



CINT2000 Result

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IBM Corporation
IBM System p5 575 (1900 Mhz, 16 CPU, SLES)

SPECint_rate2000 = 311
SPECint_rate_base2000 = 305

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.zip	32	236	220	32	236	220
175.vpr	32	193	269	32	193	269
176.gcc	32	119	344	32	119	344
181.mcf	32	149	449	32	149	449
186.crafty	32	155	239	32	125	297
197.parser	32	270	247	32	252	265
252.eon	32	147	327	32	151	319
253.perlbnk	32	282	237	32	289	231
254.gap	32	134	305	32	134	305
255.vortex	32	144	489	32	144	489
256.bzip2	32	171	325	32	171	325
300.twolf	32	354	314	32	354	314

Hardware

CPU: POWER5+
 CPU MHz: 1900
 FPU: Integrated
 CPU(s) enabled: 16 cores, 8 chips, 2 cores/chip (SMT on)
 CPU(s) orderable: 8,16 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 unified off chip per chip
 Other Cache: None
 Memory: 64 GB (32x2GB)
 Disk Subsystem: 1x73GB SCSI, 15K RPM
 Other Hardware:

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 960 > /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}
```