ICMS delta cluster, Data

Stillinger-Web₄ MPI x 1 Ope8 MPI x 1 Ope4 MPI x 2 Ope2 MPI x 4 Ope1 MPI x 8 OpenMP

Nodes:	Tot	al Time:	Total Time:	Total Time:	Total Time:	Total Time:	# Nodes:
	1	30.05	16.27	16.57	17.96	20.03	1
	2	15.38	9.76	8.55	9.43	10.67	2
	3	10.53	7.24	5.93	6.61	7.34	3
	4	7.49	6.26	4.79	4.98	5.61	4
	6	5.95	5.27	3.68	3.5	4.04	6
	8	4.72	4.98	2.93	2.73	3.16	8
	12	3.62	4.56	2.52	1.93	2.36	12
	16	3.13	4.68	2.36	1.58	1.81	16
	20	2.82	4.51	2.2	1.35	1.55	20
	24	2.59	4.36	2.17	1.21	1.35	24
	32	2.53	4.55	2.14	1.08	1.16	32

Rhodo(lj/charr4 MPI x 1 Ope8 MPI x 1 Ope4 MPI x 2 Ope2 MPI x 4 Ope1 MPI x 8 OpenMP

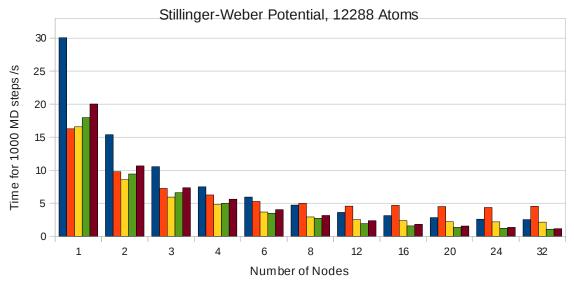
``		•	•		•	•	
Nodes:	Total	Time:	Total Time:	Total Time:	Total Time:	Total Time:	# Nodes:
	1	14.34	9.52	10.25	14.58	22.67	1
	2	7.93	6.23	5.92	8.14	12.5	2
	3	5.54	5.48	4.24	5.62	8.28	3
	4	4.57	5.28	3.61	4.28	6.47	4
	6	3.66	4.35	3	3.25	4.62	6
	8	3.25	4.42	2.82	2.5	3.54	8
	12	2.58	4.77	2.28	2.11	2.76	12
	16	2.41	5.24	2.17	1.85	2.1	16
:	20	2.47	6.31	2.28	1.56	1.82	20
:	24	2.43	5.86	2.26	1.4	1.56	24
;	32	2.56	6.61	2.47	1.27	1.34	32

