

„Altix Usage And Application Programming“

Location: Technische Universität Dresden
Zellescher Weg 12, Willers-Bau A 220

Date: February 8th / 9th, 2007

Instructor: Dr. Reiner Vogelsang, SGI GmbH

Agenda:

Day 1st

- 8.45 h -9.15 h** **Welcome and Introduction**
Topics: Welcome and survey of the training, organizational issues
Speaker: R. Vogelsang, SGI
- 9.15 h -10.00 h** **Comparison of Altix 3700/4700 Hardware**
Topics: NumaLink, System and Memory Architecture, IA64 Processor Hardware Architecture
Speaker: R. Vogelsang, SGI
- 10.15 h -11.00 h** **Altix Linux and Programming Environment**
Topics: Helpful commands and development utilities, basic compiler options and usage, recommendations with regard to scripting and Makefiles
Speaker: R. Vogelsang, SGI
- 11.15 h – 12.00 h** **Intel IA64 Compiler, Libraries and Development Tools, Part 1**
Speaker: Vogelsang, SGI
- Lunch Break**
- 13.15 h – 14.00 h** **Intel IA64 Compiler, Libraries and Development Tools, Part 2**
Speaker: R. Vogelsang, SGI
Topics: Most important options, complex optimization steps IPO & PGO, HLO, reading compiler optimization reports, alias disambiguation, directives, pragmas, MKL.
- Break**
- 14.15 h – 15.00 h** **SGI NumaTools**
Topics: Runon, taskset, dplace, cpusets, dlook. Examples
Speaker: R. Vogelsang, SGI

15.15h – 17.00 h SGI Performance Analysis Tools
Topics: histx+ tool suite, pfmon, profile.pl, pmsub,shubstats, linkstats, perfcatcher.Intel Trace Collector (optional).
Speaker: R. Vogelsang, SGI

2nd Day

9.15 h – 10.00 h Optimizations of Data Intensiv Applications
Topics: Cache tuning, understanding of memory hierarchies, I/O Examples
Speaker: R. Vogelsang, SGI

Break

10.30 h – 12.00 h Tuning of Parallel Applications
Topics: MPI Tuning, MPI I/O Examples.
Speaker: R. Vogelsang,SGI

Lunch Break

14.15 h – 17.00 h Hands-On Session
Topics: Get your own code onto the Altix
Speaker: R. Vogelsang, SGI