CINT2000 Result

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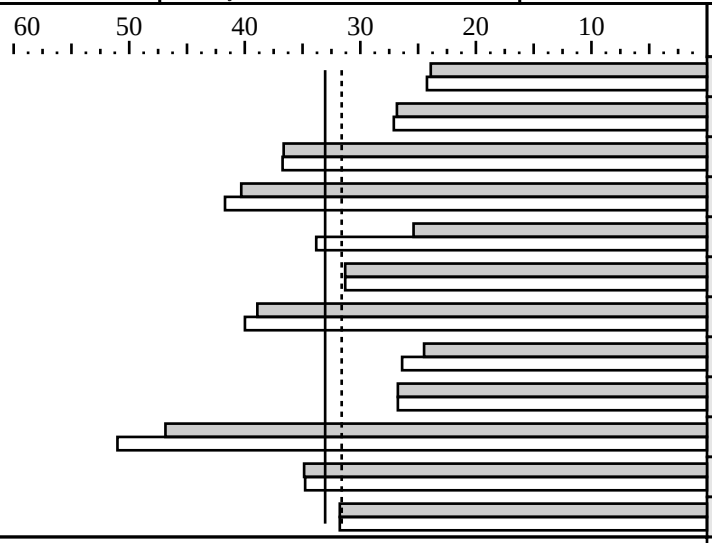
IBM Corporation
IBM eServer p5 510 (1650 MHz, 2 CPU)

SPECint_rate2000 = 33.0

SPECint_rate_base2000 = 31.6

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	4	272	23.9	4	268	24.2
175.vpr	4	242	26.8	4	240	27.1
176.gcc	4	139	36.6	4	139	36.7
181.mcf	4	207	40.3	4	200	41.7
186.crafty	4	183	25.4	4	137	33.8
197.parser	4	267	31.3	4	267	31.3
252.eon	4	155	38.9	4	151	40.0
253.perlbmk	4	341	24.5	4	317	26.4
254.gap	4	191	26.8	4	191	26.8
255.vortex	4	188	46.9	4	173	51.0
256.bzip2	4	200	34.9	4	200	34.8
300.twolf	4	438	31.8	4	438	31.8

Hardware

CPU:	POWER5
CPU MHz:	1650
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip (SMT on)
CPU(s) orderable:	1,2
Parallel:	no
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off-chip)/DCM, 1 DCM/SUT
Other Cache:	None
Memory:	8x4GB
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:      basepeak=1
  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)
SUT:  Acronym for "System Under Test"

ulimits set to unlimited.
Large page mode, memory affinity, and shared-memory pinning were set as follows:
    vmo -r -o lgpg_regions=200 -o lgpg_size=16777216 -o memory_affinity=1 -o v_pinshm=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.
```