



# CINT2000 Result

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**Bull**  
**NovaScale 6160 (1600MHz)**

SPECint\_rate2000 = 222

SPECint\_rate\_base2000 = 218

SPEC license #: 20 | Tested by: Allaoua Ait Eldjoudi | Test date: Nov-2004 | Hardware Avail: Nov-2004 | Software Avail: Nov-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	136	191	16	135	192
175.vpr	16	184	141	16	167	156
176.gcc	16	78.7	260	16	78.4	260
181.mcf	16	188	178	16	187	179
186.crafty	16	78.9	235	16	78.5	237
197.parser	16	192	174	16	192	174
252.eon	16	65.9	366	16	66.3	364
253.perlbnk	16	141	237	16	141	237
254.gap	16	141	145	16	140	146
255.vortex	16	109	324	16	109	323
256.bzip2	16	129	215	16	129	215
300.twolf	16	213	262	16	198	281

### Hardware

CPU: Itanium 2 processor 1600 MHz  
 CPU MHz: 1600  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 16 chips, 1 core/chip  
 CPU(s) orderable: 4 to 16  
 Parallel: No  
 Primary Cache: 16KBI + 16KBD on chip, per core  
 Secondary Cache: 256KB(I+D) on chip, per core  
 L3 Cache: 9.0MB (I+D) on chip, per core  
 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:

### Software

Operating System: Bull Advanced Server 2 V3 (linux kernel 2.6.4, glibc 2.2.4)  
 Compiler: Intel(R) C++ Compiler for Linux 8.1 (Build 20041021)  
 MicroQuill SmartHeap Library 7.01 (www.microquill.com)  
 File System: ext3  
 System State: Multi User

## Notes/Tuning Information

+FDO: PASS1=-prof\_gen PASS2=-prof\_use

### Baseline optimization flags:

C programs: -fast -auto\_ilp32 +FDO  
 C++ programs: -fast -ansi\_alias +FDO  
 Extra Library: libsmartheap64.a (smh)

### Portability Flags:

176.gcc: -DSPEC\_CPU2000\_LP64 -Dalloca=\_alloca -D\_LIBC  
 186.crafty: -DLINUX\_i386  
 252.eon: -DSPEC\_CPU2000\_LP64 -DHAS\_ERRLIST -DFMAX\_IS\_DOUBLE  
 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:

C programs: -fast -auto\_ilp32 +FDO



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## Notes/Tuning Information (Continued)

C++ programs: -fast -ansi\_alias +FDO

164.gzip: -fast -auto\_ilp32 + FDO + smh  
186.crafty: -O2 -ipo -auto\_ilp32 + FDO + smh  
197.parser: -fast -auto\_ilp32 + FDO + smh  
253.perlbmk: -fast -auto\_ilp32 + FDO + smh  
250.vortex: -fast -auto\_ilp32 + FDO + smh  
256.bzip2: -fast -auto\_ilp32 + FDO + smh  
300.twolf: -fast -auto\_ilp32 + FDO + smh

Processes were bound to CPUs using pexec