



Case study

WITCOM modernizes existing data center with Vertiv's thermal solutions to achieve target PUE level



Background

WITCOM, a subsidiary of ESWE Versorgungs AG, headquartered in Wiesbaden, Germany, operates critical telecommunications infrastructure for enterprise clients, government agencies, and national carriers.

Serving organizations where downtime isn't an option, WITCOM specializes in secure data center solutions, colocation, and fiber-optic connectivity. With mission-critical operations at stake, WITCOM's customers demand carrier-grade availability, robust security, and strict regulatory compliance from its IT infrastructure partner.



Challenge

WITCOM needed to replace its aging thermal infrastructure without disrupting ongoing operations. In a spatially restricted environment with fixed performance parameters and non-modifiable piping routes, the project evolved from a simple chiller replacement into a comprehensive modernization of the entire thermal management system.

The expanded scope demanded optimized Power Usage Effectiveness (PUE), availability, enhanced efficiency, and high capacity while maintaining uncompromised uptime.



Company profile:

Information and telecommunications provider offering secure data center and colocation services in Wiesbaden, Germany.

Industry: ICT/ Data Center Services.

Region: Wiesbaden, Germany.



Solution

In collaboration with Vertiv, WITCOM developed a holistic thermal architecture that transformed its existing infrastructure into a more future-ready platform.

Core solutions deployed:

- Vertiv™ Liebert® AFC Chiller Low-GWP Inverter Screw, modernizing legacy infrastructure, reducing risk, and enhancing reliability.
- Vertiv™ Liebert® PCW High DT Dual Coil, delivering precision cooling capabilities that improved temperature stability and enhanced energy efficiency.
- Additionally, integrated N+N redundancy architecture to provide backup capacity at all times.

Results

Vertiv provided an innovative, fully redundant infrastructure that exceeds today's standards and is well prepared to meet future requirements.

Highlights:

- Increased safety standards by changing from N+1 to N+N.
- Reduced energy consumption through optimized thermal management and improved PUE.
- Predominant use of free cooling capacity based on ambient conditions thanks to high Delta T configuration and increased chilled water temperature to ~25 °C.
- CRAH units with High Delta T configuration of ~25/35 °C, indicating the temperature difference between the inlet and outlet of the chiller or climate control cabinet, featuring double heat exchangers for maximum security and low space requirements.

WITCOM successfully achieved all targeted results, continuing the ongoing data center modernization with Vertiv to increase efficiency and reliability while managing costs.

“Vertiv’s expertise and technology helped us modernize our data center without compromising uptime — a true benchmark for operational excellence.”

— **Christoph Janotta,**
Facility Manager & Project Lead, WITCOM



Photo taken at the WITCOM site, 2025.