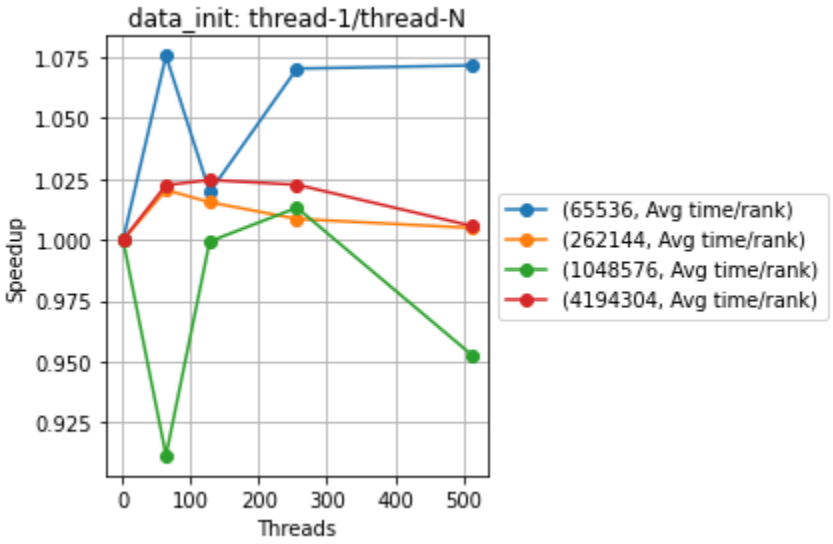
Bitonic Sort

CUDA

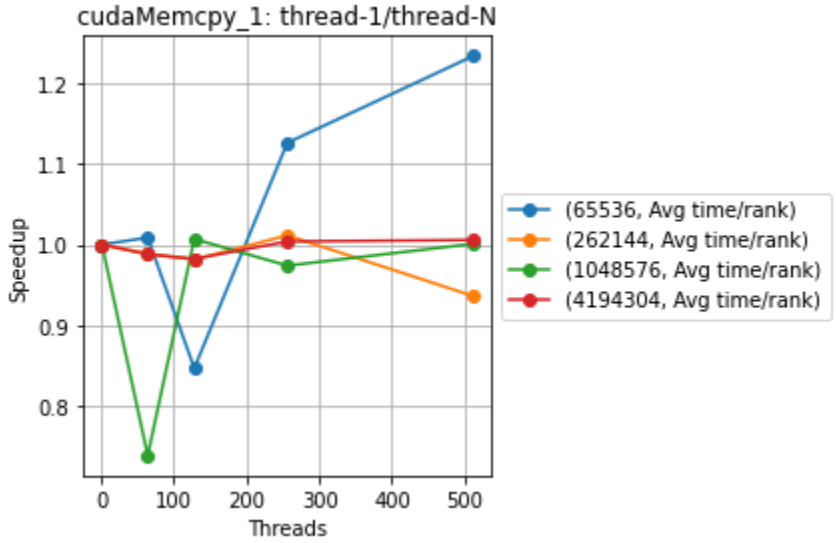
Random input

Speedup:

