AutoTune Project

Automatic Tuning based on expert knowledge. Tuning plugins:
- Parallel Pattern Tuning
- Energy Efficiency Tuning
- Compiler Based Tuning
- I/O Tuning
- MPI Tuning

www.autotune-project.eu
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Former partner
Expert Knowledge: DVFS Plugin

When is it necessary to tune?
Where to tune?
What are the tuning parameters?
How to shrink the search space?

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### Compiler Flag Selection Plugin

- Modern compilers have heuristics for application tuning that might not be optimal.
- The plugin allows to automatically evaluate compiler flags based on expert knowledge.
- Features:
  - Flexible specification of compiler flags to explore
  - Automatic recompilation
  - Multiple plugin search strategies
  - Selective compilation of compute intensive files

### MPI Tuning Plugin

- MPI parameters
  - Many parameters available
    - MP_COLLECTIVE_OFFLOAD
    - MP_USE_BULK_XFER
    - MP_EAGER_LIMIT
- Master/Worker applications
  - Easy to automate tuning
  - Number of workers
  - Data partition factor

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