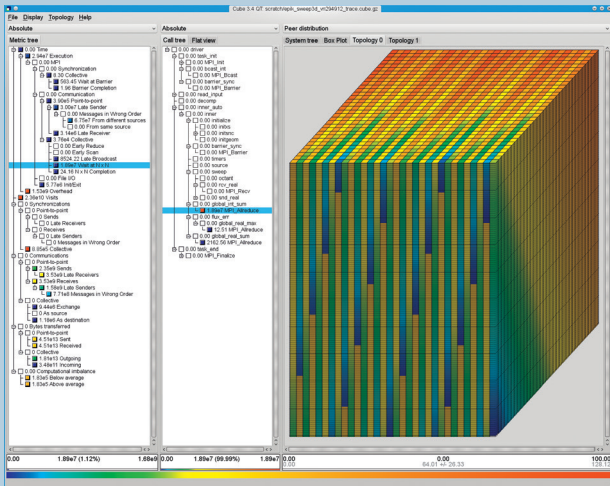


# Cross-Sectional Team Parallel Performance



Make the optimization of parallel codes both more effective and more efficient

- Product: performance-analysis tool Scalasca
- Cooperation with TU Darmstadt
- Quick performance overview on call-path level
- Wait-state, root-cause, and critical-path analysis via event tracing
- Scaling tested up to 1 million threads

## JARA-HPC cooperation between

- HPC SW Analysis and Tools Team, JSC  
B. Mohr
- RWTH Aachen University, IT Center, Aachen  
M. Müller

## Successful 3<sup>rd</sup>-party projects

- **eeClust**: Energy-efficient cluster computing (BMBF)
- **PRIMA**: TAU integration (US DOE)
- **H4H**: Hybrid programming for heterogeneous architectures (EU ITEA2)
- **HOPSA**: Integration of system and application monitoring (EU RU FP7)
- **LMAC**: Performance dynamics of massively parallel codes (BMBF)
- **RAPID**: Performance analysis of industrial applications (Siemens)
- **Catwalk**: Quick HPC performance models (DFG SPPEXA)
- **Score-E**: Analysis of energy consumption in HPC (BMBF)

## Current projects

- **VI-HPS**: Virtual Institute – High Productivity Supercomputing
- **POP**: Performance Optimization and Productivity (EU H2020)
- **SCIPHI**: Score-P and Cube extensions for Intel Xeon Phi (Intel)