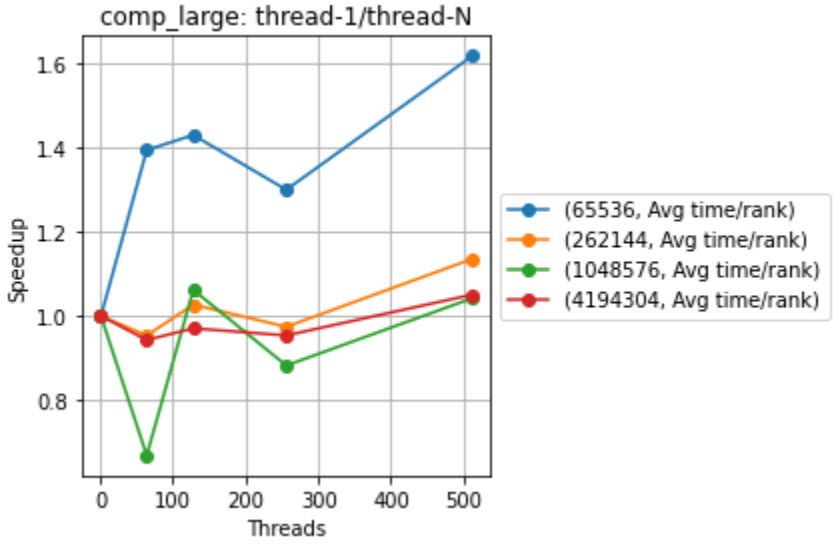
1. Data init



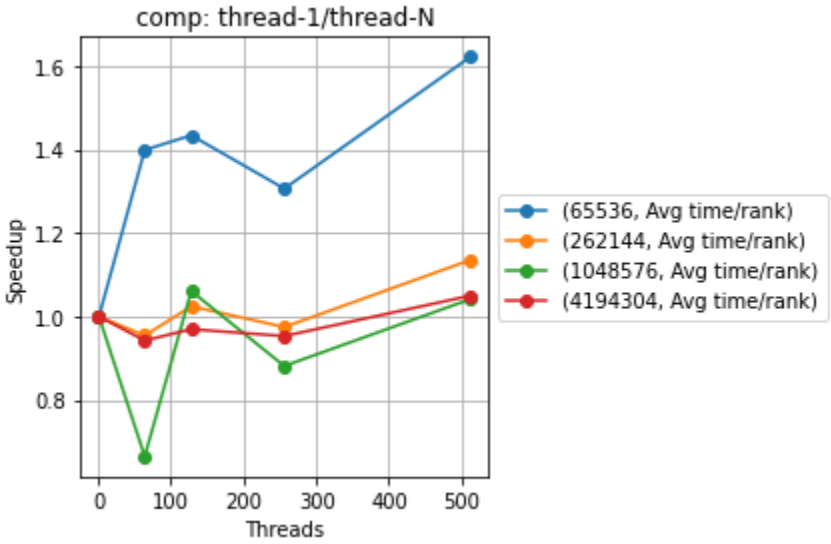
2. cudaMemcpy_1



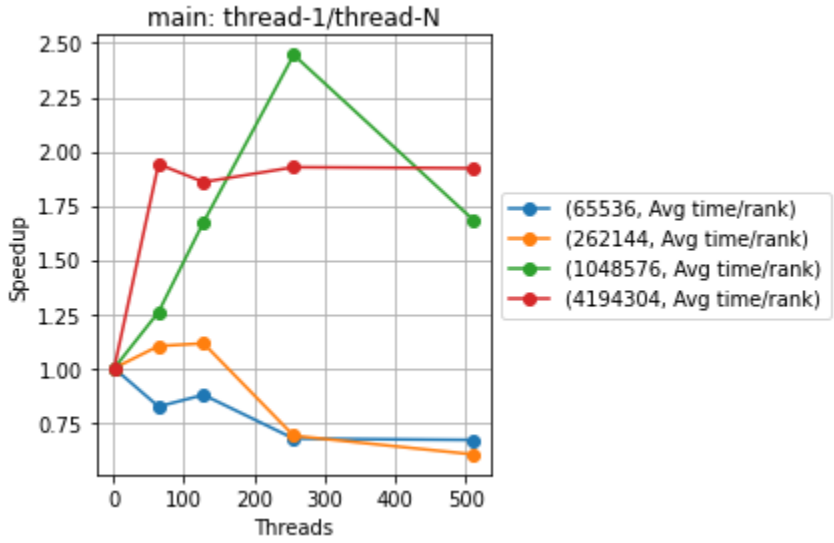
3. Comp_large



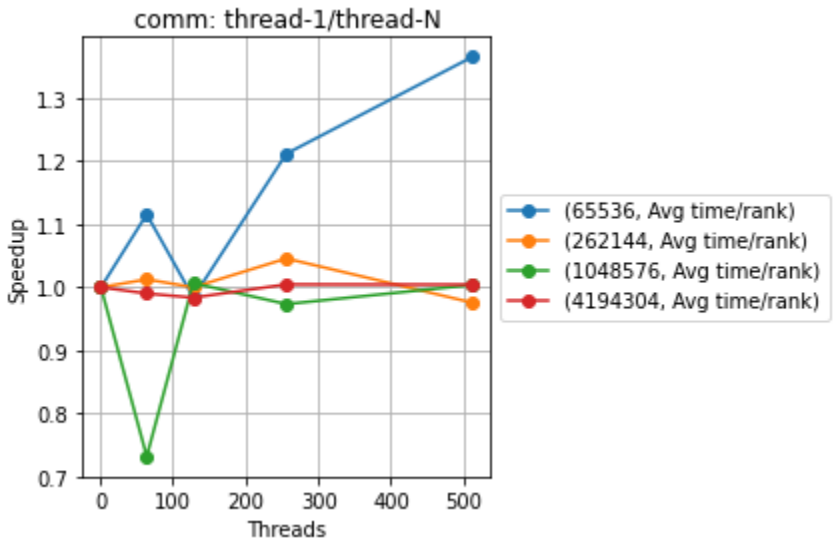
