





Amaro (Italy), March 18th, 2010 – Eurotech and the AuroraScience Collaboration today announce their joint plan to install one Aurora AU-5600 system, the innovative HPC platform for the supercomputing community. The machine will be installed as part of a planned Interdisciplinary Laboratory of Computational Science (LISC) operated jointly by the Bruno Kessler Fundation (FBK) and the University of Trento.

AuroraScience is a research project at the crossroads of Computational Sciences and Computer Architecture: a number of scientific partners are taking a global approach to the definition of next generation high performance computing for scientific and technological applications. Science has always been driving HPC innovation: the APE supercomputing family originated by the Istituto Nazionale di Fisica Nucleare (INFN) has been for more than 20 years one of the most successful European HPC initiatives in Computational Particle Physics. With the key collaboration of several institutions, AuroraScience continues this long standing experience and extends it to a variety of scientific areas. Eurotech has taken part in APE projects since 1999, providing engineering solutions and manufacturing the APEmille and the APENext systems.

"The Aurora HPC architecture offers a very balanced solution that is the result of a very long experience in parallel supercomputing. Aurora builds on the former APE architecture and extends it for a broader set of applications, with a potentially large market" said Giampietro Tecchiolli, VP and CTO of the Eurotech Group. "We are proud of teaming with AuroraScience to bring a new level of performance to the Italian research community".





"AuroraScience merges the know-how of many partners. The goal is not only HPC hardware and architecture development, but also exploiting computing power efficiently in a variety of research areas, including Lattice Gauge Theory, Computational Fluid Dynamics, Molecular Dynamics, Protein Folding, Genomics and Medical Physics," said Professor Achim Richter, Director of the European Centre for Theoretical Studies in Nuclear Physics and Related Areas (ECT*) and representative of FBK for AuroraScience. "Designing, tuning and porting activities in the Petascale age require a global approach, where competence is drawn from different sources".

The AuroraScience project is funded by the Provincia Autonoma di Trento (PAT) and by the INFN. The PAT, through the FBK, provided a significant contribution for the integration of the initiative in a larger framework, where innovation can bridge theoretical and applied science. "The new Aurora installation is the clear demonstration of the value of a comprehensive effort where leading research is used to deliver cutting-edge technology. Innovation is the necessary answer in a world that is increasingly competitive and globalized. By promoting the adoption of the most advanced technology, we are stimulating an already thriving community", Professor Richter added.

The INFN contribution to AuroraScience is regulated in the framework of a larger collaboration agreement with the FBK. "We are very happy that a pioneering approach in high performance computing – initially focused on a narrow application area in theoretical physics – has had a seminal role for an initiative that will bring benefits to science and technology at large and support industrial development" said Professor Raffaele Tripiccione, scientific leader of the project for INFN.







The Aurora Au-5600 machine will deliver in its first phase 20 TFlops and will use the latest 32nm Intel® Xeon® 5600 series processors (the six-core CPUs formerly known with the "Westmere-EP" code name). Thanks to Aurora liquid cooling, the installation will be also one of the greenest HPC facilities: waste heat will be available to provide heating services to the datacenter, drastically reducing running costs and environmental impact.





About Eurotech

Eurotech, a global company listed on the Milan stock exchange (Borsa Italiana) integrates hardware, software and expertise to deliver HPC platforms, embedded computing platforms and sophisticated systems to leading OEMs, system integrators, and enterprise customers for successful and efficient deployment of their products and services. Drawing on concepts of minimalist computing, Eurotech lowers power draw, minimizes physical size, and reduces coding complexity to bring sensors, embedded boards and platforms, stand-alone systems and high performance computers to market, specializing in several vertical segments including research. Our customers rely on us to simplify their access to state-of-art computing technologies so they can focus on their core competencies. Learn more about Eurotech at www.eurotech.com.

About AuroraScience

AuroraScience is a scientific project supported by the Provincia Autonoma di Trento (PAT) through the Fondazione Bruno Kessler (FBK) and by the Istituto Nazionale di Fisica Nucleare (INFN). It gathers several partner institutions with comprehensive scientific and technological know-how of HPC in several fields, including nuclear, particles, biological and medical physics, fluid dynamics and genomics, as well as computer science. The project profits from the most recent developments in computer technology and aims at:

- defining a computational platform able to support scientific simulations in basic and applied science and technology, supporting industrial developments in this field;
- making advance in the design of scientific algorithms, with a special attention to the opportunities provided by the Aurora architecture;
- supporting scientific research with the deployment of a large HPC installation based on the Aurora platform;
- disseminating its know-how to the research community and to provide advanced training in the Trentino area.





AuroraScience partners are:

- ECT*/FBK (European Center for Theoretical Studies in Nuclear Physics and Related Areas / Fondazione Bruno Kessler), Trento
- INFN (Istituto Nazionale di Fisica Nucleare), Ferrara Milano Bicocca -Parma
- PAT (Provincia Autonoma di Trento), Trento
- Physics Department, University of Trento, Trento
- DEI (Department of Information Engineering, University of Padova),
 Padova
- ATreP (Agenzia Provinciale per la Protonterapia), Trento
- FEM (Fondazione Edmund Mach), San Michele all'Adige

For more information on AuroraScience, please visit http://web.infn.it/aurorascience/