CINT2000 Result

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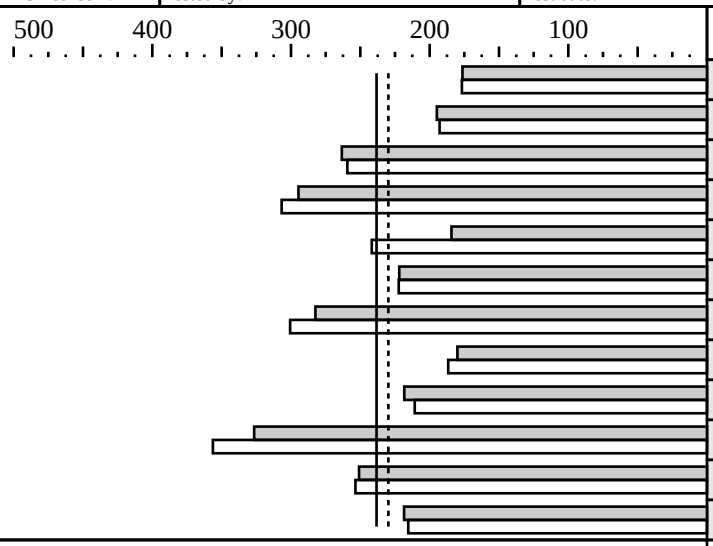
IBM Corporation

IBM eServer p5 575 (1500 MHz, 16 CPU)

SPECint_rate2000 = 238

SPECint_rate_base2000 = 230

SPEC license #: 11 | Tested by: IBM | Test date: Jul-2005 | Hardware Avail: Oct-2005 | Software Avail: Oct-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	32	295	176	32	294	177
175.vpr	32	267	195	32	269	193
176.gcc	32	155	263	32	157	259
181.mcf	32	227	295	32	218	307
186.crafty	32	201	184	32	154	242
197.parser	32	301	222	32	301	222
252.eon	32	171	282	32	161	301
253.perlbmk	32	371	180	32	358	187
254.gap	32	187	218	32	194	211
255.vortex	32	216	327	32	198	356
256.bzip2	32	222	251	32	220	254
300.twolf	32	510	218	32	517	215

Hardware

CPU:	POWER5
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip (SMT on)
CPU(s) orderable:	16
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off-chip)/DCM, 8 DCM/SUT
Other Cache:	None
Memory:	64x2GB
Disk Subsystem:	1x73GB 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
  253.perlbmk:  -DSPEC_CPU2000_AIX
  254.gap:      -DSYS_IS_BSD -DSYS_STRING_H -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 -qalign=natural -D_ILS_MACROS

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

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Notes/Tuning Information (Continued)

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

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-03 Recommended Maintenance package.

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

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"

C: IBM XL C for AIX invoked as cc
C++: IBM XL C for AIX invoked as xlC

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:

```
    vmo -r -o lgpg_regions=4096 -o lgpg_size=16777216
    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 > 31")) then let "MYCPU-=31"; fi; bindprocessor $$ $MYCPU; $command
```

The "bindprocessor" AIX command binds a process to a CPU core.

Use flags-description file IBM-20050822-AIX.txt.