



CINT2000 Result

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IBM Corporation
IBM System p5 510 (2100 Mhz, 2 CPU, SLES)

SPECint_rate2000 = 43.5
SPECint_rate_base2000 = 42.4

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	4	212	30.7	4	212	30.7
175.vpr	4	174	37.2	4	174	37.2
176.gcc	4	106	48.3	4	106	48.3
181.mcf	4	134	62.2	4	134	62.2
186.crafty	4	139	33.3	4	111	41.8
197.parser	4	244	34.2	4	228	36.7
252.eon	4	130	46.5	4	134	45.0
253.perlbnk	4	252	33.1	4	248	33.7
254.gap	4	121	42.1	4	121	42.1
255.vortex	4	130	67.9	4	130	67.9
256.bzip2	4	154	45.2	4	154	45.2
300.twolf	4	316	44.1	4	316	44.1

Hardware

CPU: POWER5+
 CPU MHz: 2100
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip (SMT on)
 CPU(s) orderable: 1,2 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: 16 GB (8x2GB)
 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 120 > /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
```

This result was measured on an IBM System p5 510. IBM System p5 505 and IBM System p5 510 (2-core version) are electronically equivalent.