

Case study



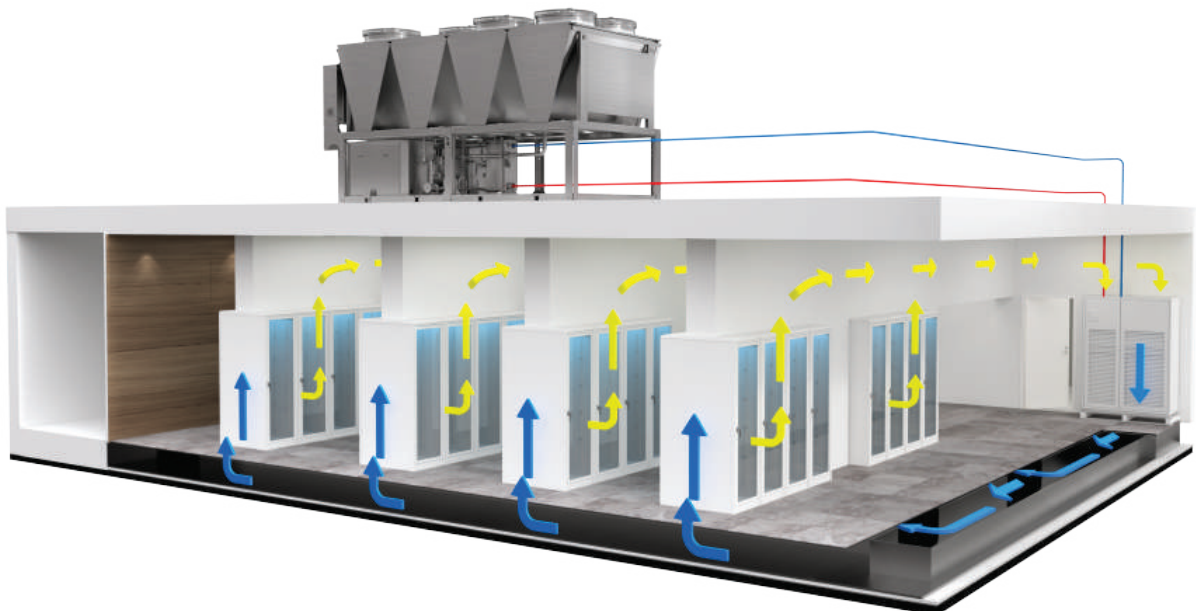
Solution: Vertiv Liebert Evaporative Free Cooling (EFC) technology to cool the data center.

Industry: Software and development

the
Context

During the last decade, the rise of artificial intelligence caused a fast growth of data centers. AI applications need the global data centers to provide the necessary computational power therefore the demand for microprocessors and servers have skyrocketed due to machine learning and deep learning. Data centers and colocation services providers need to step up their game to meet this demand.

EvoBits is aware that the factors that influence the choice of a high computing service provider are: the cost efficient services through the use of latest technology for energy efficiency, optimization, security, compliance, and disaster recovery.



High computing generates huge amounts of heat, and the room has to be kept cold enough to avoid damaging the hardware. Therefore, in the first phase of their project, EvoBits used Vertiv Liebert PDX direct expansion cooling units and Liebert MC microchannel condenser – 9 units.

the Solution

For the second phase of 3.5 MW, the solution proposed by Synotech/Innova engineers was optimising Power Usage through efficient cooling

- Vertiv Liebert Evaporative cooling EFC 320 – 6 units

The main attraction is the efficiency of the cooling system and the high volume of cold air that the system provides (95.000 m³/h per unit). At outside temperatures of 35-36C, the units were using, except the evaporative system, the supplemental mechanical cooling and we still had a PUE under 1.15, managing a air supply temperature of 20°C. After they finished the deployment they started the optimization phase and that allowed them to increase the cold air temperature by a few degrees which in turn translates to even higher efficiency.

about the Company

EvoBits Information Technology SRL is a software consulting & development, high computing and a cryptocurrency mining provider based in Eastern Europe. With several facilities totaling 4.5MW, they are a rapidly growing company in this space.

Evobits creates different applications, mostly around Blockchain, such as e-commerce platforms, Cryptocurrency Merchant platforms, cryptocurrency trading software and mining-related software, AI processing and deep learning processing. They started with a 100kw proof-of-concept, then a 1MW test facility then moved to another 3.5MW second test and now they are looking at mass deployment of over 12 MW.

“
*We like to say we offer a little
bit of transparency in an
opaque market.*

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Silviu Catalin Balici
CEO EvoBits IT



the
Result

Now the data center guarantees on-time deployments and high uptime. The processing power is not lower when it is hot outside, the equipment is online for longer since they have a very low defect rate due to the fact that they keep all the machines running in ideal conditions.

The facilities are designed to handle up to 14KW per rack, but the real usage is around 10KW per rack. The power distribution did not present a challenge and implemented by our highly experienced engineers.