

Tutorial M7 Outline

Detailed outline of the tutorial

8:15 a.m. - 8:45 a.m. Introduction to Hardware Performance Data and Analysis presented by Philip Mucci.

This time is also used for last-minute setup of PCs and for signing on to Hockney. Help setting up, getting accounts, etc. is provided by technical assistants.

8:45 a.m. – 9:45 a.m. Level 1 Performance Data Gathering presented by Bronis R. de Supinski.

Attendees first learn how to build and run POP, the Parallel Ocean Program, in various configurations. Then they will gather timing and whole-program hardware performance data using Hpmcount, Pstrun and other tools.

9:45 a.m. - 10:00 a.m. Break

10:00 a.m. - 12:00 noon. Level 2 Performance Data Gathering and Analysis presented by Celso Mendes and Philip Mucci.

First DynaProf is demonstrated. DynaProf works directly with binary executables and can provide data at level 1 and level 2. Next SvPablo is demonstrated. SvPablo instruments the source code and provides either procedure or loop-level data. Both DynaProf and SvPablo make use of the PAPI cross-platform interface for accessing hardware counter data. POP will be analyzed in depth with both tools by the attendees. Various sections of POP will be discussed along with their related performance data. From that data, the attendees will establish the computational characteristics and workload of the application, along with their performance implications. Other applications as outlined above will be presented to illustrate interesting performance issues not shown in the POP runs.

12:00 noon Finish