

HPCSW '08 Workshop

Towards a
Community Infrastructure
With and Around
Open | SpeedShop™

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Scalable Tools Landscape Today

- We have powerful & successful tools, but ...
 - Isolated success stories
 - Stove-pipe implementations
 - Danger of reinventing the wheel
 - Too much infrastructure work
- Technical Solution
 - Modular tool infrastructures
 - Exchangeable components
- Non-technical aspects
 - Cross group collaboration & coordination
 - Community effort for development & support

Why now? Why from O|SS team?

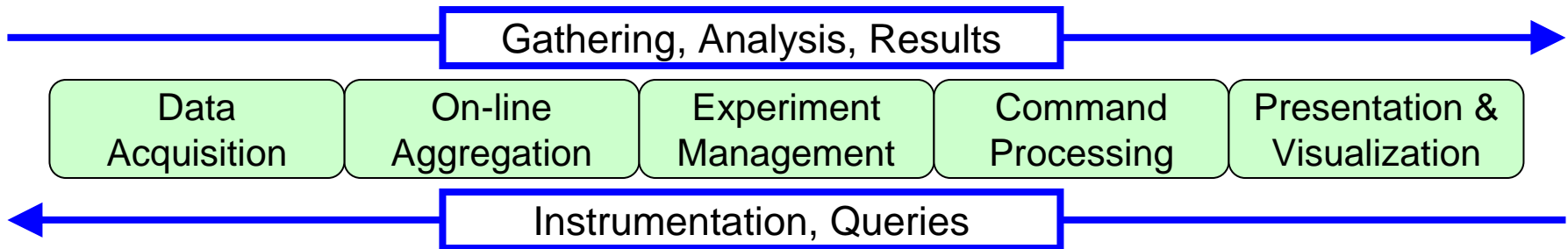
- Why Now?
 - Timing is right!
 - Fits to series of workshops (CScADS,SDTPC,...)
 - Fits to existing work (e.g., Dyninst modularization)
 - All working on infrastructures for scaling
- Open|SpeedShop
 - Already modular infrastructure
 - We are using several other components
 - We have components that can be extracted
 - Point of restructuring software base
- “Buy-in” question
 - External groups interested in parts of framework
 - Don't want to inherit end-to-end tool

Workshop Goals

- Towards a community infrastructure
 - Look beyond our own tool sets
 - Combine overlapping functionality
 - Enable interoperability
 - Modular support structure
- First step: Understand tools' structure
- Identify ...
 - Needs & requirements
 - Similar/common components
 - Tool workflow and dataflow
 - Types of APIs

Open Issues

- Can we find a common workflow?



- How to separate components?
 - Which modules do we have and need?
 - Where are natural break points and APIs?
- How to track API changes?
 - Implementation freedom vs. user pains
 - Update channels?
- How can we access tools?
 - (Common) repository access?
 - How do we handle local adaptations?

Organization

- Nine speakers, 20 minutes each
 - Introduce tools
 - Identify components and modules
 - Point out areas for collaboration
- Let's keep it interactive / Don't be shy!
 - Ask questions as we go along
 - Panel discussion at the end
 - Compare and Contrast!
 - How do tools/modules fit together?
- We'll try to keep notes for panel discussion
- Would like to publish slides on website

Questions

- ❑ What does your infrastructure look like?
 - Goals & Functionality
- ❑ How is it structured/modularized?
- ❑ Where are the key challenges?
 - Focus: Scalability
- ❑ Which components
 - ... can you contribute?
 - ... are you interested in?
 - Interfaces?
- ❑ How could a long term support model look like?

Agenda

□ Session 1

- **Martin Schulz**
Welcome and Agenda
- **Jim Galarowicz**
Open|SpeedShop
- **Matthew Legendre**
DynInst
- **Richard Graham**
Scalable Tool Communication
Infrastructure
- **Bronis R. de Supinski**
STAT / Debugging

□ Session 2

- **John Mellor-Crummey**
HPC Toolkit
- **Dan Terpstra (Martin Schulz)**
PAPI, Present and Future
- **Bernd Mohr**
ompP, TAU, KOJAK,
Scalasca, and VampirTrace
- **Rob Fowler**
ScalaTrace
- **SciCortex**
Using Open Source Tools
- **Panel Discussion**