



CINT2000 Result

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

SPECint_rate2000 = 46.4
SPECint_rate_base2000 = 45.7

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	170	38.3	4	170	38.3
175.vpr	4	167	38.9	4	163	40.0
176.gcc	4	92.1	55.4	4	92.1	55.4
181.mcf	4	239	34.9	4	239	34.9
186.crafty	4	96.1	48.3	4	93.3	49.7
197.parser	4	235	35.6	4	235	35.6
252.eon	4	97.7	61.8	4	93.9	64.3
253.perlbnk	4	179	46.7	4	171	48.7
254.gap	4	137	37.2	4	137	37.2
255.vortex	4	127	69.5	4	124	71.3
256.bzip2	4	160	43.5	4	160	43.5
300.twolf	4	272	51.2	4	263	52.9

Hardware

CPU: Intel Itanium 2
CPU MHz: 1300
FPU: Integrated
CPU(s) enabled: 4 cores, 4 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 2 processors per cell (unused processors disabled prior to booting with firmware command "cpuconfig")

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

Filesystem used for spec runs mounted "tmplog"