The UNICORE Grid technology provides a seamless, secure, and intuitive access to distributed Grid resources. UNICORE is a full-grown and well-tested Grid middleware system, which today is used in daily production worldwide. Beyond this production usage, the UNICORE technology serves as a solid basis in many European and International projects. In order to foster these ongoing developments, UNICORE is available as open source under BSD licence at http://www.unicore.eu.

The UNICORE Summit is a unique opportunity for Grid users, developers, administrators, researchers, and service providers to meet and share experiences, present past and future developments, and get new ideas for prosperous future work and collaborations. The UNICORE Summit 2012, the eighth in its series, took place 30 – 31 May at Dresden University of Technology, Dresden, Germany.

The proceedings at hand include a selection of 14 papers that show the spectrum of where and how UNICORE is used and further extended, especially with respect to data management and application support.

This publication was edited at the Jülich Supercomputing Centre (JSC) which is an integral part of the Institute for Advanced Simulation (IAS). The IAS combines the Jülich simulation sciences and the supercomputer facility in one organizational unit. It includes those parts of the scientific institutes at Forschungszentrum Jülich which use simulation on supercomputers as their main research methodology.
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