Hewlett-Packard Company

ProLiant BL480c
(1.86 GHz, Intel Xeon processor E5320)

SPECint_rate2006 = 61.0
SPECint_rate_base2006 = 59.1

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

Hewlett-Packard Company

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

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: 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 I+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

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
SPEC CINT2006 Result

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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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</tbody>
</table>

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

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

-mlink /FORCE:MULTIPLE

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<table>
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<tr>
<th>Benchmark</th>
<th>Base Optimization Flags</th>
<th>Peak Compiler Invocation</th>
<th>Peak Portability Flags</th>
<th>Peak Optimization Flags</th>
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<td>C++ benchmarks:</td>
<td>-fast -Qcxx_features /F512000000 shlw32m.lib -link /FORCE:MULTIPLE</td>
<td>icl -Qvc7.1 -Qc99</td>
<td>403.gcc: -DSPEC_CPU_WIN32 464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32</td>
<td>400.perlbench: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000 shlw32m.lib -link /FORCE:MULTIPLE</td>
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<td>429.mcf: basepeak = yes</td>
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<td>445.gobmk: Same as 400.perlbench</td>
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<td>456.hmmer: Same as 400.perlbench</td>
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<td>458.sjeng: Same as 400.perlbench</td>
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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
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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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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Tested with SPEC CPU2006 v1.0.