



# 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.perlbnk	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.perlbnk: -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.perlbnk: 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
```