CINT2000 Result

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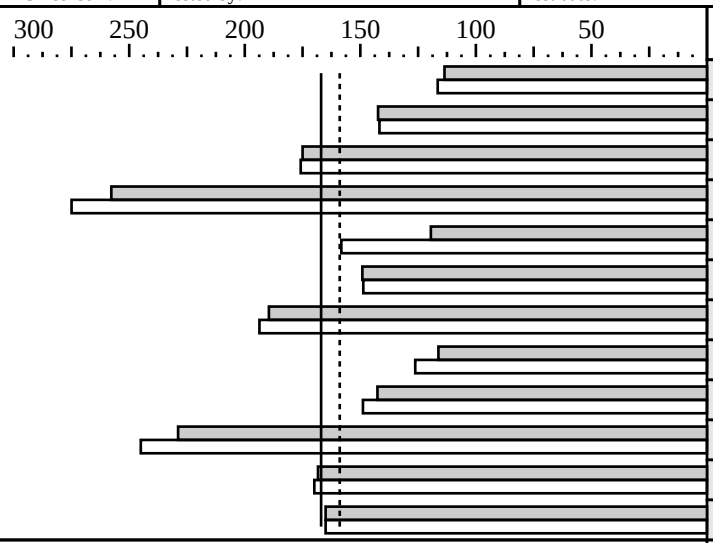
IBM Corporation
IBM eServer p5 575 (1900 MHz, 8 CPU)

SPECint_rate2000 = 167

SPECint_rate_base2000 = 159

SPEC license #: 11 | Tested by: IBM | Test date: Jan-2005 | Hardware Avail: Feb-2005 | Software Avail: Dec-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	229	114	16	223	117
175.vpr	16	183	142	16	183	142
176.gcc	16	117	175	16	116	176
181.mcf	16	130	258	16	122	275
186.crafty	16	155	119	16	117	158
197.parser	16	224	149	16	225	149
252.eon	16	127	190	16	125	194
253.perlbmk	16	287	116	16	265	126
254.gap	16	143	143	16	137	149
255.vortex	16	154	229	16	144	245
256.bzip2	16	165	168	16	164	170
300.twolf	16	337	165	16	337	165

Hardware

CPU:	POWER5
CPU MHz:	1900
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip (SMT on)
CPU(s) orderable:	8
Parallel:	no
Primary Cache:	64KBI+32KBD (on chip)
Secondary Cache:	1920KB unified (on chip)
L3 Cache:	36MB unified (off-chip)/DCM, 8 DCM/SUT
Other Cache:	None
Memory:	32 GB
Disk Subsystem:	2x36GB SCSI, 15K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 7.0 for AIX
File System:	AIX/JFS2
System State:	Multi-user

Notes/Tuning Information

```
Portability Flags:
  176.gcc:      -ma -DHOST_WORDS_BIG_ENDIAN
  186.crafty:   -DAIX
  252.eon:      srcalt=fmax_errno
                -I.
  253.perlbmk:  -DSPEC_CPU2000_AIX
  254.gap:      -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO
                -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
  300.twolf:    -DHAVE_SIGNED_CHAR

Base Optimization Flags:
  C:    -qpdf1/pdf2
        -O5 -blpdata -D_ILS_MACROS
  C++:  -qpdf1/pdf2
        -O5 -lhmu -qalign=natural

Peak Optimization Flags
  164.gzip:     -qpdf1/pdf2
                fdpr -q -O3
                -O5 -blpdata -qfdpr
```

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Notes/Tuning Information (Continued)

```
  175.vpr:      -qpdf1/pdf2
                -O5 -blpdata -qalign=natural -D_ILS_MACROS
  176.gcc:      -qpdf1/pdf2
                -O5 -blpdata -D_ILS_MACROS
  181.mcf:      fdpr -q -O3
                -O5 -blpdata -qfdpr
  186.crafty:   -qpdf1/pdf2
                fdpr -q -O3
                -O4 -q64 -qfdpr -qarch=pwr3 -qtune=pwr3
  197.parser:   -qpdf1/pdf2
                -O5 -blpdata -qalign=natural -D_ILS_MACROS
  252.eon:      -qpdf1/pdf2
                -O4 -qarch=auto -qtune=auto -qalign=natural -D_ILS_MACROS
  253.perlbmk:  -qpdf1/pdf2
                -O5 -lhmu -qalign=natural -blpdata -D_ILS_MACROS
  254.gap:      -qpdf1/pdf2
                 -O5 -blpdata -qalign=natural -D_ILS_MACROS
  255.vortex:   -qpdf1/pdf2
                -O5 -lhmu -qalign=natural -blpdata
  256.bzip2:    fdpr -q -O3
                -O5 -blpdata -qfdpr -D_ILS_MACROS
  300.twolf:    basepeak=1

Approved alternate-source file 252.eon.fmax_errno.src.alt.tar.gz
was used with 252.eon for POSIX-compatibility.

APAR IY62267 was applied to AIX 5L V5.3 to achieve Mantainence Level 1.

SMT:  Acronym for "Simultaneous Multi-Threading". A processor technology that allows
      the simultaneous execution of multiple thread contexts within a single processor
      core. (Enabled by default)
DCM:  Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)
      For the 575, only one core is active per chip.
SUT:  Acronym for "System Under Test"

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:
    vmo -r -o lgpg_regions=1664 -o lgpg_size=16777216 -o memory_affinity=1
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    reboot -q
    export MEMORY_AFFINITY=MCM

The following config-file entry was used to assign each benchmark process to a core:
    submit = let "MYCPU=2*$SPECUSERNUM"; if (("$MYCPU > 15")) then let "MYCPU-=15"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.
```