Open|SpeedShop Fact Sheet

Open Source, Multi-platform Linux® Performance Tool

- Co-funded by the DOE and developed by SGI

- Supports systems with Intel® Itanium®2, Intel Pentium®, Pentium® II Xeon™, and AMD Opteron™ processors

- Easy to use GUI wizards and context sensitive help

- Modular and extensible plug-ins for performance experiments

An Introduction to Open|SpeedShop

Open|SpeedShop is an open source, multi-platform Linux® performance tool which is targeted to support performance analysis of applications running on both single node and large scale systems with Intel® Itanium® 2, Intel Pentium®, Pentium® II Xeon™, and AMD Opteron™ processors. Open|SpeedShop is explicitly designed with usability in mind and is for application developers and computer scientists. The base functionality includes program counter (PC) sampling, exclusive and inclusive user time, CPU hardware performance counter, MPI event tracing, I/O call tracing, and Floating Point exception experiments. In addition, Open|SpeedShop is designed to be modular and extensible. It supports several levels of plug-ins which allow users to add their own performance experiments.

Open|SpeedShop is co-funded by the U.S. Department of Energy's (DOE) National Nuclear Security Administration (NNSA). It is developed by Silicon Graphics in collaboration with an advisory board consisting of Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Sandia National Laboratory. Open|SpeedShop utilizes dynamic instrumentation technology developed at the University of Wisconsin and University of Maryland. The infrastructure and base components of Open|SpeedShop are released as open source code under GPL and LGPL.

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Features

- Three modes of operation: batch, interactive command line interface (CLI), and graphical user interface (GUI)

- Supports multi-platform single system image (SSI), traditional cluster, and SGI supercluster

- Scales to large numbers of processes, threads, and ranks

- Create your own experiments via a well defined plug-in facility

- Attach to running processes, threads, and ranks to gather performance data*

- View performance data for the application's lifetime

- View performance data for the application in smaller time slices*

- While the experiment is running, view intermediate performance measurement data

- Save and restore performance experiment data and symbol information for post experiment performance analysis

- Compare performance results for processes, threads, ranks or compare current experiment results with previous experiment results

- No need to recompile user application to profile

- Successfully user tested GUI wizard facility and context sensitive help

- Python Scripting API accesses Open|SpeedShop functionality corresponding to CLI commands

- Automatic attachment to all processes in an MPI job specifically for versions of MPI supporting the MPIR feature

* Portions of this feature may still be in development and not available with the latest release of Open|SpeedShop

- CVS branch for the Open|SpeedShop development version

- Latest stable releases of Open|SpeedShop

  Downloads available from the Open|SpeedShop web site: *http://oss.sgi.com/projects/openspeedshop/*

  Click on the Download URL and follow the instructions to download the Open|SpeedShop source code, platform specific RPMs and prerequisite supporting RPMs

- Use the Open|SpeedShop plug-in facility to write new experiment plug-ins

  Experiments supported by Open|SpeedShop
  - Program Counter Sampling
  - Call Stack User Time Sampling
  - Hardware Counter Event Count
  - Hardware Counter Time
  - MPI Event Tracing
  - Input/Output (I/O) Event Tracing

For More Information

See the Open|SpeedShop web page at *http://oss.sgi.com/projects/openspeedshop/*

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