CINT2000 Result

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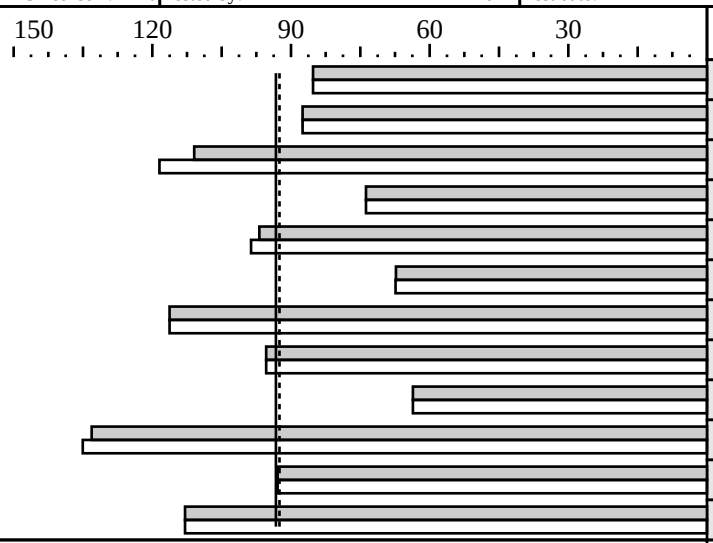
Bull
NovaScale 5160 HPC 8 way (1500MHz)

SPECint_rate2000 = 93.3

SPECint_rate_base2000 = 92.5

SPEC license #: 20 | Tested by: JFL | Test date: Jul-2003 | Hardware Avail: Sep-2003 | Software Avail: Sep-2003



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	152	85.2	8	152	85.2
175.vpr	8	148	87.5	8	148	87.5
176.gcc	8	92.0	111	8	86.2	118
181.mcf	8	226	73.8	8	226	73.8
186.crafty	8	95.8	96.8	8	94.1	98.6
197.parser	8	248	67.3	8	248	67.4
252.eon	8	104	116	8	104	116
253.perlbmk	8	175	95.4	8	175	95.4
254.gap	8	160	63.6	8	160	63.6
255.vortex	8	132	133	8	131	135
256.bzip2	8	150	92.9	8	150	92.9
300.twolf	8	247	113	8	247	113

Hardware

CPU:	Itanium 2 processor 1500 MHz
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	4 to 16
Parallel:	No
Primary Cache:	16KBI + 16KBD on chip
Secondary Cache:	256KB(I+D) on chip
L3 Cache:	6MB (I+D) off chip
Other Cache:	N/A
Memory:	64 GB (4 * 16 * 1GB DIMMs)
Disk Subsystem:	1 SJ0812 Disk drawer with 2 15krpm 36GB SCSI disks
Other Hardware:	Hardware configuration: 4 modules of 2 CPUs

Software

Operating System:	Linux 64 bit : Red Hat Advanced Server 2.1 + Bull expansion Pack
Compiler:	Intel(R) C++ Compiler for Linux 7.1 (Build 20030605)
File System:	ext2
System State:	multi User

Notes/Tuning Information

```
+FDO: PASS1=-prof_gen  PASS2=-prof_use

Baseline optimization flags:
  C programs:       -ipo -O3 +FDO
  C++ programs:     -ipo -O2 +FDO -ansi_alias

Portability Flags:
  176.gcc: -DSPEC_CPU2000_LP64 -Dalloca=_builtin_alloca -D_LIBC
  186.crafty: -DLINUX_i386
  252.eon: -DSPEC_CPU2000_LP64 -DHAS_ERRLIST
  253.perlbmk: -DSPEC_CPU2000_LP64 -DSPEC_CPU2000_NEED_BOOL
               -DSPEC_CPU2000_LINUX_IA64 -DSPEC_CPU2000_GLIBC22
  254.gap: -DSPEC_CPU2000_LP64 -DSYS_HAS_CALLOC_PROTO -DSYS_IS_USG
           -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
  255.vortex: -DSPEC_CPU2000_LP64

Peak optimization flags:
164.gzip: basepeak=yes
175.vpr: basepeak=yes
```

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Notes/Tuning Information (Continued)

```
176.gcc: +FDO -ipo -O2
164.gzip: basepeak=yes
186.crafty: +FDO -ipo -O2
197.parser: +FDO -ipo -O2
252.eon: basepeak=yes
253.perlbmk: basepeak=yes
254.gap: basepeak=yes
255.vortex: +FDO -ipo -O2
256.bzip2: basepeak=yes
300.twolf: basepeak=yes

 16 CPU machine with only 8 CPU enabled
 8 CPU disabled by the service processor before booting
```