee should win

- The team were relentless in the pursuit of excellence, leaving no stone unturned.
- Innovation was at the forefront of everything delivering the impossible, balancing limited space vs. the unrelenting demand for system availability.
- The data centre delivers a unique engineering design.
- This project singularly demonstrates why Host Europe Group is one of the leading players in the cloud computing and hosting space.
- The complexities of this project would challenge even the most experienced data centre specialist. The team was not fazed and delivered an exceptional industry leading facility.