

	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
All-FA gap	4,346,747,383	1,765,770,431	405,854,184	1,141,243,892	1,033,878,876
All-FA gcc	8,360,135,477	3,271,282,265	962,709,476	1,315,419,952	2,810,723,784
All-FA gzip	11,537,891,365	6,662,548,549	918,997,875	1,106,952,730	2,849,392,211
All-FA mcf	2,142,148,086	1,703,572,954	86,319,191	179,156,238	173,099,703
All-FA twolf	731,903,705	323,582,380	71,500,821	78,766,488	258,054,016
All-FA vpr	4,542,425,524	1,895,331,042	602,006,366	357,482,324	1,687,605,792
All-FA Total	31,661,251,540	15,622,087,621	3,047,387,913	4,179,021,624	8,812,754,382
All-FA CPI	3.8865	7.1459	2.2570	5.0357	2.3313
L2-Big gap	5,767,132,525	2,777,941,996	459,245,417	1,307,371,154	1,222,573,958
L2-Big gcc	9,325,836,856	3,819,863,237	1,018,431,255	1,425,472,885	3,062,069,479
L2-Big gzip	9,299,549,188	4,437,794,505	919,243,103	1,091,581,616	2,850,929,964
L2-Big mcf	1,853,993,296	1,445,575,187	88,930,638	140,017,971	179,469,500
L2-Big twolf	881,693,459	424,318,951	77,784,176	92,816,966	286,773,366
L2-Big vpr	5,336,360,273	2,186,086,199	711,294,028	454,613,638	1,984,366,408
L2-Big Total	32,464,565,597	15,091,580,075	3,274,928,617	4,511,874,230	9,586,182,675
L2-Big CPI	3.9851	6.9033	2.4255	5.4368	2.5359
2-4-way gap	5,207,601,639	2,360,390,892	442,686,621	1,229,362,920	1,175,161,206
2-4-way gcc	9,312,702,298	3,817,641,943	1,026,653,451	1,401,735,319	3,066,671,585
2-4-way gzip	11,648,710,380	6,761,592,453	919,423,753	1,115,880,086	2,851,814,088
2-4-way mcf	1,980,438,624	1,547,847,131	86,958,200	169,243,993	176,389,300
2-4-way twolf	860,570,823	410,879,653	77,866,322	93,153,648	278,671,200
2-4-way vpr	5,711,122,605	2,661,761,947	681,365,204	461,447,582	1,906,547,872
2-4 Way Total	34,721,146,369	17,560,114,019	3,234,953,551	4,470,823,548	9,455,255,251
2-4 Way CPI	4.2621	8.0324	2.3959	5.3873	2.5013
All-2way gap	5,754,335,063	2,703,756,918	463,415,799	1,298,449,450	1,288,712,896
All-2way gcc	10,050,549,226	4,221,575,419	1,073,077,749	1,502,882,723	3,253,013,335
All-2way gzip	11,756,916,620	6,861,642,247	919,474,949	1,123,678,672	2,852,120,752
All-2way mcf	2,106,176,134	1,650,421,793	86,996,008	192,246,029	176,512,304
All-2way twolf	1,040,601,441	540,570,095	78,130,768	120,681,830	301,218,748
All-2way vpr	6,224,302,845	3,004,537,959	690,463,434	538,687,822	1,990,613,630
All-2way Total	36,932,881,329	18,982,504,431	3,311,558,707	4,776,626,526	9,862,191,665
All-2way CPI	4.5336	8.6831	2.4526	5.7558	2.6089
L2-2way gap	6,690,957,226	3,329,194,427	500,225,906	1,432,616,204	1,428,920,689
L2-2way gcc	10,727,121,042	4,663,995,140	1,102,745,620	1,610,094,668	3,350,285,614
L2-2way gzip	11,979,698,699	7,046,464,786	919,313,911	1,161,235,117	2,852,684,885
L2-2way mcf	2,121,693,993	1,663,755,286	88,164,419	191,780,680	177,993,608
L2-2way twolf	1,151,367,043	612,947,975	78,826,940	139,412,155	320,179,973
L2-2way vpr	6,841,578,402	3,434,078,699	677,782,368	603,255,323	2,126,462,012
L2-2way Total	39,512,416,405	20,750,436,313	3,367,059,164	5,138,394,147	10,256,526,781
L2-2way CPI	4.8503	9.4918	2.4937	6.1917	2.7132

