Virtual Institute – High Productivity Supercomputing

Partnership to develop advanced programming tools for complex simulation codes

Goals

Improve code quality
Speed up development

Activities

Development & integration
of HPC programming tools
× Scalable
× Easy to use

Service
× Support email lists
× Application engagement

Bring-your-own-code
tuning workshops
× 3-5 days
× Overview of tool suite
× Functionality of individual tools
× Hands-on experience & expert
  assistance using the tools

Academic workshops especially for
young scientists
ESPT/ProTools workshop series in
conjunction with
Supercomputing (SC) conference
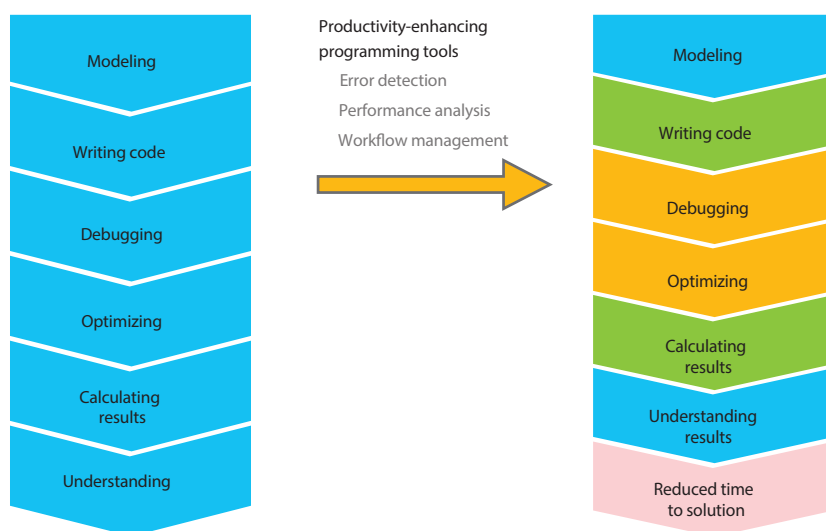
More information
www.vi-hps.org

Contact
info@vi-hps.org

Sponsored by

HELMHOLTZ
RESEARCH FOR GRAND CHALLENGES

Supercomputing productivity

Modeling
Writing code
Debugging
Optimizing
Calculating results
Understanding

Productivity-enhancing
programming tools
Error detection
Performance analysis
Workflow management

Modeling
Writing code
Debugging
Optimizing
Calculating results
Understanding results
Reduced time to solution

Integrated tool suite

Single Node Performance	Parallel Performance		Debugging & Correctness
Callgrind	Dimemas	Open|SpeedShop	Archer
LIKWID	Extra-P	Paraver	Linaro DDT
MAQAO	Linaro MAP	Scalasca	Memchecker
DiscoPoP	Linaro Performance Reports	TAU	MUST
	mpiP	Vampir	STAT

End-user

Instrumentation	Measurement	Integration	Visualization	Infrastructure
OPARI2	Caliper	Component-based Tool Framework	Cube	
	Extrae	LaunchMON		
	PAPI	P^{n}MPI		
	Score-P	JUBE		