



CINT2000 Result

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Bull
NovaScale 6320 HPC 16way (1600MHz)

SPECint_rate2000 = 249
SPECint_rate_base2000 = 247

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.zip	16	134	194	16	134	194
175.vpr	16	140	185	16	131	198
176.gcc	16	73.2	279	16	73.1	279
181.mcf	16	103	323	16	101	331
186.crafty	16	78.7	236	16	77.9	238
197.parser	16	173	194	16	173	193
252.eon	16	66.1	365	16	66.4	363
253.perlbnk	16	137	244	16	137	244
254.gap	16	126	162	16	126	162
255.vortex	16	95.0	371	16	94.8	372
256.bzip2	16	120	231	16	120	232
300.twolf	16	199	280	16	199	280

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: 128 GB (8 * 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 default: -fast -auto_ilp32 +FDO



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Notes/Tuning Information (Continued)

C++ programs default: -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.perlbnk: -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
```

32 CPU machine with only 16 CPU enabled
16 CPU disabled by service processor before booting
Processes were bound to CPUs using pexec