	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
All-FA gap	1,080,215,648	16,881,962	0	460,568,062	24,133,543	12,252,402
All-FA gcc	1,817,619,288	74,502,079	0	639,933,042	33,076,594	13,218,213
All-FA gzip	2,975,810,859	60,969	0	1,051,260,432	43,366,206	17,025,013
All-FA mcf	181,968,102	3,136	0	35,727,545	16,657,938	2,746,855
All-FA twolf	249,006,566	3,380,213	0	99,446,843	6,653,934	1,865,387
All-FA vpr	1,746,908,847	80,275	0	572,512,720	32,692,151	9,854,303
All-FA Total	8,051,529,310	94,908,634	0	2,859,448,644	156,580,366	56,962,173
All-FA CPI						

L2-Big gap	1,067,014,581	30,083,029	0	444,306,793	40,394,812	16,639,941
L2-Big gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
L2-Big gzip	2,975,786,903	84,925	0	1,048,705,251	45,921,387	18,652,293
L2-Big mcf	181,616,757	354,481	0	35,973,390	16,412,093	2,719,281
L2-Big twolf	246,421,920	5,964,859	0	96,170,149	9,930,628	2,925,691
L2-Big vpr	1,721,369,145	25,619,977	0	565,196,905	40,007,966	13,237,798
L2-Big Total	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
L2-Big CPI						

2-4-way gap	1,067,014,581	30,083,029	0	444,306,793	40,394,812	16,639,941
2-4-way gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
2-4-way gzip	2,975,786,903	84,925	0	1,048,705,251	45,921,387	18,652,293
2-4-way mcf	181,616,757	354,481	0	35,973,390	16,412,093	2,719,281
2-4-way twolf	246,421,920	5,964,859	0	96,170,149	9,930,628	2,925,691
2-4-way vpr	1,721,369,145	25,619,977	0	565,196,905	40,007,966	13,237,798
2-4 Way Total	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
2-4 Way CPI						

All-2way gap	1,067,014,581	30,083,029	0	444,306,793	40,394,812	16,639,941
All-2way gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
All-2way gzip	2,975,786,903	84,925	0	1,048,705,251	45,921,387	18,652,293
All-2way mcf	181,616,757	354,481	0	35,973,390	16,412,093	2,719,281
All-2way twolf	246,421,920	5,964,859	0	96,170,149	9,930,628	2,925,691
All-2way vpr	1,721,369,145	25,619,977	0	565,196,905	40,007,966	13,237,798
All-2way Total	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
All-2way CPI						

L2-2way gap	1,050,697,581	46,400,029	0	422,062,012	62,639,593	24,440,520
L2-2way gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
L2-2way gzip	2,975,736,580	135,248	0	1,039,285,345	55,341,293	23,248,831
L2-2way mcf	181,414,649	556,589	0	35,369,277	17,016,206	2,890,812
L2-2way twolf	244,353,096	8,033,683	0	93,293,737	12,807,040	3,820,328
L2-2way vpr	1,712,409,115	34,580,007	0	543,193,246	62,011,625	19,301,663
L2-2way Total	7,969,313,107	177,124,837	0	2,742,979,150	273,049,860	96,527,855
L2-2way CPI						

	L2 Hit	L2 Miss	L2 Evictions
All-FA gap	47,516,196	5,751,711	2,996,431
All-FA gcc	106,109,237	14,687,649	2,794,051
All-FA gzip	37,979,097	22,473,091	9,245,816
All-FA mcf	10,761,997	8,645,932	1,347,940
All-FA twolf	11,741,848	157,686	26,295
All-FA vpr	40,806,094	1,820,635	484,532
All-FA Total	254,914,469	53,536,704	16,895,065
All-FA CPI			

L2-Big gap	76,610,370	10,507,412	4,103,520
L2-Big gcc	119,969,837	18,543,648	3,541,928
L2-Big gzip	52,514,765	12,143,840	3,530,435
L2-Big mcf	12,613,884	6,871,971	1,130,020
L2-Big twolf	18,455,567	365,611	46,474
L2-Big vpr	75,501,026	3,364,715	168,956
L2-Big Total	355,665,449	51,797,197	12,521,333
L2-Big CPI			

2-4-way gap	79,656,541	7,461,241	3,283,592
2-4-way gcc	119,789,640	18,723,845	3,260,190
2-4-way gzip	42,073,733	22,584,872	9,421,653
2-4-way mcf	11,792,576	7,693,279	1,176,694
2-4-way twolf	18,600,233	220,945	46,464
2-4-way vpr	74,182,324	4,683,417	1,470,612
2-4 Way Total	346,095,047	61,367,599	18,659,205
2-4 Way CPI			

