



# CINT2000 Result

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**ION**  
**I2X2 (1.6GHz Itanium 2 processor)**

SPECint\_rate2000 = 28.4

SPECint\_rate\_base2000 = 28.2

SPEC license #: 2697 | Tested by: ION | Test date: Jan-2005 | Hardware Avail: May-2004 | Software Avail: Dec-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	137	23.7	2	137	23.7
175.vpr	2	145	22.4	2	145	22.4
176.gcc	2	80.1	31.9	2	80.1	31.9
181.mcf	2	166	25.2	2	166	25.2
186.crafty	2	77.1	30.1	2	77.7	29.9
197.parser	2	195	21.5	2	195	21.5
252.eon	2	66.5	45.3	2	66.5	45.3
253.perlbnk	2	141	29.5	2	139	30.1
254.gap	2	129	19.7	2	129	19.7
255.vortex	2	107	41.3	2	101	43.4
256.bzip2	2	139	25.1	2	139	25.1
300.twolf	2	210	33.2	2	200	34.7

### Hardware

CPU: Intel Itanium 2 processor  
 CPU MHz: 1596  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
 CPU(s) orderable: 1-2  
 Parallel: No  
 Primary Cache: 16KBI + 16KBD (on chip) per CPU  
 Secondary Cache: 256KB (I+D) (on chip) per CPU  
 L3 Cache: 3072KB (I+D) (on chip) per CPU  
 Other Cache: N/A  
 Memory: 8 GB (8x1GB DDR266, 2.5-3-3 DIMMS)  
 Disk Subsystem: 1x36GB SCSI (Seagate Cheetah 15k rpm)  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux AS 3 Update 4, 2.4.21-27.EL, IPF  
 Compiler: Intel(R) C Compiler for Linux 8.1, IPF (Build 20041123)  
 Intel(R) C++ Compiler for Linux 8.1, IPF (Build 20041123)  
 MicroQuill SmartHeap library 7.01, IPF  
 File System: ext3  
 System State: Multi-user, run level 3

## Notes/Tuning Information

Tested by ION Computer Systems

INT Baseline optimization flags:  
 C Programs: -fast -auto\_ilp32 +FDO  
 C++ programs: -fast +FDO  
 INT Peak optimization flags:  
 164.gzip: basepeak=yes  
 175.vpr: basepeak=yes  
 176.gcc: basepeak=yes  
 181.mcf: basepeak=yes  
 186.crafty: -fast -auto\_ilp32 -ansi\_alias /opt/SmartHeap\_7.01/lib/libsmartheap64.a +FDO  
 197.parser: basepeak=yes  
 252.eon: basepeak=yes  
 253.perlbnk: -fast -auto\_ilp32 -ansi\_alias /opt/SmartHeap\_7.01/lib/libsmartheap64.a +FDO  
 254.gap: basepeak=yes



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## Notes/Tuning Information (Continued)

```
255.vortex: -fast -auto_ilp32 /opt/SmartHeap_7.01/lib/libsmartheap64.a +FDO
256.bzip2: basepeak=yes
300.twolf: -fast -auto_ilp32 -ansi_alias /opt/SmartHeap_7.01/lib/libsmartheap64.a +FDO
```

### Portability Flags:

```
176.gcc: -DSPEC_CPU2000_LP64 -Dalloca=_builtin_alloca
176.gcc: srcalt=64bitgcc35
186.crafty: -DLINUX_i386
252.eon: -DSPEC_CPU2000_LP64 -DHAS_ERRLIST
252.eon: srcalt=stdcpp
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
255.vortex: srcalt=closed_files
```