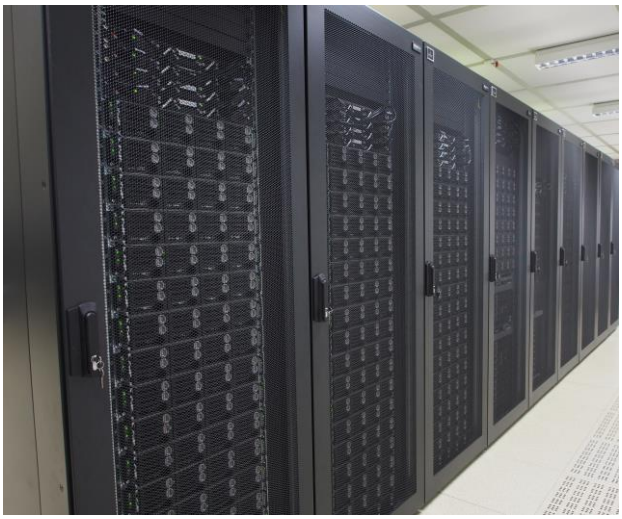
KIT Runs Central High-performance Computing System for State Universities

"bwUniCluster" Central High-performance Computing System Started Operation at KIT – Easy Access for Universities and Colleges in Baden-Württemberg



The "bwUniCluster" at KIT supplies the universities and colleges in Baden-Württemberg with high-performance computing capacities. (Photo: KIT)

Monika Landgraf
Chief Press Officer

Kaiserstraße 12
76131 Karlsruhe, Germany
Phone: +49 721 608-47414
Fax: +49 721 608-43658
E-mail: presse@kit.edu

For further information, please contact:

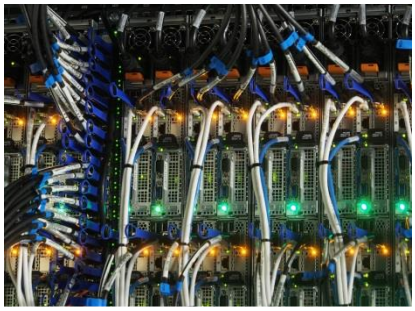
Ursula Scheller
SCC
Phone: +49 721 608-44865
Fax: +49 721 32550
E-mail: ursula.scheller@kit.edu

Kosta Schinarakis
PKM – Science Scout
Phone: +49 721 608 41956
Fax: +49 721 608 43658
E-mail: schinarakis@kit.edu

Today (January 27, 2014), the high-performance computing system "bwUniCluster" takes up operation at KIT. It is the first central system supplying the Baden-Württemberg universities and colleges with high-performance computing capacities. Its capacity of 176 teraflops/s corresponds to that of 5000 high-end PCs connected by broadband technology. The computing system is part of the "bwHPC" Baden-Württemberg state concept for high- and highest-performance computing in research and education.

To account for the increasing significance of scientific computing in research and education, scientific institutions are dependent on latest infrastructure facilities. For this reason, universities and other institutions in Baden-Württemberg jointly developed concepts for the cooperative supply and use of resources and services to support the state's scientists and students in the best possible way. "The bwUniCluster is part of this state concept and replaces or complements local high-performance computing resources of state universities. Work can be shared and efficiency is enhanced," explains Dr.

Holger Marten, Head of the Scientific Computing and Simulation Section of the Steinbuch Centre for Computing (SCC).



The "bwUniCluster" at KIT supplies the universities and colleges in Baden-Württemberg with high-performance computing capacities. (Photo: KIT)

The massively parallel "bwUniCluster" (Baden-Württemberg University Cluster) system with a theoretical maximum capacity of 176 teraflops/s, corresponding to 176 trillion computing operations per second, can also be accessed by state universities and colleges that are not yet involved in the program and by cooperative ventures with industry against payment. The investment costs amount to about EUR 4 million. As in case of operation costs, 50% are borne by the state of Baden-Württemberg and 50% by the nine state universities. Under the "bwIDM" innovative identity management project coordinated by the SCC, scientists are granted very easy and secure access independently of their location. Moreover, the state funds a bwHPC support project for the use of high-performance computing systems by the scientists. Science-adequate use and further development of the systems is controlled by a state committee consisting of representatives of all universities involved.

The "bwHPC" state concept was found to be of innovative character and supraregional importance and recommended for funding by the German Research Foundation (DFG). It is considered a model concept for Germany. "bwHPC" covers the funding of high-performance computing (HPC) with variable capacities and competence centers on all levels. Within the framework of the concept, it is planned to extend the high-performance computing center in Stuttgart, to grant broad user groups of state universities access to the high-performance computing systems at KIT, and to establish special, dedicated computing clusters at universities and research institutions of the state. The "bwUniCluster" at KIT's Steinbuch Centre for Computing (SCC) represents the central HPC supply system for scientists in Baden-Württemberg.

Further information (in German) on bwUniCluster can be found at: http://www.scc.kit.edu/dienste/9237.php

Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. Research activities focus on energy, the natural and built environment as well as on society and technology and cover the whole range extending from fundamental aspects to application. With about 9000 employees, including nearly 6000 staff members in the science and education sector, and 24000 students, KIT is one of the biggest research and education institutions in Europe.

Work of KIT is based on the knowledge triangle of research, teaching, and innovation.

This press release is available on the internet at www.kit.edu.

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