CINT2000 Result

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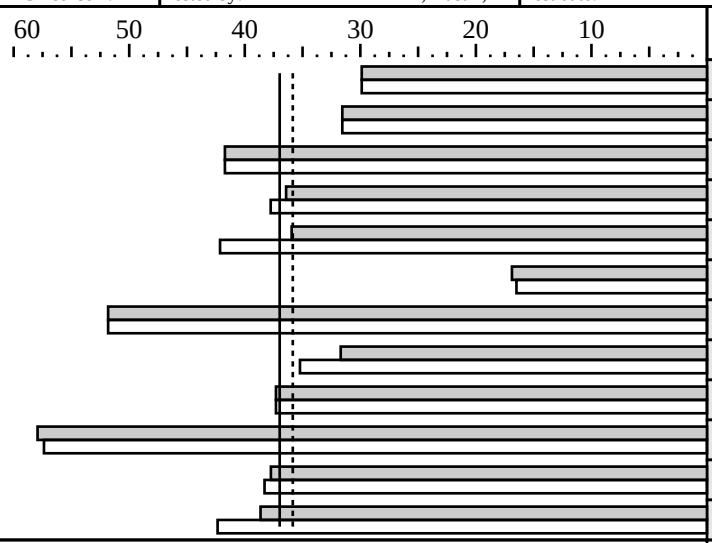
IBM Corporation

IBM eServer pSeries 630 Model 6E4 (1450 MHz, 4 CPU)

SPECint_rate2000 = 37.0

SPECint_rate_base2000 = 35.8

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Jan-2003 | Hardware Avail: Feb-2003 | Software Avail: Dec-2002



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	217	29.9	4	217	29.9
175.vpr	4	206	31.6	4	206	31.6
176.gcc	4	122	41.7	4	122	41.7
181.mcf	4	229	36.4	4	221	37.8
186.crafty	4	129	35.9	4	110	42.1
197.parser	4	495	16.9	4	507	16.5
252.eon	4	116	51.8	4	116	51.8
253.perlbmk	4	263	31.7	4	237	35.2
254.gap	4	137	37.3	4	137	37.3
255.vortex	4	152	57.9	4	154	57.4
256.bzip2	4	184	37.7	4	182	38.3
300.twolf	4	360	38.6	4	329	42.4

Hardware

CPU:	POWER4+
CPU MHz:	1450
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip, 1 chip/SCM
CPU(s) orderable:	1,2,4 (order by # cores)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1536KB unified (on chip) per chip
L3 Cache:	8MB unified (off-chip) per SCM, 2 SCMs in SUT
Other Cache:	None
Memory:	16 GB
Disk Subsystem:	1x36GB SCSI
Other Hardware:	None

Software

Operating System:	AIX 5L V5.2
Compiler:	IBM C for AIX, Version 6.0 IBM VisualAge C++ Professional for AIX, Version 6.0
File System:	AIX/JFS
System State:	Multi-User

Notes/Tuning Information

```
Integer Portability Flags:
  gcc:     -ma -DHOST_WORDS_BIG_ENDIAN
  crafty:  -DAIX
  eon:     -DNEED_EXPLICIT_SPECIALIZATION
            -I. -DNDEBUG
  perlbmk: -DSPEC_CPU2000_AIX
  gap:     -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO
           -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
  twolf:   -DHAVE_SIGNED_CHAR

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

Integer Peak Optimization Flags
164.gzip
```

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Notes/Tuning Information (Continued)

```
    BASEPEAK = 1
    "CC      = /usr/vac/bin/xlc"
  175.vpr
    BASEPEAK = 1
  176.gcc
    BASEPEAK = 1
  181.mcf
    fdpr -v -R3
    -O5 -blpdata
  186.crafty
    -qpdf1/pdf2
    fdpr -v -R3
    -O3 -q64
  197.parser
    -O5 -blpdata
  252.eon
    BASEPEAK = 1
  253.perlbmk
    -qpdf1/pdf2
    -O5 -lhmu -qalign=natural
  254.gap
    BASEPEAK = 1
  255.vortex
    -qpdf1/pdf2
    -O5 -lhmu -qalign=natural
  256.bzip2
    -qpdf1/pdf2
    -O5 -blpdata -qarch=pwr3 -qtune=pwr3
  300.twolf
    -qpdf1/pdf2
    -O5 -lhmu -qalign=natural -blpdata
    "CC      = /usr/vac/bin/xlc"

    SCM: Acronym for "Single-Chip Module"
    SUT: Acronym for "System Under Test"

    fpdr: Feedback directed program restructuring tool
    /usr/spec2000 filesystem mounted with no JFS log file I/O.
    APAR IY 38292 was applied to AIX to enable new hardware support.
    ulimits set to unlimited.
    C: IBM VAC++ invoked as cc except where noted as xlc
    C++: IBM VAC++ invoked as xlC
    Large page mode and memory affinity were set as follows:
      vmo -r -o lgpg_regions=128 -o lgpg_size=16777216 -o memory_affinity=1
      chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
      shutdown -r
      export MEMORY_AFFINITY=MCM
```