

Distribution	Communication Type	NP	Input World Size	Estimated Computation Time	Estimation Communication Time	Estimated Speedup	Actual Time	Actual Speedup	Efficiency
Serial	none	1	900	0.003321	0	-	0.003321812556	-	-
Row	sync	9	900	0.000369	0.0000160462	8.624939033	0.001032438364	3.217443938	0.3574937709
Row	sync	25	900	0.00013284	0.0000160462	22.30562671	0.0003916338996	8.481933151	0.3392773261
Block	sync	9	900	0.000369	0.000023175964	8.468137532	0.0004439029369	7.483195717	0.8314661908
Block	sync	25	900	0.00013284	0.000021395644	21.53198777	0.0004166506671	7.972656277	0.3189062511
Row	async	9	900	0.000369	0.0000066762	8.840059605	0.0007830303353	0.5321002882	0.05912225425
Row	async	25	900	0.00013284	0.0000066762	23.80368731	0.0002682395168	12.38375537	0.4953502148
Block	async	9	900	0.000369	0.000004435964	8.893090972	0.0007313724991	4.541888791	0.5046543102
Block	async	25	900	0.00013284	0.000002655644	24.51001303	0.0002236246943	14.85440848	0.5941763393
Serial	none	1	2700	0.029889	0	-	0.03343059543	-	-
Row	sync	9	2700	0.003321	0.0000293986	8.921028083	0.009229498701	3.622146393	0.4024607103
Row	sync	25	2700	0.00119556	0.0000293986	24.40000829	0.001313595301	25.4496917	1.017987668
Block	sync	9	2700	0.003321	0.000032077564	8.913900567	0.003810601855	8.77304864	0.9747831823
Block	sync	25	2700	0.00119556	0.000026736604	24.4531482	0.0013419446	24.91205331	0.9964821324
Row	async	9	2700	0.003321	0.0000200286	8.946047334	0.007272724089	4.596708883	0.5107454315
Row	async	25	2700	0.00119556	0.0000200286	24.58808844	0.002499537065	13.37471482	0.5349885927
Block	async	9	2700	0.003321	0.000013337564	8.963999423	0.006938037613	4.818451166	0.5353834629
Block	async	25	2700	0.00119556	0.000007996604	24.83389639	0.001884309348	17.74156428	0.7096625711
Serial	none	1	5400	0.119556	0	-	0.1357311835	-	-
Row	sync	9	5400	0.013284	0.0000494272	8.966636875	0.04136996374	3.280911347	0.3645457052
Row	sync	25	5400	0.00478224	0.0000494272	24.74425391	0.005155008159	26.32996481	1.053198593
Block	sync	9	5400	0.013284	0.000045429964	8.969325794	0.01711879656	7.928780683	0.8809756314
Block	sync	25	5400	0.00478224	0.000034748044	24.81965886	0.01343210379	10.10498322	0.404199329
Row	async	9	5400	0.013284	0.0000400572	8.972942566	0.03290318296	4.12516879	0.4583520878
Row	async	25	5400	0.00478224	0.0000400572	24.79233341	0.009782681245	13.8746403	0.554985612
Block	async	9	5400	0.013284	0.000026689964	8.981953627	0.03202808644	4.237879891	0.4708755434
Block	async	25	5400	0.00478224	0.000016008044	24.91659433	0.007208812213	18.8285087	0.7531403479
Serial	none	1	9000	0.3321	0	-	1.029113724	-	-
Row	sync	9	9000	0.0369	0.000076132	8.981469452	0.04731079988	21.75219457	2.416910507
Row	sync	25	9000	0.013284	0.000076132	24.85753883	0.04084522623	25.19544679	1.007817872
Block	sync	9	9000	0.0369	0.000063233164	8.984603661	0.04739566554	21.71324555	2.412582839
Block	sync	25	9000	0.013284	0.000045429964	24.91479387	0.04123370271	24.95807207	0.998322883
Row	async	9	9000	0.0369	0.000066762	8.983745993	0.09197389751	11.18919337	1.243243708
Row	async	25	9000	0.013284	0.000066762	24.87498466	0.03082291703	33.38794063	1.335517625
Block	async	9	9000	0.0369	0.000044493164	8.989161078	0.08963759382	11.48082719	1.275647465
