CINT2000 Result

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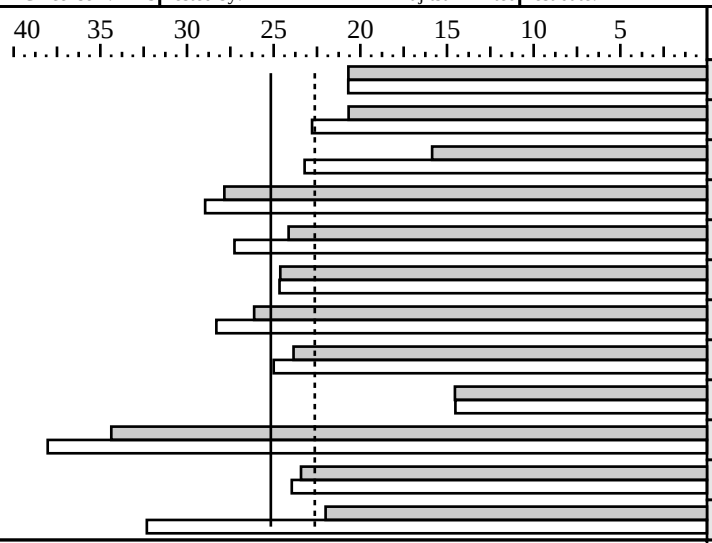
Fujitsu Limited
PRIMEPOWER600 (400MHz)

SPECint_rate2000 = 25.2

SPECint_rate_base2000 = 22.6

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Feb-2001 | Hardware Avail: Feb-2001 | Software Avail: Apr-2001



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	628	20.7	8	628	20.7
175.vpr	8	628	20.7	8	570	22.8
176.gcc	8	644	15.9	8	440	23.2
181.mcf	8	600	27.8	8	577	29.0
186.crafty	8	384	24.1	8	340	27.3
197.parser	8	679	24.6	8	677	24.7
252.eon	8	462	26.1	8	426	28.3
253.perlbmk	8	700	23.9	8	668	25.0
254.gap	8	702	14.5	8	703	14.5
255.vortex	8	513	34.4	8	464	38.0
256.bzip2	8	594	23.4	8	581	24.0
300.twolf	8	1265	22.0	8	861	32.3

Hardware

CPU:	SPARC64 GP
CPU MHz:	400
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	2 to 8
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	8MB(I+D) off chip, per CPU
L3 Cache:	None
Other Cache:	None
Memory:	8192MB
Disk Subsystem:	1 x 36.4GB SCSI (10025rpm)
Other Hardware:	Ethernet

Software

Operating System:	Solaris 8
Compiler:	Fujitsu Parallelnavi 1.0.1 Sun Forte Developer 6 update 1
File System:	ufs
System State:	single user

Notes/Tuning Information

```
Baseline (except 252.eon, for Parallelnavi 1.0.1): -Kfast_GP=3,largepage
 fdo_pre0=rm -rf ‘pwd‘/*.fbk
 PASS1=-Kpg
 PASS2=-Kpu=$(EXEBASE).fbk
(252.eon, for Forte Developer 6 update 1): -fast -xcrossfile -xarch=v8plus
 fdo_pre0=rm -rf ‘pwd‘/../feedback.profile ‘pwd‘/SunWS_cache
 PASS1=-xprofile=collect:‘pwd‘/../feedback
 PASS2=-xprofile=use:‘pwd‘/../feedback

Peak (for Parallelnavi 1.0.1):
 fdo_pre0=rm -rf ‘pwd‘/*.fbk
 PASS1=-Kpg
 PASS2=-Kpu=$(EXEBASE).fbk
 164.gzip: -Kfast_GP=3,largepage
 175.vpr: -Kfast_GP=4,staticclump,memalias,switchopt,cond,GREG,nounroll,largepage,onefile,NOFLTLD=3,xi=30
 181.mcf: -Kfast_GP=2,nounroll,memalias,restp,prefetch=4,largepage -x-
 186.crafty: -Kfast_GP=3,switchopt,cond,noiopt,staticclump,xi=6,memalias,largepage
 197.parser: -Kfast_GP=3,switchopt,cond,staticclump,use_rodata,largepage,funcalign=128
 253.perlbmk: -Kfast_GP=3,memalias,switchopt,largepage,bcopy
 254.gap: -Kfast_GP=3,largepage
```

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Notes/Tuning Information (Continued)

256.bzip2: Kfast_GP=3,NOFLTLD=1,use_rodata,staticclump,xi=8,cfunc,memalias,restp,largepage,funcalign=128
300.twolf: -Kfast_GP=5,GREG,popt,cfunc,staticclump,use_rodata,xi=10,nounroll,largepage,bcopy
(for Forte Developer 6 update 1)
fdo_pre0=rm -rf 'pwd'/../feedback.profile 'pwd'/SunWS_cache
PASS1=-xprofile=collect:'pwd'/../feedback
PASS2=-xprofile=use:'pwd'/../feedback
176.gcc: -fast -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qiselect-funcalign=64
-xarch=v8plus -xprefetch
252.eon: -fast -xcrossfile -xregs=syst -xsafe=mem -Qoption iropt -Mt500,-restrict_g,-restrict
-Qoption cg -Qgsched-trace_late=1,-Qgsched-trace_spec_load=1,-Qgsched-T4 -xarch=v8plus
-lmopt
255.vortex: -fast -xsafe=mem -xcrossfile -W2,-Aheap,-reroll=1,-Aunroll,-Ms1,-Mt500,-Mr6000,-crit
-Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32 -Wc,-Qpeep-Sh0
-xrestrict -xdepend -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xarch=v8plus

Portability:
176.gcc: -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon: -library=iostream,no%Cstd
253.perlbmk: -DSPEC_CPU2000_SOLARIS -lnsl -lsocket
254.gap: -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
-DSYS_HAS_CALLOC_PROTO -DSYS_HAS_IOCTL_PROTO

Note:
System Tunables: (for /etc/system)
consistent_coloring=1, tune_t_fsflushr=86400, autoup=86400,
shmsys:shminfo_shmmax=268435456, shmsys:shminfo_shmmni=1024, shmsys:shminfo_shmseg=1024
(for /etc/opt/FJSVpnrm/lpg.conf)
TSS=512M, SHMSEGSIZE=256M
ONESTEP=yes was set for all baseline and peak benchmarks.
Feedback directed optimization was used for all baseline and peak benchmarks.

Also used:
-Xa (base and peak, except where noted) for 176.gcc (base only), 181.mcf, 186.crafty, 197.parser (peak only), 254.gap
-dy (base) for all benchmarks except 252.eon, -dy (peak) for all except 176.gcc, 252.eon, 255. vortex
-DWANT_STD_PROTO for 181.mcf (base and peak), -DCPU2000 for 186.crafty (base and peak),
-DSUN -DCPU2000 for 197.parser (peak)
The flags listed above as "also used" were used for the actual compilation,
but they had no effect (-D flags), were the compiler's default (-Xa), or the compiler's
default when -Klargepage is used (-dy).
They are not necessary for result reproduction and can be omitted.