



Press Release

ParTec Cluster Competence Center GmbH

ParaStationV5 – Cluster Operating and Management Software

ParTec is team member to design and build the fastest European Petaflop Cluster-Supercomputer

Munich, June 9, 2008. To develop the next generation of general purpose cluster computer as a research activity it is necessary to bring together the most experienced companies and research sites to combine and integrate the best processor, server, interconnect and cluster software. Therefore, the companies **ParTec** and **Quadrics** will partner together with **Research Centre Jülich** to establish a cluster architecture based on Intel technology, Quadrics interconnect and **ParaStationV5** cluster operating and management software.

One of the goals is to overcome the high scalability limitation of today's general purpose clusters. This will lead to the next milestone to build clusters with Petaflop performance. This project establishes the prototype of the next generation of general purpose cluster computer provided to the **Jülich Supercomputer Centre (JSC)** as well as to a worldwide community of users and scientists.

JSC has chosen ParTec and Quadrics because our mission is to provide professional key products for JSC's JUROPA-Project, to develop jointly the most performant Petaflop class system for world-leading research by simulation. **Juropa-II**, the new supercomputer of the highest performance class will be designed and built by the core group of this project: Jülich Supercomputer Centre, ParTec, Quadrics and Intel.

Based on the activities of the ParaStation consortium which was founded in fall 2004 **ParaStationV5** has been released to fulfill the requirements of a high productive cluster operating and management software. " With the new release of **ParaStationV5** ParTec offers the latest technology of cluster operating and management features as a complete entity, including MPI-2, DAPL and comprehensive monitoring. Today's module based cluster software like a collection of open source tools and specific software from different vendors are no longer well suited in the world of productive Petaflop clusters in the future.", said Dieter Schuett, sales manager, ParTec.

On top of the **ParaStationV5** software stack, ParTec provides consulting and support offerings ranging from pre-sales consulting up to system setup and maintenance. This may include installation, configuration and tuning of an entire Linux software stack including numerous open source and commercial products for various parallel computing environments.

ParaStationV5 provides unique features with common techniques fine tuned and optimized for high performance computing solutions to deliver an integrated, easy to use and reliable compute cluster environment. The optimized cluster software stack supports a wide range of server hardware platforms, various communication technologies and interconnects from Gigabit Ethernet to Quadrics QsNet and QsTenG components as well as many flavours of MPI implementations.

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ParTec provides excellence across the entire compute cluster environment, focussing on optimal software experiences for its users, while keeping operation and support costs under control.

Most important features of ParaStationV5 in a nutshell:

- MPI-2 support
- cross-MPI support (for other MPI implementations)
- enhanced process control features
- Quadrics QsTenG, QsNetII and support
- optimized Ethernet protocol for very low latency and high bandwidth
- supports all common interconnects
{Myrinet(GM), Infiniband(VAPI), 10G(DAPL), 1G(IP,p4sock), QsNet(ELAN)}
- DAPL protocol support
- supported on source code level
- debugger support
- automated cluster installation tool
- comprehensive hardware and software monitoring

About ParTec

ParTec Cluster Competence Center GmbH is specialized in development of comprehensive cluster software and support of productive supercomputers. ParaStation, an own developed cluster software stack that creates a parallel environment for Linux clusters in a reliable, stable and highly efficient way is one of the most world class operating and management platforms. ParTec provides vendor-independent consultancy for a sophisticated choice of products and support for professional operation of Linux compute clusters. Our approach ensures rapid deployment cycles and seamless interoperability of software components.

ParTec is member of major european research consortia (e.g. PROSPECT) to contribute to the development of Juropa-II, the next Petaflop architecture of supercomputers. The headquarter of **ParTec** is located in Munich, Germany.

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