Jülich Supercomputing Centre (JSC) is one of the leading high-performance computing (HPC) research centers in Europe. The research institute is redefining the future of supercomputing in a European Union funded project. The HPC solution in development is part of a collaborative R&D project Dynamical Exascale Entry Platform – Extreme Scale Technologies (DEEP-EST). The DEEP-EST Modular Supercomputing Architecture (MSA) system consists of three processing modules using of 2nd gen Intel® Xeon® scalable processors. The system also uses Intel® Optane™ persistent memory, Intel® Optane™ SSDs and Intel® FPGA Programmable Accelerator Cards. The combination of technologies accelerates complex scientific simulations, data analysis and machine learning applications.