ICMS delta cluster, Data

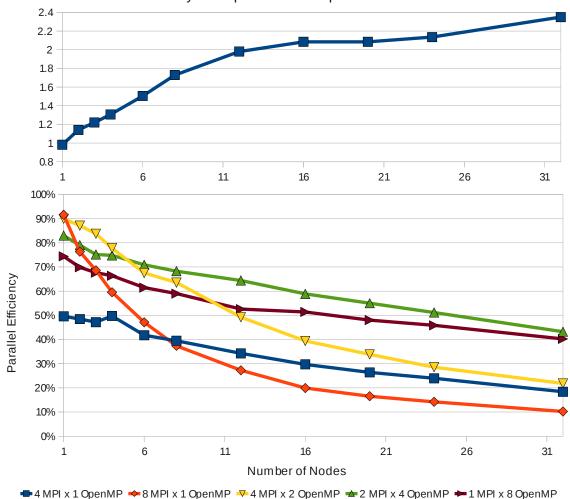
1CPU reference	119.21 Factor:		14.9		
4 MPI x 1 Ope8	MPI x 1 Ope4 MPI x	c 2 Ope2 N	/IPI x 4 Ope1 MPI	x 8 OpenM	P hybrid ratio
50%	92%	90%	83%	74%	0.98
48%	76%	87%	79%	70%	1.14
47%	69%	84%	75%	68%	1.22
50%	60%	78%	75%	66%	1.31
42%	47%	68%	71%	61%	1.5
39%	37%	64%	68%	59%	1.73
34%	27%	49%	64%	53%	1.98
30%	20%	39%	59%	51%	2.08
26%	17%	34%	55%	48%	2.08
24%	14%	29%	51%	46%	2.14
18%	10%	22%	43%	40%	2.35
1CPU reference	56 Factor:		7		
	56 Factor: MPI x 1 Ope4 MPI x			x 8 OpenM	P hybrid ratio
				x 8 OpenMl 31%	P hybrid ratio 0.93
4 MPI x 1 Ope8	MPI x 1 Ope4 MPI x	(2 Ope2 N	MPI x 4 Ope1 MPI		-
4 MPI x 1 Ope8 49%	MPI x 1 Ope4 MPI > 74%	c 2 Ope2 N 68%	MPI x 4 Ope1 MPI 48%	31%	0.93
4 MPI x 1 Ope8 49% 44%	MPI x 1 Ope4 MPI x 74% 56%	62 Ope2 N 68% 59%	MPI x 4 Ope1 MPI 48% 43%	31% 28%	0.93 1.05
4 MPI x 1 Ope8 49% 44% 42%	MPI x 1 Ope4 MPI x 74% 56% 43%	68% 68% 59% 55%	MPI x 4 Ope1 MPI 48% 43% 42%	31% 28% 28%	0.93 1.05 1.29
4 MPI x 1 Ope8 49% 44% 42% 38%	MPI x 1 Ope4 MPI x 74% 56% 43% 33%	62 Ope2 N 68% 59% 55% 48%	MPI x 4 Ope1 MPI 48% 43% 42% 41%	31% 28% 28% 27%	0.93 1.05 1.29 1.27
4 MPI x 1 Ope8 49% 44% 42% 38% 32%	MPI x 1 Ope4 MPI x 74% 56% 43% 33% 27%	62 Ope2 N 68% 59% 55% 48% 39%	MPI x 4 Ope1 MPI 48% 43% 42% 41% 36%	31% 28% 28% 27% 25%	0.93 1.05 1.29 1.27 1.22
4 MPI x 1 Ope8 49% 44% 42% 38% 32% 27%	MPI x 1 Ope4 MPI x 74% 56% 43% 33% 27% 20%	62 Ope2 N 68% 59% 55% 48% 39% 31%	MPI x 4 Ope1 MPI 48% 43% 42% 41% 36% 35%	31% 28% 28% 27% 25%	0.93 1.05 1.29 1.27 1.22 1.3
4 MPI x 1 Ope8 49% 44% 42% 38% 32% 27% 23%	MPI x 1 Ope4 MPI x 74% 56% 43% 33% 27% 20% 12%	68% 59% 55% 48% 39% 31% 26%	API x 4 Ope1 MPI 48% 43% 42% 41% 36% 35% 28%	31% 28% 28% 27% 25% 25% 21%	0.93 1.05 1.29 1.27 1.22 1.3 1.22
4 MPI x 1 Ope8 49% 44% 42% 38% 32% 27% 23% 18%	MPI x 1 Ope4 MPI x 74% 56% 43% 33% 27% 20% 12% 8%	68% 59% 55% 48% 39% 31% 26% 20%	API x 4 Ope1 MPI 48% 43% 42% 41% 36% 35% 28% 24%	31% 28% 28% 27% 25% 25% 21%	0.93 1.05 1.29 1.27 1.22 1.3 1.22 1.3

ICMS delta cluster, Charts

2x Intel Xeon 2.66Ghz (Harpertown) w/ DDR Infiniband



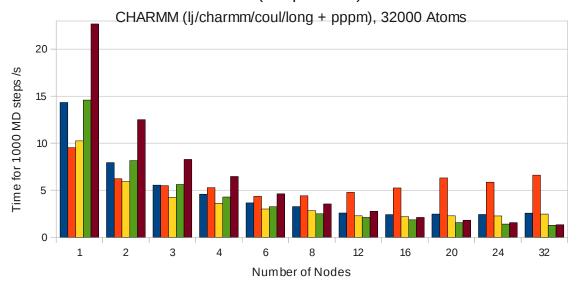
Hybrid OpenMP/MPI to plain MPI ratio



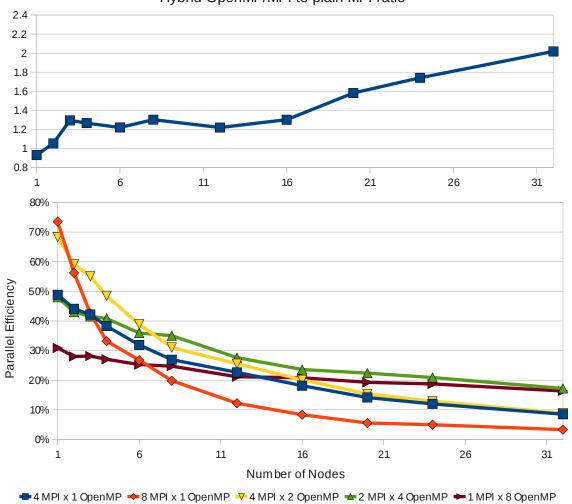
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2x Intel Xeon 2.66Ghz (Harpertown) w/ DDR Infiniband



Hybrid OpenMP/MPI to plain MPI ratio



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