ompP is a performance profiler for OpenMP applications. It supports the developers of OpenMP applications in quickly identifying the most time consuming parts of their code. In addition, ompP offers a number of enhanced productivity features, such as overhead analysis, scalability analysis, hardware counter evaluators, and performance properties. ompP supports OpenMP applications written in C/C++ and FORTRAN.

**SUPPORTED PLATFORMS**

**COMPILERS**
- Pathscale
- PGI
- SUN Studio
- Intel icc & ifort
- IBM xlc & xlf
- gcc 4.2.0 and up

**OPERATING SYSTEMS**
- Linux/x86
- x86_64
- ia64Solaris/SPARC
- x86
- x86_64
- AIX/Power

**EXAMPLE PROFILING DATA**

(Execution with four threads):

```
#pragma omp parallel
{
  #pragma omp critical
  {
    sleep(1)
  }
}
```

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<th>execC</th>
<th>bodyT</th>
<th>enterT</th>
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</table>

**OVERHEAD CLASSIFICATION:**

Quantify overheads of parallel execution into four classes
- Synchronization
- Imbalance
- Limited Parallelism
- Thread Management

**SCALABILITY ANALYSIS:**

See how overheads change with increasing number of threads

**INCREMENTAL PROFILING:**

- Capture profiles continuously (e.g., each second) while the program executes
- Analyze and display profiling data with temporal component

**OVERHEADS OVER TIME**

Application: 328.fma3d_m

**PERFORMANCE COUNTER HEATMAPS**

http://icl.cs.utk.edu/ompp/