

Interval Numbers for SPEC CPU 2000 and 2006 on x86

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machine	processor	memory	L1 I/D	L2/L3 Cache	performance counters used
ancient	200MHz Pentium Pro	128MB	8KB/8KB	512KB	inst_retired
nestle	400MHz Pentium II	256MB	16KB/16KB	512KB	inst_retired
spruengli	550MHz Pentium III	512MB	16KB/16KB	512KB	inst_retired
itanium	800MHz Itanium	1GB	16KB/16KB	96KB/3MB	ia32_inst_retired
chocovic	1.66GHz Core Duo	1GB	32KB/32KB	1MB	instructions_retired
milka	1.733MHz Athlon MP	512MB	64KB/64KB	256KB	retired_instructions
gallais	1.8GHz Pentium 4	256MB	12K μ /16KB	256KB	instr_retired:nbogusntag
jennifer	2GHz Athlon64 X2	1GB	64KB/64KB	512KB	retired_instructions
sampaka12	2.8GHz Pentium 4	2GB	12K μ /16KB	512KB	instr_retired:nbogusntag
domori25	3.46GHz Pentium D	4GB	12K μ /16KB	2MB	instr_retired:nbogusntag

Table 1: Machines used

Benchmark	nestle Pentium II	ancient Pentium Pro	spruengli Pentium III	itanium Itanium (compat)	chocovic Core Duo	milka Athlon MP	gallais Pentium 4	jennifer Athlon64 X2	sampaka12 Pentium 4	donori25 Pentium D	Pin	Qemu	Valgrind
188.ammpp.static.default	3331	3331	3331	3331	3331	3331	3331	3331	3331	3331	3331	3330	3331
173.applu.static.default	5545	5544	5545	5545	5544	5544	5545	5544	5544	5544	5545	5545	5545
301.apsi.static.default	6486	6485	6486	6486	6485	6485	6485	6485	6485	6485	6486	6482	6486
179.art.static.110	562	N/A	562	562	562	562	562	562	562	562	562	1124	562
179.art.static.470	619	N/A	619	619	619	619	619	619	619	619	619	1169	619
256.bzip2.static.graphic	1175	1175	1175	1175	1175	1175	1175	1175	1175	1175	1175	1175	1175
256.bzip2.static.program	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032
256.bzip2.static.source	866	866	866	866	866	866	866	866	866	866	866	864	866
186.crafty.static.defaul	2156	2156	2156	2156	2154	2156	2156	2156	2156	2156	2156	2156	2156
252.eon.static.cook	851	851	851	851	851	851	852	851	852	852	851	851	851
252.eon.static.kajiya	1093	1093	1093	1093	1093	1093	1095	1093	1095	1094	1093	1093	1093
252.eon.static.rushmeier	629	629	629	629	629	629	630	629	630	630	629	628	629
183.quake.static.defaul	1449	1449	1449	1449	1449	1449	1449	1449	1449	1449	1449	1448	1449
187.facerec.static.defau	3099	3098	3099	3098	3098	3098	3096	3102	3096	3097	3098	3094	3098
191.fma3d.static.default	3209	3209	3209	3209	3209	3209	3208	3212	3208	3209	3209	3205	3209
178.galgel.static.default	3707	3707	3707	3707	3707	3707	3707	3707	3707	3706	3707	3703	3709
254.gap.static.default	2216	2216	2216	2216	2216	2215	2216	2216	2216	2216	2216	2214	2216