All-2way gap	76,389,157	10,728,625	3,781,416
All-2way gcc	115,493,502	23,019,983	4,050,267
All-2way gzip	41,604,553	23,054,052	9,705,267
All-2way mcf	11,081,631	8,404,224	1,333,405
All-2way twolf	17,628,260	1,192,918	318,768
All-2way vpr	71,129,084	7,736,657	1,952,092
All-2way Total	333,326,187	74,136,459	21,141,215
All-2way CPI			

L2-2way gap	121,842,460	11,637,682	3,949,561
L2-2way gcc	149,954,461	23,524,624	4,156,889
L2-2way gzip	55,780,857	22,944,515	9,735,524
L2-2way mcf	12,073,732	8,389,875	1,341,709
L2-2way twolf	23,373,850	1,287,201	308,890
L2-2way vpr	108,283,864	7,609,431	2,040,992
L2-2way Total	471,309,224	75,393,328	21,533,565
L2-2way CPI			

	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.
All-FA gap	1,097,097,610	339,675,083	181,044,249	145,026,522	431,351,756
All-FA gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576
All-FA gzip	2,975,871,828	813,702,849	459,138,656	280,923,789	1,422,106,534
All-FA mcf	181,971,238	43,327,708	43,138,124	9,057,775	86,447,631
All-FA twolf	252,386,779	81,244,089	33,142,620	24,856,688	113,143,382
All-FA vpr	1,746,989,122	467,818,386	300,439,791	137,386,485	841,344,460
All-FA Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
All-FA CPI					

L2-Big gap	1,097,097,610	339,675,083	181,044,249	145,026,522	431,351,756
L2-Big gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576
L2-Big gzip	2,975,871,828	813,702,849	459,138,656	280,923,789	1,422,106,534
L2-Big mcf	181,971,238	43,327,708	43,138,124	9,057,775	86,447,631
L2-Big twolf	252,386,779	81,244,089	33,142,620	24,856,688	113,143,382
L2-Big vpr	1,746,989,122	467,818,386	300,439,791	137,386,485	841,344,460
L2-Big Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2-Big CPI					

2-4-way gap	1,097,097,610	339,675,083	181,044,249	145,026,522	431,351,756
2-4-way gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576
2-4-way gzip	2,975,871,828	813,702,849	459,138,656	280,923,789	1,422,106,534
2-4-way mcf	181,971,238	43,327,708	43,138,124	9,057,775	86,447,631
2-4-way twolf	252,386,779	81,244,089	33,142,620	24,856,688	113,143,382
2-4-way vpr	1,746,989,122	467,818,386	300,439,791	137,386,485	841,344,460
2-4 Way Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
2-4 Way CPI					

All-2way gap	1,097,097,610	339,675,083	181,044,249	145,026,522	431,351,756
All-2way gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576
All-2way gzip	2,975,871,828	813,702,849	459,138,656	280,923,789	1,422,106,534
All-2way mcf	181,971,238	43,327,708	43,138,124	9,057,775	86,447,631
All-2way twolf	252,386,779	81,244,089	33,142,620	24,856,688	113,143,382
All-2way vpr	1,746,989,122	467,818,386	300,439,791	137,386,485	841,344,460
All-2way Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
All-2way CPI					

L2-2way gap	1,097,097,610	339,675,083	181,044,249	145,026,522	431,351,756
L2-2way gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576
L2-2way gzip	2,975,871,828	813,702,849	459,138,656	280,923,789	1,422,106,534
L2-2way mcf	181,971,238	43,327,708	43,138,124	9,057,775	86,447,631
L2-2way twolf	252,386,779	81,244,089	33,142,620	24,856,688	113,143,382
L2-2way vpr	1,746,989,122	467,818,386	300,439,791	137,386,485	841,344,460
L2-2way Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2-2way CPI					

