HPC Advisory Council Switzerland Workshop 2010
March 15-17, 2010

Hosted by the Swiss Supercomputing Centre and the HPC Advisory Council

Lugano Convention Centre
Piazza Indipendenza 4
6900 Lugano, Switzerland

The workshop will focus on High-Performance Computing education and training including CPU technologies, accelerators, networking, storage, software middleware and various applications. The workshop will also cover advanced topics such as MPI offloads, networking optimizations and will feature presenters from the Swiss Supercomputing Centre, Simula Research Laboratory, HPC Advisory Council professionals as well as technologists from various Independent Software Vendors and OEMs. Hands-on training will be incorporated within the workshop agenda to allow participants to actually configure and test high-performance clusters. The workshop will bring together system managers, researchers, developers, computational scientists, students and industry affiliates for cross-training and to discuss recent HPC developments and future advancements.

This is an excellent training and educational opportunity for European-based, HPC and data center IT professionals.

**The conference is free.
Registration is required.**
www.hpcadvisorycouncil.com

Agenda - Day 1

9:00-9:30	Welcome Session (Gilad Shainer, HPC Advisory Council Chairman)
9:30-9:45	HPC in the Swiss National Supercomputing Centre (Dominik Ulmer, CSCS)
9:45-10:00	HPC Systems in the Swiss National Supercomputing Centre (Neil Stringfellow)
10:00-10:30	HPC Storage Systems at CSCS (Hussein N. Harake, CSCS)
10:30-10:45	The HPC Advisory Council Recent Activities (Gilad Shainer, HPC Advisory Council)
11:00-12:00	Sponsor Presentations (IBM, Microsoft, HP)
12:00-13:00	Lunch
13:00-14:30	InfiniBand Architecture Overview (Erez Cohen)
14:30-15:15	Large Scale Applications Scalability - Past Experience
15:30-16:15	InfiniBand Storage Tutorial (Mike Anderson, StreamScale)
16:15-17:00	Using InfiniBand for High-Performance Visualization - HPV (Stefan Eilemann, Eyescale Software GmbH
17:00-18:30	InfiniBand Clustering Basics Hands-on Training (Erez Cohen)
18:30-20:00	Evening Event

Agenda - Day 2

9:00-10:00	Advanced Topics in HPC Networking – Adaptive/Static Routing, Congestion Avoidance (Sven-Arne Reinemo, Simula Research Laboratory)
10:00-10:45	Advanced HPC Technologies – Collectives Operations and Offloading (Gilad Shainer, HPC Advisory Council)
11:00-12:00	Sponsor Presentations (Sun, AMD, Voltaire)
12:00-13:00	Lunch
13:00-13:45	Networking Topologies – CLOS (Fat-Tree), 3D Torus, Network Management
13:45-14:00	Sponsor Presentation (Dell)
14:00-16:00	Clustering Fabric Management and Monitoring Hands-on (Erez Cohen)
16:30-17:30	Swiss Supercomputer Center - What We Need from InfiniBand? (Sadaf Alam, CSCS)
17:30-18:00	The JuRoPA Supercomputer - Experience from Building a Supercomputer (Hugo Falter, ParTec)
18:00-18:30	Q&A
18:30-20:00	Evening Event

Agenda - Day 3 (Industrial Day)

8:45-9:00	Industrial Day introduction (Gilad Shainer, HPC Advisory Council)
9:00-9:45	Keynote session: HPC - Challenges of the 21st century (Goldi Misra, Centre For Development of Advanced Computing)
9:45-10:30	HP
10:45-11:30	IBM
11:30-12:15	Voltaire
12:15-13:15	Lunch
13:15-14:00	Dell
14:00-14:45	Microsoft
14:45-15:30	Sun
15:45-16:30	AMD Opteron™ processors scalability and roadmap (Herve Chevanne, AMD)
16:30-17:00	Putting Personality into High-Performance Computing (John D. Leidel, Convey Computer Corporation)
17:00-17:30	Gateway Technology
17:30-18:00	DataDirect Networks
18:00-18:30	Advancements in Copper Cable Interconnects for HPC Applications (Russell Hornung and Henry N.Yates II, W.L. Gore & Associates)
18:30-18:45	Adjourn and prize raffle!