176.gcc.static.166	223	223	223	223	223	223	223	223	223	223	223	223	223
176.gcc.static.200	726	726	726	726	726	726	726	726	726	726	726	726	726
176.gcc.static.expr	72	72	72	72	72	72	72	72	72	72	72	72	72
176.gcc.static.integrate	72	72	72	72	72	72	72	72	72	72	72	72	72
176.gcc.static.scilab	391	391	391	391	391	391	391	391	391	391	391	391	391
164.gzip.static.graphic	739	739	739	739	739	739	739	739	739	739	739	737	739
164.gzip.static.log	293	293	293	293	293	293	293	293	293	293	293	291	293
164.gzip.static.program	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055
164.gzip.static.random	603	603	603	603	603	603	603	603	603	603	603	596	603
164.gzip.static.source	560	560	560	560	560	560	560	560	560	560	560	560	560
189.lucas.static.default	2991	2991	2991	2991	2991	2990	2991	2991	2991	2991	2991	2975	2991
181.mcf.static.default	693	693	693	693	693	693	693	693	693	693	693	688	693
177.mesa.static.default	2829	2829	2829	2829	2829	2829	2898	2829	2897	2897	2829	2826	2829
172.mgrid.static.default	5026	5026	5026	5026	5026	5026	5026	5026	5026	5026	5026	5024	5026
197.parser.static.defaul	3721	3721	3721	3720	3721	3721	3721	3720	3720	3721	3720	3720	3721
253.perlbmk.static.535	545	545	545	545	545	545	545	545	545	545	545	545	544
253.perlbmk.static.704	577	577	577	577	577	577	577	577	577	577	577	577	577
253.perlbmk.static.957	957	957	957	957	957	957	957	957	957	957	957	957	957
253.perlbmk.static.850	1107	1107	1107	1107	1107	1107	1107	1107	1107	1107	1107	1107	1107
253.perlbmk.static.diffm	328	328	328	328	328	328	328	328	328	328	328	328	328
253.perlbmk.static.maker	12	12	12	12	12	12	12	12	12	12	12	12	12
253.perlbmk.static.perfe	213	213	213	213	213	213	213	213	213	213	213	212	213
200.sixtrack.static.defa	9072	9071	9071	9072	9071	9069	9017	9071	9070	9069	9072	9065	9072
171.swim.static.default	3011	3011	3011	3011	3011	3011	3011	3011	3011	3011	3011	3008	3011
300.twolf.static.default	3118	3118	3118	3118	3118	3118	3122	3118	3122	3122	3118	3118	3118
255.vortex.static.1	1443	1443	1443	1443	1443	1443	1443	1443	1443	1443	1443	1443	1443
255.vortex.static.2	1625	1625	1625	1625	1625	1625	1625	1625	1625	1625	1625	1625	1625
255.vortex.static.3	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
175.vpr.static.place	1102	1102	1102	1102	1102	1102	1106	1102	1106	1106	1102	1102	1102
175.vpr.static.route	934	934	934	934	934	934	934	934	934	934	934	933	934
168.wupwise.static.defau	5022	5021	5022	5022	5021	5021	5022	5021	5021	5021	5022	5021	5022

