ColdLogik

CASE STUDY

Jaguar Land Rover, UK

Containerised HPC Data Center

2012

USystems
A brand of legrand

JAGUAR

LAND ROVER

The Client

Jaguar Land Rover is a company that brings together two much loved, highly prestigious British car brands. After Tata Motors acquired Jaguar and Land Rover from Ford in 2008, it merged the two marques into a single company and its success has flourished, with memorable vehicles and innovative technologies that add to a long-lasting legacy.

Jaguar Land Rover are a global automotive manufacturer and leading technology company

Advanced design, engineering and technology have all played a part in Jaguar Land Rover's success over the years. The company invests more in research and development than any other manufacturing company in the UK, which has allowed our thousands of world class engineers to develop world-class innovations. It is these breakthroughs that Jaguar Land Rover can rely on to build better-performing vehicles, lower our environmental impact, and inspire customers.

Jaguar Land Rover's 900-acre UK site offers many energy efficiency challenges which are under constant review for the latest technologies.

The Brief

In 2011 Jaguar Landrover required a high density HPC data centre to expand on of their existing data centres in UK, Due to space restrictions this was to be deployed in 3 phases within 40-foot containers. Each container was to house 17 cabinets with a cooling capacity of 10-30kW per cabinet. Therefore, cooling for this project was the priority as there was no false floor, an extremely small footprint, and a serious heat issue with such high densities.

Modular containerised Data Centre

The Cooling Solution

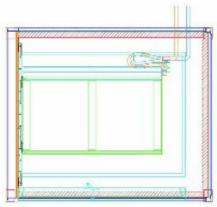
Our Spanish partners AST Modular supplied, populated and commissioned the containers specifying the ColdLogik Rear Door Cooler as the only viable cooling solution for this project.

A crane moves one of the AST modules into place. Photo by: AST Modular

USystems supplied 17 x USpace ColdLogik compliant server cabinets complete with C12 Rear Door Coolers which were deployed within a 40ft container. In total 3 containers (3 phases) each with an identical solution were successfully commissioned for this project enabling the Jaguar Land Rover HPC data centre to be housed in available 'brown field' space.

The ColdLogik solution offered a major energy saving on a CRAC based design, but also saving the floor footprint and removing the need for a false floor. External plant used was a chiller and dry air cooler which with the ColdLogik Rear Door Coolers enabled a total cooling capacity of 1380kW with a PUE of only 1.2-1.26.

The projects came in on time and in budget and have full N+1 redundancy.



Schematic of the container layout

Project Summary

Energy efficiency and cost savings

- Low CAPEX and fast ROI
- Low PUE of 1.2 - 1.26
- Year on year energy savings
- Low carbon
- Reduced footprint
- Major energy savings on CRAC based design
- No false floor required

Security and control

- N+1 redundancy

"Responsibility means incorporating both long and short term economic, environmental and social considerations within our decision making and day to day work, for the benefit of our products as well as the world in which we operate."

"The containers were built and populated in Spain - USystems delivered their racks and Rear Door Coolers directly there and once returned in their to the UK site were commissioned by their excellent team of engineers."

JAGUAR LAND ROVER

To learn more visit :

www.legrand.com/datacenter

Legrand Data Center Solutions