



CINT2000 Result

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Hewlett-Packard Company
HP Integrity rx7620 (1300 MHz Itanium 2)

SPECint_rate2000 = 91.9
SPECint_rate_base2000 = 90.6

SPEC license #: 3 Tested by: HP Richardson Test date: Oct-2003 Hardware Avail: Nov-2003 Software Avail: Oct-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	170	76.6	8	170	76.6
175.vpr	8	169	76.9	8	164	79.1
176.gcc	8	92.8	110	8	92.8	110
181.mcf	8	256	65.2	8	256	65.2
186.crafty	8	95.3	97.4	8	93.6	99.1
197.parser	8	233	71.7	8	233	71.7
252.eon	8	97.3	124	8	94.0	128
253.perlbnk	8	179	93.3	8	172	97.3
254.gap	8	142	72.1	8	142	72.1
255.vortex	8	127	139	8	124	142
256.bzip2	8	160	87.0	8	160	87.0
300.twolf	8	270	103	8	263	106

Hardware

CPU: Intel Itanium 2
CPU MHz: 1300
FPU: Integrated
CPU(s) enabled: 8 cores, 8 chips, 1 core/chip
CPU(s) orderable: 2,4,6,8
Parallel: no
Primary Cache: 16KBI + 16KBD (on chip) per CPU
Secondary Cache: 256KB (on chip) per CPU
L3 Cache: 3.0MB (on chip) per CPU
Other Cache: N/A
Memory: 16GB (32 * 512MB DIMMs)
Disk Subsystem: 2x18GB 10K rpm SCSI (striped)
Other Hardware: N/A

Software

Operating System: HPUX11i-TCOE B.11.23
Compiler: HP C/ANSI C Compiler A.05.52
HP aC++ Compiler A.05.52
File System: vxfs
System State: Multi-user

Notes/Tuning Information

Portability Flags

176.gcc : -DHOST_WORDS_BIG_ENDIAN
186.crafty : -DHP
252.eon : -DFMAX_IS_DOUBLE
253.perlbnk : -DSPEC_CPU2000_HP
254.gap : -DSPEC_CPU2000_HP -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO
-DSYS_HAS_TIME_PROTO -DSYS_HAS_CALLOC_PROTO

Base Flags

all : +Oprofile=collect:all/+Oprofile=use
C : +Ofaster -exec +Odatalayout
C++ : +Ofaster +inline_level 2 -minshared

Peak Flags

164.gzip : basepeak=true
175.vpr : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
+Onoptrs_to_globals +Onorecovery
176.gcc : basepeak=true
181.mcf : basepeak=true
186.crafty : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout



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Notes/Tuning Information (Continued)

```
+Otype_safety=ansi
197.parser : basepeak=true
252.eon : +Oprofile=collect:all/+Oprofile=use +Ofaster +inline_level 2
        -minshared +Otype_safety=ansi
253.perlbnk : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
        +Onoptrs_to_globals
        LIBS = /opt/langtools/lib/hpux32/fastmem.o
254.gap : basepeak=true
255.vortex : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
        +Onoptrs_to_globals +Onorecovery
256.bzip2 : basepeak=true
300.twolf : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
        +Onoptrs_to_globals
        LIBS = /opt/langtools/lib/hpux32/effmem.o
```

Kernel Tunables:

```
dbc_max_pct=20
dbc_min_pct=20
maxdsiz=3221225472
maxssiz=401604608
maxdsiz_64bit=4396972761584
maxssiz_64bit=1073741824
vps_pagesize=4096
vps_ceiling=16384
```

The system under test had the HP-UX 11i v2 (version 11.23) Technical Computing Operating Environment and compilers installed, with the following patches applied:

```
PHSS_29655 aC++ compiler (A.05.52)
PHSS_29656 HP C Compiler (A.05.52)
PHSS_29657 u2comp/be/plugin library Patch
PHSS_29663 Fortran Product Patch, v2.7 to v2.7.2
```

Notes:

System was configured with 1/2 of memory interleaved and 1/2 of memory local to each cell

System configured as a single partition with 2 cells and 4 processors per cell

Processes were assigned to localities using the HP-UX mpsched utility

Filesystem used for spec runs mounted "tmplog"