Block	async	25	9000	0.013284	0.000026689964	24.94987119	0.0245529703	41.91402146	1.676560858
Serial	none	1	12600	0.650916	0	-	2.018465143	-	-
Row	sync	9	12600	0.072324	0.0001028368	8.987221157	0.225628498	8.945967204	0.993996356
Row	sync	25	12600	0.02603664	0.0001028368	24.90164608	0.08058301103	25.04827156	1.001930862
Block	sync	9	12600	0.072324	0.000081036364	8.98992712	0.0934044956	21.60993569	2.401103966
Block	sync	25	12600	0.02603664	0.000056111884	24.94623805	0.08086519815	24.96086313	0.9984345253
Row	async	9	12600	0.072324	0.0000934668	8.988384001	0.1811638724	11.14165378	1.237961531
Row	async	25	12600	0.02603664	0.0000934668	24.91057557	0.0603156624	33.46502489	1.338600995

Block	async	9	12600	0.072324	0.000062296364	8.992254511	0.4329709233	4.661895371	0.5179883746
Block	async	25	12600	0.02603664	0.000037371884	24.9641675	0.04772840375	42.29064843	1.691625937
Serial	none	1	900	0.003321	0	-	0.003321812556	-	-
Row	async-overlapped	9	900	0.000369	0.0000066762	8.840059605	0.001014330962	3.274880369	0.3638755966
Row	async-overlapped	25	900	0.00013284	0.0000066762	23.80368731	0.0007004451465	4.742430685	0.1896972274
Block	async-overlapped	9	900	0.000369	0.0000066762	8.840059605	0.0007373210307	4.505245907	0.5005828786
Block	async-overlapped	25	900	0.00013284	0.0000066762	23.80368731	0.0001511862567	21.97165688	0.8788662751
Serial	none	1	2700	0.029889	0	-	0.03343059543	-	-
Row	async-overlapped	9	2700	0.003321	0.0000200286	8.946047334	0.007256998354	4.606669837	0.5118522041
Row	async-overlapped	25	2700	0.00119556	0.0000200286	24.58808844	0.003309040793	10.10280547	0.4041122189
Block	async-overlapped	9	2700	0.003321	0.0000200286	8.946047334	0.02835645014	1.178941485	0.1309934983
Block	async-overlapped	25	2700	0.00119556	0.0000200286	24.58808844	0.004420017821	7.563452633	0.3025381053
Serial	none	1	5400	0.119556	0	-	0.1357311835	-	-
Row	async-overlapped	9	5400	0.013284	0.0000400572	8.972942566	0.08093484275	1.677042654	0.1863380726
Row	async-overlapped	25	5400	0.00478224	0.0000400572	24.79233341	0.009785168157	13.87111405	0.5548445618
Block	async-overlapped	9	5400	0.013284	0.0000400572	8.972942566	0.04125704364	3.289891167	0.365543463
Block	async-overlapped	25	5400	0.00478224	0.0000400572	24.79233341	0.01893297895	7.169034721	0.2867613888
Serial	none	1	9000	0.3321	0	-	1.029113724	-	-
Row	async-overlapped	9	9000	0.0369	0.000066762	8.983745993	0.09215478849	11.16723006	1.24080334
Row	async-overlapped	25	9000	0.013284	0.000066762	24.87498466	0.1135512767	9.062986822	0.3625194729
Block	async-overlapped	9	9000	0.0369	0.000066762	8.983745993	0.08944150499	11.5059974	1.278444156
Block	async-overlapped	25	9000	0.013284	0.000066762	24.87498466	0.06146253321	16.74375706	0.6697502823
Serial	none	1	12600	0.650916	0	-	2.018465143	-	-
Row	async-overlapped	9	12600	0.072324	0.0000934668	8.988384001	0.1809005713	11.15787047	1.239763386
Row	async-overlapped	25	12600	0.02603664	0.0000934668	24.91057557	0.1603833082	12.58525694	0.5034102778
Block	async-overlapped	9	12600	0.072324	0.0000934668	8.988384001	0.1768903334	11.41082786	1.267869762
Block	async-overlapped	25	12600	0.02603664	0.0000934668	24.91057557	0.1031347964	19.57113617	0.7828454467
ta	0.0000000041								
ts	0.000004685								
tc	0.000000003709								