



**Corporate  
Capabilities**

KCI is an Arizona Corporation founded in 1996. KCI's mission is to provide HPC consulting in architect processing systems that are forward-looking, utilizing innovative and best-value strategies proven by simulation, in order to develop the best client solutions available. **Aside from the performance analysis tool, EzParaPerf, KCI specializes in High Speed data movement, including file systems, storage systems, and processing systems.**

1. Acquisition and Architecting high performance computer (HPC) and storage solutions.
2. HPC timeline performance modeling. Stochastic modeling techniques are used to analyze computer performance.
3. Heterogeneous SAN, NAS, Tape, and HSN storage system design.
4. Gig E; 10 Gig E, Fibre Channel, InfiniBand.



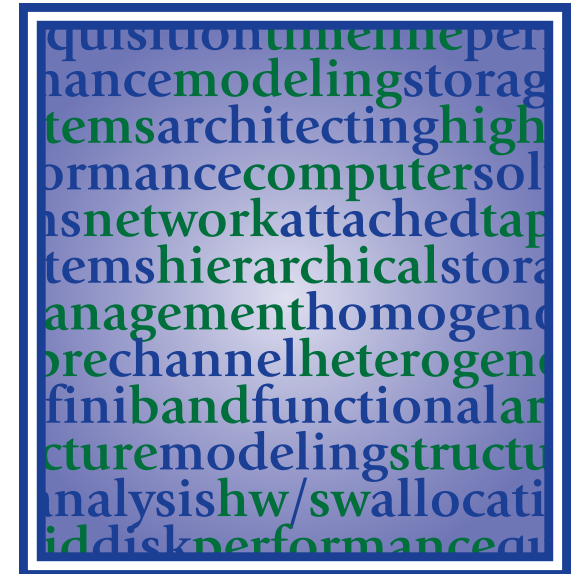
PO Box 1641  
Litchfield Park  
AZ 85340

# INTRODUCING EzParaPerf

DEVELOPED BY:



ARCHITECTS OF  
HIGH-PERFORMANCE  
COMPUTER SOLUTIONS



PO Box 1641 • LITCHFIELD PARK • AZ • 85340

**1-800-694-0236**  
[www.keanoc.com](http://www.keanoc.com)

Today's HPC platforms require good tools to understand and therefore improve parallel performance.

*This is the tool your software team has been waiting for...*

### ***EzParaPerf—a Fortran Parallel Performance Tool (Version 2.1)***

- Portable to all HPC platforms;
- Powerful Yet Easy to Use (Very Short Learning Curve)
  - run our automatic Fortran instrumenter
  - link to our runtime library
  - run our profiler
- PAPI Compatability:
  - PAPI used alone provides overall cpu performance
  - Our tool breaks it down per routine and code section
- Reports Performance for each subroutine
  - aggregate cpu (mflops, cache-misses, tlb-misses...)
  - network, and I/O performance
  - variation across cpus

### ***The EzParaperf Instrumenter (f95inst)***

- f95inst is quick
- f95inst is fully automatic
- f95inst automatically instruments subroutines for:
  - cpu and wall time (inclusive and exclusive)
  - PAPI events
- f95inst automatically instruments MPI calls
  - all point-to-point and collective operations
  - cpu and wall time, and transfer rates
- f95inst has user directives
  - NOINST directive is good for suppressing small routines
  - USER directive for blocks of code with performance issues
- f95inst allows the user to reinstrument and instrumentation is easily removed with a switch
- f95inst supports conditional compilation
- f95inst supports both free and fixed format codes
- f95inst allows the user to control and modify which PAPI events are of current interest

*What more could you ask for?*

### ***The EzParaPerf Runtime Library (libparaperf.a)***

- The runtime library writes a runtime file for each processor in XML-format
- Each XML file contains:
  - Automatic information
  - Job Stats
  - Performance Data
- User-supplied information
  - Using a runtime library call as many times you like
  - How the code was built
  - What kind of run it was

### ***The EzParaPerf Profiler (ezperf)***

- Easy to Use
- Gives the power to the user to see the data in many useful ways
  - finds the most time consuming routines
  - rank routines by cpu or wall time or any PAPI event
  - rank routines by efficiency
  - sort the data in a myriad of ways

#### ***License***

EzParaPerf is proprietary code written by two PHDs that are HPC experts. The Fortran95 instrumenter f95inst requires two public domain programs:

- the Performance Database Toolkit (pdtool- kit-3.4) from the University of Oregon Performance Research Laboratory can be downloaded from the URL: <http://www.cs.uoregon.edu/research/pdt/home.php> and
- the Python module PLEX (Plex-v1.1.4.1) written by Greg Ewing of the Computer Science Department at the University of Canterbury, Christchurch, New Zealand.