	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
L1-2way gap	6,931,177,353	3,480,183,896	498,569,591	1,514,304,230	1,438,119,636
L1-2way gcc	11,500,867,542	4,952,002,943	1,173,225,917	1,766,644,993	3,608,993,689
L1-2way gzip	12,140,692,284	7,208,781,595	919,401,419	1,161,268,398	2,851,240,872
L1-2way mcf	2,220,846,532	1,746,808,819	88,951,180	202,794,611	182,291,922
L1-2way twolf	1,209,976,859	677,459,947	78,644,600	138,737,270	315,135,042
L1-2way vpr	6,690,899,185	3,326,061,929	719,631,936	597,971,102	2,047,234,218
L1-2way Total	40,694,459,755	21,391,299,129	3,478,424,643	5,381,720,604	10,443,015,379
L1-2way CPI	4.9954	9.7849	2.5762	6.4850	2.7626
Base gap	8,632,108,128	4,593,402,883	556,524,974	1,836,969,678	1,645,210,593
Base gcc	12,814,773,322	5,862,985,246	1,225,466,326	1,978,197,886	3,748,123,864
Base gzip	12,591,149,439	7,582,725,966	919,204,277	1,237,233,135	2,851,986,061
Base mcf	2,244,775,253	1,764,502,510	90,401,481	203,743,154	186,128,108
Base twolf	1,414,212,115	829,896,713	80,084,656	166,508,397	337,722,349
Base vpr	7,540,700,622	3,952,358,117	705,053,700	696,473,921	2,186,814,884
Base Total	45,237,718,879	24,585,871,435	3,576,735,414	6,119,126,171	10,955,985,859
Base CPI	5.5531	11.2462	2.6490	7.3735	2.8983

	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
L1-2way gap	1,067,014,581	30,083,029	0	444,306,793	40,394,812	16,639,941
L1-2way gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
L1-2way gzip	2,975,786,903	84,925	0	1,048,705,251	45,921,387	18,652,293
L1-2way mcf	181,616,757	354,481	0	35,973,390	16,412,093	2,719,281
L1-2way twolf	246,421,920	5,964,859	0	96,170,149	9,930,628	2,925,691
L1-2way vpr	1,721,369,145	25,619,977	0	565,196,905	40,007,966	13,237,798
L1-2way Total	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
L1-2way CPI						

Base gap	1,050,697,581	46,400,029	0	422,062,012	62,639,593	24,440,520
Base gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
Base gzip	2,975,736,580	135,248	0	1,039,285,345	55,341,293	23,248,831
Base mcf	181,414,649	556,589	0	35,369,277	17,016,206	2,890,812
Base twolf	244,353,096	8,033,683	0	93,293,737	12,807,040	3,820,328
Base vpr	1,712,409,115	34,580,007	0	543,193,246	62,011,625	19,301,663
Base Total	7,969,313,107	177,124,837	0	2,742,979,150	273,049,860	96,527,855
Base CPI						

	L2 Hit	L2 Miss	L2 Evictions
L1-2way gap	69,887,152	17,230,630	5,406,770
L1-2way gcc	107,122,306	31,391,179	5,679,722
L1-2way gzip	39,364,139	25,294,466	10,110,090
L1-2way mcf	10,487,138	8,998,717	1,532,508
L1-2way twolf	16,653,057	2,168,121	511,595
L1-2way vpr	68,548,604	10,317,137	2,593,851
L1-2way Total	312,062,396	95,400,250	25,834,536
L1-2way CPI			

Base gap	111,285,443	22,194,699	6,805,464
Base gcc	138,176,401	35,302,684	6,785,857
Base gzip	52,549,417	26,175,955	10,733,099
Base mcf	11,435,662	9,027,945	1,555,445
Base twolf	21,954,558	2,706,493	706,236
Base vpr	104,304,874	11,588,421	2,885,204
Base Total	439,706,355	106,996,197	29,471,305
Base CPI			

	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.
L1-2way gap	1,097,097,610	339,675,083	181,044,249	145,026,522	431,351,756
L1-2way gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576
L1-2way gzip	2,975,871,828	813,702,849	459,138,656	280,923,789	1,422,106,534
L1-2way mcf	181,971,238	43,327,708	43,138,124	9,057,775	86,447,631
L1-2way twolf	252,386,779	81,244,089	33,142,620	24,856,688	113,143,382
L1-2way vpr	1,746,989,122	467,818,386	300,439,791	137,386,485	841,344,460
L1-2way Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L1-2way CPI					

Base gap	1,097,097,610	339,675,083	181,044,249	145,026,522	431,351,756
Base gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576
Base gzip	2,975,871,828	813,702,849	459,138,656	280,923,789	1,422,106,534
Base mcf	181,971,238	43,327,708	43,138,124	9,057,775	86,447,631
Base twolf	252,386,779	81,244,089	33,142,620	24,856,688	113,143,382
Base vpr	1,746,989,122	467,818,386	300,439,791	137,386,485	841,344,460
Base Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
Base CPI					

