Hewlett-Packard Company
ProLiant BL20p G4
(1.86 GHz, Intel Xeon processor E5320)

| SPECint®2006 = 11.9 |
| SPECint_base2006 = 11.4 |

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

Test date: Feb-2007
Hardware Availability: Jan-2007
Software Availability: Nov-2006

| SPECint2006 = 11.9 |
| SPECint_base2006 = 11.4 |

### Hardware

- **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:** 4 cores, 1 chip, 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 chip, 4 MB shared / 2 cores
- **L3 Cache:** None
- **Other Cache:** None
- **Memory:** 16 GB (8x2 GB PC2-5300F CL5)
- **Disk Subsystem:** 2x72 GB 10k SAS
- **Other Hardware:** None

### Software

- **Operating System:** Windows Server 2003 Enterprise x64 Edition SP1
- **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
Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds Base</th>
<th>Ratio Base</th>
<th>Seconds</th>
<th>Ratio</th>
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</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
SPEC CINT2006 Result

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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

Continued on next page
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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.