

Rittal – The System.

Faster – better – everywhere.

Meyer Werft: IT systems must be shipshape

CUSTOMER REFERENCES

IT infrastructure



Customer: Meyer Werft GmbH & Co. KG
Industry: Ship Builder
Company size: 3,300 employees
Established: 1795
Headquarters: Papenburg, Germany

Meyer Werft, a shipyard based in Papenburg, northern Germany, is one of the world's leading builders of luxury passenger ships. It was founded in 1795, and has manufactured state-of-the-art cruise liners for over 25 years. Meyer Werft completed in summer 2017 its largest ever vessel,

Norwegian Joy, which is thought to be the fourth largest passenger ship in the world. Powerful IT systems ensure its over 4,000 passengers and approximately 2,000 crew sail in safety and comfort. Rittal provided future-proof infrastructure for the two on-board data centres.



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“We have a successful relationship with Rittal that goes back many years. Time and again, we have worked together to develop smart ways of installing sensitive IT components for ships that deliver reliability and space savings.”

Frank Langen,
Technical Design Department
at Meyer Werft GmbH & Co. KG

THE PROJECT

The Challenge

- High available infrastructure for DCs
- Security, monitoring, flexibility and exchangeability of IT modules

The Solution

- Two DCs equipped with 10 Rittal TS IT Racks, LCP-series (Liquid Cooling Package) with up to 30 kW
- 25 technic rooms with three racks each and two air-water heat exchanger



High-performance IT on limited space

Incorporating data centres is just one of many challenges in shipbuilding, and requires specialist knowledge. Typically, space for large IT equipment is at a premium on passenger ships. In addition, maintenance and repairs are difficult to perform during a voyage. In case components fail while the vessel is on the open water, they need to be easily replaceable. Moreover, it is advantageous if the IT vendor offers support services in ports-of-call. A number of other aspects must also be taken into account. Marine diesel engines constantly generate vibrations – consequently, IT racks must be equipped with special rubber mounts. As cruises transverse multiple regions there can be extreme variations in temperature and humidity. And a crew of 2,000 calls for sophisticated access control systems. Plus, corresponding infrastructure, such as power supply and cooling, should be redundant to ensure high availability.

Exchangeability ensured

Planning for a large-scale project of this kind begins many years in advance. Key challenges include making best use of space – plus independent operation of the data centres, and their management and maintenance by an on-board team of service engineers. As a ship will sail for many years, it requires high-quality, long-lasting IT components. Additional

factors are flexibility, scalability, and easy-to-replace IT modules, as ships are often later refitted for new destinations. A high degree of standardisation is therefore essential, in order to quickly and simply integrate server racks, and power supply and cooling units.

IT in two fire protection areas

Norwegian Joy has two data centres. These are separated by a significant distance, and are located in different fire zones. They employ a conventional cooling solution, and have up to ten TS IT racks from Rittal. These racks have solid panels that lack ventilation holes; instead, LCP (Liquid Cooling Package) units with an output of up to 30 kW ensure adequate climate control. The LCPs are mounted on the side panels of the racks. As a result, warm air from the servers can be cooled directly. The entire system is highly efficient, and the ship’s own chillers supply sufficient cold water. Moreover, ample spare data-centre resources were incorporated should the ship sail to new ports-of-call or serve other target groups in the future.

Rittal offers a worldwide guarantee on its components for the ship’s data centres. It also provides global support should maintenance be required, including delivery of spare parts.

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