Total	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
L1 Direct	84,750,135,284	45,336,307,748	6,943,794,578	11,257,520,318	21,212,512,640
L1 Direct CPI	5.2017	10.3690	2.5714	6.7826	2.8057
L1-2 Way	107,880,171,721	54,042,993,223	9,988,306,811	14,364,418,382	29,484,453,305
L1-2 Way CPI	4.4142	8.2402	2.4659	5.7697	2.5999
L1-FA	31,661,251,540	15,622,087,621	3,047,387,913	4,179,021,624	8,812,754,382
L1-FA CPI	3.8865	7.1459	2.2570	5.0357	2.3313

Total	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
L2 Direct	85,932,178,634	45,977,170,564	7,055,160,057	11,500,846,775	21,399,001,238
L2 Direct CPI	5.2742	10.5156	2.6126	6.9292	2.8304
L2 2Way	76,445,297,734	39,732,940,744	6,678,617,871	9,915,020,673	20,118,718,446
L2 2Way CPI	4.6919	9.0874	2.4732	5.9738	2.6611
L2 4Way	34,721,146,369	17,560,114,019	3,234,953,551	4,470,823,548	9,455,255,251
L2 4Way CPI	4.2621	8.0324	2.3959	5.3873	2.5013
L2 Direct Big	32,464,565,597	15,091,580,075	3,274,928,617	4,511,874,230	9,586,182,675
L2 Dir Big CPI	3.9851	6.9033	2.4255	5.4368	2.5359
L2 FA	31,661,251,540	15,622,087,621	3,047,387,913	4,179,021,624	8,812,754,382
L2-FA CPI	3.8865	7.1459	2.2570	5.0357	2.3313

Total	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
All-FA	31,661,251,540	15,622,087,621	3,047,387,913	4,179,021,624	8,812,754,382
L2-Big	32,464,565,597	15,091,580,075	3,274,928,617	4,511,874,230	9,586,182,675
2-4 Way	34,721,146,369	17,560,114,019	3,234,953,551	4,470,823,548	9,455,255,251
All-2way	36,932,881,329	18,982,504,431	3,311,558,707	4,776,626,526	9,862,191,665
L2-2way	39,512,416,405	20,750,436,313	3,367,059,164	5,138,394,147	10,256,526,781
L1-2way	40,694,459,755	21,391,299,129	3,478,424,643	5,381,720,604	10,443,015,379
Base	45,237,718,879	24,585,871,435	3,576,735,414	6,119,126,171	10,955,985,859

Total	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
L1 Direct	117,214,700,881	60,427,887,823	10,218,723,195	15,769,394,548	30,798,695,315
L1-2 Way	75,415,606,124	38,951,413,148	6,713,378,194	9,852,544,152	19,898,270,630
L1-FA	31,661,251,540	15,622,087,621	3,047,387,913	4,179,021,624	8,812,754,382

Total	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
L2 Direct	85,932,178,634	45,977,170,564	7,055,160,057	11,500,846,775	21,399,001,238
L2 Direct Big	32,464,565,597	15,091,580,075	3,274,928,617	4,511,874,230	9,586,182,675
L2 2Way	76,445,297,734	39,732,940,744	6,678,617,871	9,915,020,673	20,118,718,446
L2 4Way	34,721,146,369	17,560,114,019	3,234,953,551	4,470,823,548	9,455,255,251
L2 FA	31,661,251,540	15,622,087,621	3,047,387,913	4,179,021,624	8,812,754,382

Total	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
L1 Direct	15,938,626,214	354,249,674	0	5,485,958,300	546,099,720	193,055,710
L1 Direct CPI	0.97825739	0.02174261	0.00000000	0.33670902	0.03351770	0.01184909
L1-2 Way	24,018,238,446	421,075,386	0	8,458,432,443	589,654,587	211,657,965
L1-2 Way CPI	0.98277057	0.01722943	0.00000000	0.34609942	0.02412730	0.00866055
L1-FA	8,051,529,310	94,908,634	0	2,859,448,644	156,580,366	56,962,173
L1-FA CPI	0.98834968	0.01165032	0.00000000	0.35100601	0.01922072	0.00699228

