



CINT2000 Result

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ION I2X4 (1.6GHz Itanium 2 processor)

SPECint2000 = 1419
SPECint_base2000 = 1410

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	136	1030	136	1030	
175.vpr	1400	119	1180	119	1180	
176.gcc	1100	68.8	1598	68.8	1598	
181.mcf	1800	68.7	2620	68.7	2620	
186.crafty	1000	76.8	1301	76.8	1301	
197.parser	1800	173	1040	173	1040	
252.eon	1300	66.4	1957	66.4	1957	
253.perlbnk	1800	132	1367	132	1367	
254.gap	1100	122	905	122	905	
255.vortex	1900	91.1	2085	88.0	2159	
256.bzip2	1500	121	1238	121	1238	
300.twolf	3000	208	1439	200	1497	

Hardware

CPU: Intel Itanium 2 processor
 CPU MHz: 1596
 FPU: Integrated
 CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
 CPU(s) orderable: 1-4
 Parallel: No
 Primary Cache: 16KBI + 16KBD (on chip) per CPU
 Secondary Cache: 256KB (I+D) (on chip) per CPU
 L3 Cache: 9MB (I+D) (on chip) per CPU
 Other Cache: N/A
 Memory: 32 GB (16x2048MB DDR266 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 -cxxlib-icc
 +FDO: PASS1=-prof_gen PASS2=-prof_use

INT Peak optimization flags:
 164.gzip: basepeak=yes
 175.vpr: basepeak=yes
 176.gcc: basepeak=yes
 181.mcf: basepeak=yes
 186.crafty: basepeak=yes
 197.parser: basepeak=yes
 252.eon: basepeak=yes
 253.perlbnk: basepeak=yes



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Notes/Tuning Information (Continued)

```
254.gap: basepeak=yes
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.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
255.vortex: srcalt=closed_files
```