



CINT2000 Result

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IBM Corporation

IBM eServer pSeries 630 Model 6C4 (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.perlbnk	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
perlbnk: -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 -lhm -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.perlbnk
-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 lpgg_regions=128 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM

```