

## CUSTOMER PROJECT REFERENCE:

MARUM – Zentrum für Marine Umweltwissenschaften  
der Universität Bremen\*, DFG Forschungszentrum und Exzellenzcluster



**Contact:** MARUM – Zentrum für Marine Umweltwissenschaften  
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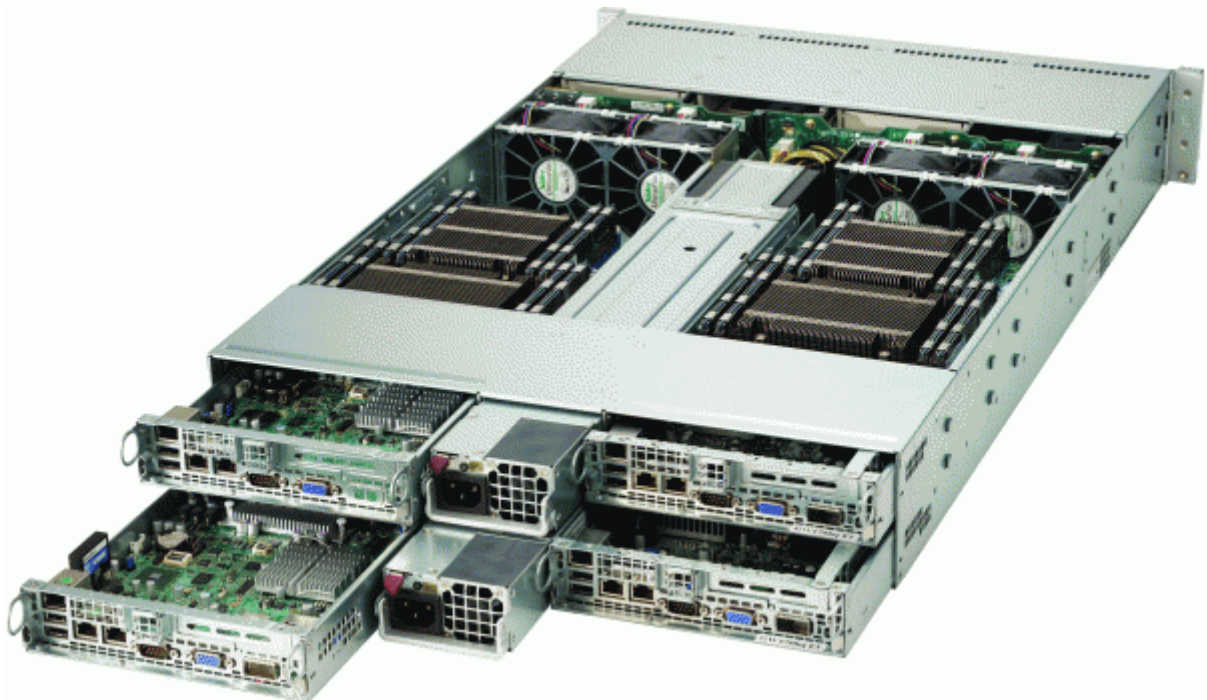


**Project volume:** approx. 140.000€

**Project time:** 2016

**Project description:** Delivery, installation, and configuration of a redundant HA cluster, with consideration for particularly high scalability, packing density, and optimal green IT framework conditions, as well as various other site redundancies, including a storage server with 45-bay JBODs with a 270TB capacity.

**Project realization:** This is the second stage of an already existing, medium performance class cluster infrastructure in a Tier 3 Green IT Data Center. It contains especially compact cluster nodes based on the SuperMicro 2U Twin2 systems, which contain 4 systems in 2U each. Each node has 2x Intel Xeon E5-2609 V3, 64GB DDR4 RAM, and 3x 960GB Enterprise SSDs from the Samsung SM863 series in RAID 1 + a spare. Being part of a fast interprocess network, a scalable 56Gbps Mellanox FDR Infiniband interface is available for an expansion up to 128 nodes, which is planned for the future stages. Parallel networking is accomplished via a high-performance iSCSI connection with 10Gbase-T.



*MUSTANG® systems /SuperMicro 2U Twin2 Super Server  
6028TP-HCOFR used in the second stage*