Total	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
L2 Direct	15,975,392,589	317,483,299	0	5,562,456,631	469,601,389	167,080,510
L2 Direct CPI	0.98051398	0.01948602	0.00000000	0.34140422	0.02882250	0.01025482
L2 2Way	15,975,392,589	317,483,299	0	5,562,456,631	469,601,389	167,080,510
L2 2Way CPI	0.98051398	0.01948602	0.00000000	0.34140422	0.02882250	0.01025482
L2 4Way	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
L2 4Way CPI	0.98277057	0.01722943	0.00000000	0.34609942	0.02412730	0.00866055
L2 Direct Big	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
L2 Dir Big CPI	0.98277057	0.01722943	0.00000000	0.34609942	0.02412730	0.00866055
L2 FA	8,051,529,310	94,908,634	0	2,859,448,644	156,580,366	56,962,173
L2-FA CPI	0.98834968	0.01165032	0.00000000	0.35100601	0.01922072	0.00699228

Total	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
All-FA	8,051,529,310	94,908,634	0	2,859,448,644	156,580,366	56,962,173
L2-Big	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
2-4 Way	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
All-2way Total	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
L2-2way	7,969,313,107	177,124,837	0	2,742,979,150	273,049,860	96,527,855
L1-2way	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
Base	7,969,313,107	177,124,837	0	2,742,979,150	273,049,860	96,527,855

Total	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
L1 Direct	23,944,705,696	494,608,136	0	8,305,435,781	742,651,249	263,608,365
L1-2 Way	16,012,158,964	280,716,924	0	5,638,954,962	393,103,058	141,105,310
L1-FA	8,051,529,310	94,908,634	0	2,859,448,644	156,580,366	56,962,173

Total	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
L2 Direct	15,975,392,589	317,483,299	0	5,562,456,631	469,601,389	167,080,510
L2 Direct Big	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
L2 2Way	15,975,392,589	317,483,299	0	5,562,456,631	469,601,389	167,080,510
L2 4Way	8,006,079,482	140,358,462	0	2,819,477,481	196,551,529	70,552,655
L2 FA	8,051,529,310	94,908,634	0	2,859,448,644	156,580,366	56,962,173

Total	L2 Hit	L2 Miss	L2 Evictions
L1 Direct	911,015,579	182,389,525	51,004,870
L1 Direct CPI	0.83319126	0.03211641	0.00313050
L1-2 Way	1,013,822,892	208,565,046	57,015,074
L1-2 Way CPI	0.82937901	0.02405569	0.00233292
L1-FA	254,914,469	53,536,704	16,895,065
L1-FA CPI	0.82643378	0.01835705	0.00207392

Total	L2 Hit	L2 Miss	L2 Evictions
L2 Direct	751,768,751	202,396,447	55,305,841
L2 Direct CPI	0.78788113	0.03532510	0.00339448
L2 2Way	804,635,411	149,529,787	42,674,780
L2 2Way CPI	0.84328732	0.02609806	0.00261923
L2 4Way	346,095,047	61,367,599	18,659,205
L2 4Way CPI	0.84939086	0.02123424	0.00229047
L2 Direct Big	355,665,449	51,797,197	12,521,333
L2 Dir Big CPI	0.87287866	0.01792272	0.00153703
L2 FA	254,914,469	53,536,704	16,895,065
L2-FA CPI	0.82643378	0.01835705	0.00207392

Total	L2 Hit	L2 Miss	L2 Evictions
All-FA	254,914,469	53,536,704	16,895,065
L2-Big	355,665,449	51,797,197	12,521,333
2-4 Way	346,095,047	61,367,599	18,659,205
All-2way Total	333,326,187	74,136,459	21,141,215
L2-2way	471,309,224	75,393,328	21,533,565
L1-2way	312,062,396	95,400,250	25,834,536
Base	439,706,355	106,996,197	29,471,305

Total	L2 Hit	L2 Miss	L2 Evictions
L1 Direct	1,266,681,028	234,186,722	63,526,203
L1-2 Way	658,157,443	156,767,849	44,493,741
L1-FA	254,914,469	53,536,704	16,895,065

Total	L2 Hit	L2 Miss	L2 Evictions
L2 Direct	751,768,751	202,396,447	55,305,841
L2 Direct Big	355,665,449	51,797,197	12,521,333
L2 2Way	804,635,411	149,529,787	42,674,780
L2 4Way	346,095,047	61,367,599	18,659,205
L2 FA	254,914,469	53,536,704	16,895,065

Total	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.
L1 Direct	16,292,875,888	4,372,302,066	2,700,405,190	1,659,755,954	7,560,412,678
L1 Direct CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181
L1-2 Way	24,439,313,832	6,558,453,099	4,050,607,785	2,489,633,931	11,340,619,017
L1-2 Way CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181
L1-FA	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L1-FA CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181

