



CINT2000 Result

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IBM Corporation
IBM System p5 550Q (1650 Mhz, 1 CPU, SLES)

SPECint2000 = **1303**
SPECint_base2000 = **1256**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	179	782	179	782	
175.vpr	1400	119	1173	119	1173	
176.gcc	1100	78.6	1399	78.6	1399	
181.mcf	1800	61.5	2928	61.5	2928	
186.crafty	1000	98.6	1014	79.7	1255	
197.parser	1800	196	917	177	1016	
252.eon	1300	101	1285	100	1299	
253.perlbnk	1800	222	810	199	905	
254.gap	1100	97.2	1131	97.2	1131	
255.vortex	1900	88.8	2139	88.8	2139	
256.bzip2	1500	126	1194	126	1194	
300.twolf	3000	204	1471	204	1471	

Hardware

CPU: POWER5+
CPU MHz: 1650
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable: 4,8 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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SPECint2000 = 1303

SPECint_base2000 = 1256

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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.perlbmk:
  +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 30 > /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.)
```

Linux booted with the options:

```
maxcpus=1 smt-enabled=off
```

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

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