



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

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.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 -lhu -qalign=natural
```

Integer Peak Optimization Flags

164.gzip



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

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

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
```