Total	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.
L2 Direct	16,292,875,888	4,372,302,066	2,700,405,190	1,659,755,954	7,560,412,678
L2 Direct CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181
L2 2Way	16,292,875,888	4,372,302,066	2,700,405,190	1,659,755,954	7,560,412,678
L2 2Way CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181
L2 4Way	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2 4Way CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181
L2 Direct Big	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2 Dir Big CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181
L2 FA	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2-FA CPI	1.00000000	0.26835668	0.16574147	0.10187004	0.46403181

Total	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.
All-FA	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2-Big	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
2-4 Way	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
All-2way Total	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2-2way	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L1-2way	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
Base	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339

Total	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.
L1 Direct	24,439,313,832	6,558,453,099	4,050,607,785	2,489,633,931	11,340,619,017
L1-2 Way	16,292,875,888	4,372,302,066	2,700,405,190	1,659,755,954	7,560,412,678
L1-FA	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339

Total	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.
L2 Direct	16,292,875,888	4,372,302,066	2,700,405,190	1,659,755,954	7,560,412,678
L2 Direct Big	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2 2Way	16,292,875,888	4,372,302,066	2,700,405,190	1,659,755,954	7,560,412,678
L2 4Way	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339
L2 FA	8,146,437,944	2,186,151,033	1,350,202,595	829,877,977	3,780,206,339

	Total Cycles	Load Cycles	Branch Cycles	Store Cycles	Compute Cycles
All-FA_16 gcc	8,360,135,477	3,271,282,265	962,709,476	1,315,419,952	2,810,723,784
All-FA_32 gcc	7,660,867,477	2,855,047,625	929,517,916	1,193,477,232	2,682,824,704
All-FA_64 gcc	7,311,233,477	2,646,930,305	912,922,136	1,132,505,872	2,618,875,164
L2-Big_16 gcc	9,325,836,856	3,819,863,237	1,018,431,255	1,425,472,885	3,062,069,479
L2-Big_32 gcc	8,442,413,816	3,311,374,037	972,246,975	1,283,910,805	2,874,881,999
L2-Big_64 gcc	8,000,702,296	3,057,129,437	949,154,835	1,213,129,765	2,781,288,259
2-4-way_16 gcc	9,312,702,298	3,817,641,943	1,026,653,451	1,401,735,319	3,066,671,585
2-4-way_32 gcc	8,433,340,898	3,310,142,703	978,220,491	1,266,655,999	2,878,321,705
2-4-way_64 gcc	7,993,660,198	3,056,393,083	954,004,011	1,199,116,339	2,784,146,765
All-2way_16 gcc	10,050,549,226	4,221,575,419	1,073,077,749	1,502,882,723	3,253,013,335
All-2way_32 gcc	8,967,739,226	3,602,629,419	1,011,838,509	1,340,022,003	3,013,249,295
All-2way_64 gcc	8,426,334,226	3,293,156,419	981,218,889	1,258,591,643	2,893,367,275
L2-2way_16 gcc	10,727,121,042	4,663,995,140	1,102,745,620	1,610,094,668	3,350,285,614
L2-2way_32 gcc	9,619,860,522	4,036,664,500	1,038,731,660	1,441,203,548	3,103,260,814
L2-2way_64 gcc	9,066,230,262	3,722,999,180	1,006,724,680	1,356,757,988	2,979,748,414
L1-2way_16 gcc	11,500,867,542	4,952,002,943	1,173,225,917	1,766,644,993	3,608,993,689
L1-2way_32 gcc	10,018,031,502	4,131,450,503	1,084,422,397	1,531,038,313	3,271,120,289
L1-2way_64 gcc	9,276,613,482	3,721,174,283	1,040,020,637	1,413,234,973	3,102,183,589
Base_16 gcc	12,814,773,322	5,862,985,246	1,225,466,326	1,978,197,886	3,748,123,864
Base_32 gcc	11,131,231,682	4,904,197,766	1,127,719,766	1,707,758,886	3,391,555,264
Base_64 gcc	10,289,460,862	4,424,804,026	1,078,846,486	1,572,539,386	3,213,270,964
16 Bit Path	62,041,436,537	26,387,770,774	6,509,232,045	9,497,565,703	19,646,868,015
32 Bit Path	55,305,745,897	22,548,877,134	6,130,859,205	8,424,044,783	18,201,964,775
64 Bit Path	51,937,900,577	20,629,430,314	5,941,672,785	7,887,284,323	17,479,513,155

