



CINT2000 Result

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IBM Corporation

IBM System p5 550 (2100 Mhz, 4 CPU, SLES)

SPECint_rate2000 = 86.7

SPECint_rate_base2000 = 85.0

SPEC license #: 11 | Tested by: IBM Austin | Test date: Oct-2006 | Hardware Avail: Aug-2006 | Software Avail: Dec-2006

| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|-------------|-------------|--------------|------------|--------|---------|-------|
| 164.gzip | 8 | 211 | 61.7 | 8 | 211 | 61.7 |
| 175.vpr | 8 | 174 | 74.9 | 8 | 174 | 74.9 |
| 176.gcc | 8 | 106 | 96.3 | 8 | 106 | 96.3 |
| 181.mcf | 8 | 134 | 125 | 8 | 134 | 125 |
| 186.crafty | 8 | 138 | 67.1 | 8 | 113 | 81.8 |
| 197.parser | 8 | 242 | 69.1 | 8 | 225 | 74.2 |
| 252.eon | 8 | 131 | 92.0 | 8 | 138 | 87.5 |
| 253.perlbnk | 8 | 253 | 66.1 | 8 | 247 | 67.6 |
| 254.gap | 8 | 122 | 83.9 | 8 | 122 | 83.9 |
| 255.vortex | 8 | 130 | 136 | 8 | 130 | 136 |
| 256.bzip2 | 8 | 153 | 90.7 | 8 | 153 | 90.7 |
| 300.twolf | 8 | 317 | 87.9 | 8 | 317 | 87.9 |

Hardware

CPU: POWER5+
 CPU MHz: 2100
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip (SMT on)
 CPU(s) orderable: 2,4 core
 Parallel: No
 Primary Cache: 64 KB I + 32 KB D on chip per core
 Secondary Cache: 1920 KB I+D on chip per chip
 L3 Cache: 36 MB I+D off chip per chip
 Other Cache: None
 Memory: 32 GB (16x2GB)
 Disk Subsystem: 1x73GB SCSI, 15K RPM
 Other Hardware: None

Software

Operating System: SLES
 SUSE Linux Enterprise Server 10 (ppc) VERSION = 10
 w/2.6.16.21-0.8-ppc64 Linux kernel
 Compiler: IBM XL C/C++ Advanced Edition V8.0.1 for Linux
 File System: reiserfs
 System State: Multi-User

Notes/Tuning Information

+FDO

Feedback directed optimization enabled by: PASS1=-qpdf1 PASS2=-qpdf2

Integer suite

C: invoked as cc
 C++: invoked as xlc

Integer Portability Flags:

176.gcc: -DHOST_WORDS_BIG_ENDIAN
 186.crafty: -DLINUX_PPC32
 252.eon: -DHAS_ERRLIST
 253.perlbnk: -DSPEC_CPU2000_LINUX_PPC32 -DSPEC_CPU2000_NEED_BOOL
 254.gap: -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_CALLOC_PROTO
 300.twolf: -DHAVE_SIGNED_CHAR

Additional Peak Portability Flags:

252.eon: -DSPEC_CPU2000_LP64 (for 64-bit compilation)
 253.perlbnk: -DSPEC_CPU2000_LP64 (for 64-bit compilation)

Integer Base Optimization Flags:



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Notes/Tuning Information (Continued)

C: +FDO -O5
C++: +FDO -O5

Integer Peak Optimization Flags

164.gzip
basepeak=1
175.vpr
basepeak=1
176.gcc
basepeak=1
181.mcf
basepeak=1
186.crafty
+FDO -O4 -qarch=pwr4 -qtune=pwr4 -q64
197.parser
+FDO -O5 -qstaticlink
252.eon
+FDO -O5 -q64
253.perlbnk:
+FDO -O5 -q64
254.gap
basepeak=1
255.vortex
basepeak=1
256.bzip2
basepeak=1
300.twolf
basepeak=1

System Settings:

-- ulimit stack size set to unlimited

SMT: Acronym for 'Simultaneous Multi-Threading'. A processor technology that allows the simultaneous execution of multiple thread contexts within a single processor core. SMT is enabled by default.

Large pages reserved as follows by root user:

```
echo 240 > /proc/sys/vm/nr_hugepages
```

System configured with libhugetlbfs library for application access to large pages

Environment variables set as follows:

```
export HUGETLB_MORECORE=yes
```

```
export LD_PRELOAD=libhugetlbfs.so
```

(export LD_PRELOAD=libhugetlbfs.so not used for --action build.)

Each process was bound to a cpu using submit= with the taskset command

```
submit = taskset -p -c \${SPECUSERNUM} \${\} >/dev/null ; \${command}
```