Hewlett-Packard Company
ProLiant ML370 G5
(1.86 GHz, Intel Xeon processor E5320)

SPECint\_rate2006 = 61.0
SPECint\_rate_base2006 = 59.2

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

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CPU Name: Intel Xeon E5320
CPU Characteristics: 1.86 GHz, 2x4 MB L2 shared, 1066 MHz system bus
CPU MHz: 1860
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
CPU(s) orderable: 1.2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 8 MB 1+D on chip per core, 4 MB shared / 2 cores
L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB PC2-5300F CL5)
Disk Subsystem: 1x72 GB 10 K SAS
Other Hardware: None

Operating System: Windows Server 2003 Enterprise x64 Edition
Compiler: Intel C++ Compiler for 32-bit applications,
Version 9.1, Build 20061103Z
Package ID: W\_CC\_C\_9.1.033
Microsoft Visual Studio .NET 2003
(v7.1.3088, for libraries)

Auto Parallel: No
File System: NTFS
System State: Default
Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: MicroQuill SmartHeap Library 8.0
Hewlett-Packard Company

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Results Table

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<tr>
<th>Benchmark</th>
<th>Copies</th>
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<th>Base Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
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<td>400.perlbench</td>
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<td>752</td>
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<td>401.bzip2</td>
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<td>26.1</td>
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<td>429.mcf</td>
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<td>1472</td>
<td>49.6</td>
<td>1471</td>
<td>49.6</td>
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<tr>
<td>445.gobmk</td>
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<td>1200</td>
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<td>1070</td>
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<td>35.4</td>
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<td>72.9</td>
<td>758</td>
<td>72.8</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Platform Notes

Power Regulator set to Static High Performance Mode in BIOS. Adjacent Sector Prefetch disabled in BIOS.

Base Compiler Invocation

C benchmarks:
  icl -Qvc7.1 -Qc99

C++ benchmarks:
  icl -Qvc7.1

Base Portability Flags

403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32

Base Optimization Flags

C benchmarks:
  -fast /F512000000 shlw32m.lib -link /FORCE:MULTIPLE

Continued on next page
### Base Optimization Flags (Continued)

C++ benchmarks:
- `-fast -Qcxx_features /F512000000 shlw32m.lib`
- `-link /FORCE:MULTIPLE`

### Base Other Flags

C benchmarks:
- `403.gcc: -Dalloca=_alloca`

### Peak Compiler Invocation

C benchmarks:
- `icl -Qvc7.1 -Qc99`

C++ benchmarks:
- `icl -Qvc7.1`

### Peak Portability Flags

- `403.gcc: -DSPEC_CPU_WIN32`
- `464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32`

### Peak Optimization Flags

C benchmarks:
- `400.perlbench: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000 shlw32m.lib -link /FORCE:MULTIPLE`
- `401.bzip2: Same as 400.perlbench`
- `403.gcc: Same as 400.perlbench`
- `429.mcf: basepeak = yes`
- `445.gobmk: Same as 400.perlbench`
- `456.hmmer: Same as 400.perlbench`
- `458.sjeng: Same as 400.perlbench`

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Test sponsor: Hewlett-Packard Company
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Test date: Feb-2007
Hardware Availability: Nov-2006
Software Availability: Nov-2006

Peak Optimization Flags (Continued)

462.libquantum: Same as 400.perlbench
464.h264ref: Same as 400.perlbench

C++ benchmarks:
- -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
  /F512000000 shlw32m.lib
  -link /FORCE:MULTIPLE

Peak Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.02.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.02.xml

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.