	L1 Inst Hit	L1 Inst Miss	L1 Inst Evictions	L1 Data Hit	L1 Data Miss	L1 Data Evictions
All-FA_16 gcc	1,817,619,288	74,502,079	0	639,933,042	33,076,594	13,218,213
All-FA_32 gcc	1,817,619,288	74,502,079	0	639,933,042	33,076,594	13,218,213
All-FA_64 gcc	1,817,619,288	74,502,079	0	639,933,042	33,076,594	13,218,213
L2-Big_16 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
L2-Big_32 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
L2-Big_64 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
2-4-way_16 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
2-4-way_32 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
2-4-way_64 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
All-2way_16 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
All-2way_32 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
All-2way_64 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
L2-2way_16 gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
L2-2way_32 gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
L2-2way_64 gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
L1-2way_16 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
L1-2way_32 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
L1-2way_64 gcc	1,813,870,176	78,251,191	0	629,124,993	43,884,643	16,377,651
Base_16 gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
Base_32 gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
Base_64 gcc	1,804,702,086	87,419,281	0	609,775,533	63,234,103	22,825,701
16 Bit Path	10,868,633,988	484,094,214	0	3,746,859,087	291,198,729	108,002,568
32 Bit Path	10,868,633,988	484,094,214	0	3,746,859,087	291,198,729	108,002,568
64 Bit Path	10,868,633,988	484,094,214	0	3,746,859,087	291,198,729	108,002,568

	L2 Hit	L2 Miss	L2 Evictions
All-FA_16 gcc	106,109,237	14,687,649	2,794,051
All-FA_32 gcc	106,109,237	14,687,649	2,794,051
All-FA_64 gcc	106,109,237	14,687,649	2,794,051
L2-Big_16 gcc	119,969,837	18,543,648	3,541,928
L2-Big_32 gcc	119,969,837	18,543,648	3,541,928
L2-Big_64 gcc	119,969,837	18,543,648	3,541,928
2-4-way_16 gcc	119,789,640	18,723,845	3,260,190
2-4-way_32 gcc	119,789,640	18,723,845	3,260,190
2-4-way_64 gcc	119,789,640	18,723,845	3,260,190
All-2way_16 gcc	115,493,502	23,019,983	4,050,267
All-2way_32 gcc	115,493,502	23,019,983	4,050,267
All-2way_64 gcc	115,493,502	23,019,983	4,050,267
L2-2way_16 gcc	149,954,461	23,524,624	4,156,889
L2-2way_32 gcc	149,954,461	23,524,624	4,156,889
L2-2way_64 gcc	149,954,461	23,524,624	4,156,889
L1-2way_16 gcc	107,122,306	31,391,179	5,679,722
L1-2way_32 gcc	107,122,306	31,391,179	5,679,722
L1-2way_64 gcc	107,122,306	31,391,179	5,679,722
Base_16 gcc	138,176,401	35,302,684	6,785,857
Base_32 gcc	138,176,401	35,302,684	6,785,857
Base_64 gcc	138,176,401	35,302,684	6,785,857
16 Bit Path	741,121,882	142,173,629	26,218,637
32 Bit Path	741,121,882	142,173,629	26,218,637
64 Bit Path	741,121,882	142,173,629	26,218,637

	Total Instructions	Load Inst.	Branch Inst.	Store Inst.	Compute Inst.	Cost
All-FA_16 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	4225
All-FA_32 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	4325
All-FA_64 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	4425
L2-Big_16 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	975
L2-Big_32 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1075
L2-Big_64 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1175
2-4-way_16 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1025
2-4-way_32 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1125
2-4-way_64 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1225
All-2way_16 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	975
All-2way_32 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1,075
All-2way_64 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1175
L2-2way_16 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	575
L2-2way_32 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	675
L2-2way_64 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	775
L1-2way_16 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	925
L1-2way_32 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1025
L1-2way_64 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	1125
Base_16 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	525
Base_32 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	625
Base_64 gcc	1,892,121,367	440,382,918	333,299,155	232,626,718	885,812,576	725
16 Bit Path	11,352,728,202	2,642,297,508	1,999,794,930	1,395,760,308	5,314,875,456	
32 Bit Path	11,352,728,202	2,642,297,508	1,999,794,930	1,395,760,308	5,314,875,456	
64 Bit Path	11,352,728,202	2,642,297,508	1,999,794,930	1,395,760,308	5,314,875,456	