Table 2: Number of intervals (100 Million committed instructions) for SPEC CPU2000 on x86. Dark grey is >10% error, medium grey 1-10% error, light grey is slight mismatch. The error with art on QEMU is due to a quirk in floating point rounding, explained in my HiPEAC08 paper. The Pentium Pro results are still running. The mesa anomaly is due to P4 cores counting the `fildcw` instruction as two instructions.

Benchmark	chocovic Core Duo	jennifer Athlon64 X2	sampaka12 Pentium 4	domori25 Pentium D	Pin	Qemu	Valgrind
473.astar.static.BigLake	4354	4355	4355	4355	4355	4352	4355
473.astar.static.rivers	8709	8709	8709	8709	8709	8708	8709
410.bwaves.static.defaul	24858	24885	24956	24956	24958	24869	24979
401.bzip2.static.chicken	1992	1992	1992	1992	1992	1991	1992
401.bzip2.static.combine	3641	3641	3641	3641	3641	3641	3641
401.bzip2.static.html	7062	7064	7063	7063	7064	7064	7064
401.bzip2.static.liberty	3463	3463	3463	3463	3463	3462	3463
401.bzip2.static.program	5930	5933	5932	5932	5933	5932	5933
401.bzip2.static.source	4519	4519	4519	4519	4520	4519	4520
436.cactusADM.static.def	31497	31518	31489	31495	31499	31499	31499
454.calculix.static.defa	86864	86865	86862	86872	86872	86872	86874
447.dealll.static.defaul	22711	22711	22709	22711	22712	23345	23307
416.gamess.static.cytosi	11429	11429	11431	11431	11430	11430	11428
416.gamess.static.h2ocu2	8676	8676	8675	8676	8676	8676	8676
416.gamess.static.triazo	42149	42148	42149	42151	42151	42151	42151
403.gcc.static.166	857	857	857	857	857	857	857
403.gcc.static.200	1666	1666	1666	1666	1666	1666	1666
403.gcc.static.c-typeck	1408	1408	1408	1408	1408	1408	1408
403.gcc.static.cp-decl	1095	1095	1095	1095	1095	1095	1095
403.gcc.static.expr	1181	1181	1181	1181	1181	1181	1181
403.gcc.static.expr2	1602	1602	1602	1602	1602	1602	1603
403.gcc.static.g23	1937	1937	1937	1937	1937	1937	1937
403.gcc.static.s04	1792	1792	1792	1792	1792	1792	1792
403.gcc.static.scilab	646	646	646	646	646	646	646
459.GemsFDTD.static.defa	25113	25118	25114	25112	25115	25115	25115
445.gobmk.static.13x13	2382	2382	2382	2382	2382	2382	2382
445.gobmk.static.nngs	6314	6314	6315	6315	6314	6314	6314
445.gobmk.static.score2	3451	3451	3452	3452	3451	3451	3451
445.gobmk.static.trevorc	2364	2365	2365	2365	2365	2365	2365
445.gobmk.static.trevord	3401	3401	3402	3402	3401	3401	3401
435.gromacs.static.defau	29291	29291	29293	29295	29292	29290	29292
464.h264ref.static.forem	5646	5646	5646	5647	5646	5646	5646
464.h264ref.static.forem	3230	3230	3230	3231	3231	3231	3231
464.h264ref.static.sss_	28145	28145	28145	28147	28146	28146	28146
456.hmmcr.static.nph3	10398	10398	10397	10397	10398	10397	10398
456.hmmcr.static.retro	22126	22126	22130	22130	22127	22127	22127
470.lbm.static.default	14956	14957	14956	14956	14957	14906	14957
437.leslie3d.static.defa	25340	25340	25339	25339	25341	25339	25341
462.libquantum.static.de	38842	38844	38842	38841	38845	38831	38845
429.mcf.static.default	4496	4498	4498	4498	4498	4498	4498
433.milc.static.default	13867	13867	13867	13867	13868	13865	13868
444.namd.static.default	28954	28955	28953	28953	28957	28950	28957
471.omnetpp.static.defau	7639	7640	7639	7639	7640	7639	7628
400.perlbench.static.che	1480	1480	1480	1480	1480	1480	1479
400.perlbench.static.dif	4019	4019	4019	4019	4019	4017	4018
400.perlbench.static.spl	7142	7142	7143	7143	7143	7142	7144
453.povray.static.defaul	12040	12041	12054	12054	12041	12041	12041
482.sphinx3.static.defau	28277	28277	28514	28514	28278	28278	28280
458.sjeng.static.default	25307	25308	25308	25308	25309	25309	25309
450.soplex.static.pds-50	4509	4509	4509	4509	4509	4509	4768
450.soplex.static.ref	4590	4590	4590	4590	4590	4590	4770
465.tonto.static.default	28954	28956	28952	28954	28955	28956	28955
481.wrf.static.default	41168	41170	41180	41181	41171	41171	41168
483.xalancbmk.static.def	13144	13144	13136	13136	13134	13133	13148
434.zeusmp.static.defaul	23974	23982	23969	23971	23976	23964	N/A

Table 3: Number of intervals (100 Million committed instructions) for SPEC CPU2006 on x86. Variations of greater than 1% are highlighted. **zeusmp** immediately segfaults under DBI.