4. Comp



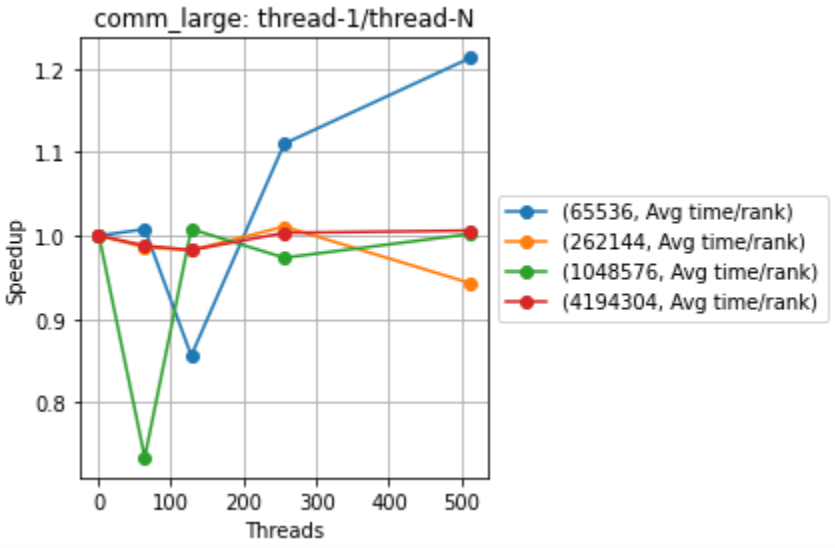
5. Main



6. Comm

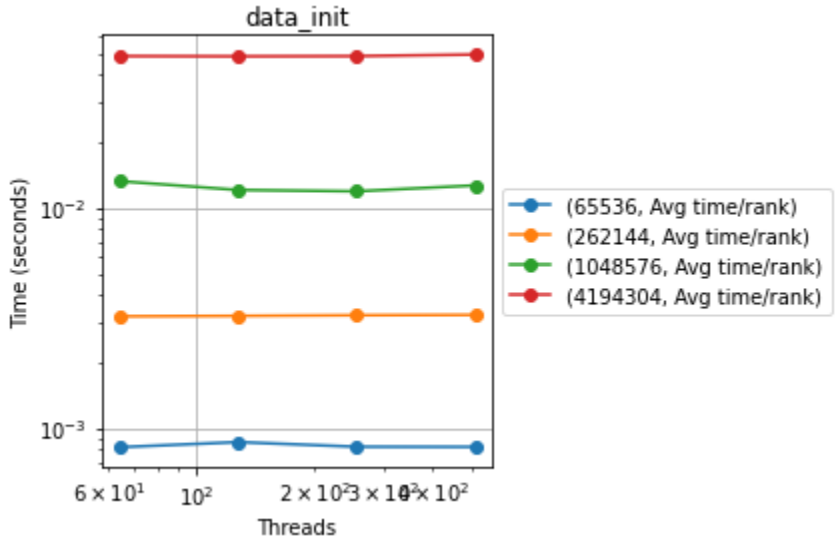


7. Comm_large

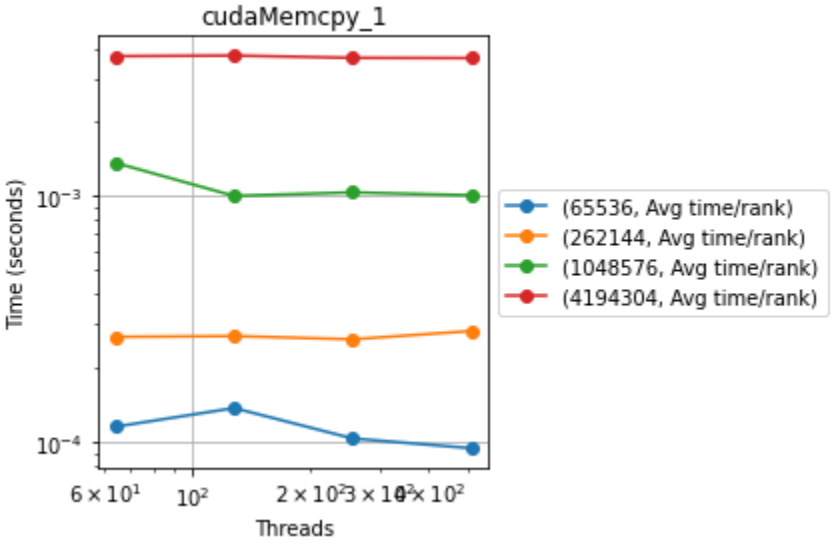


Weak Scaling

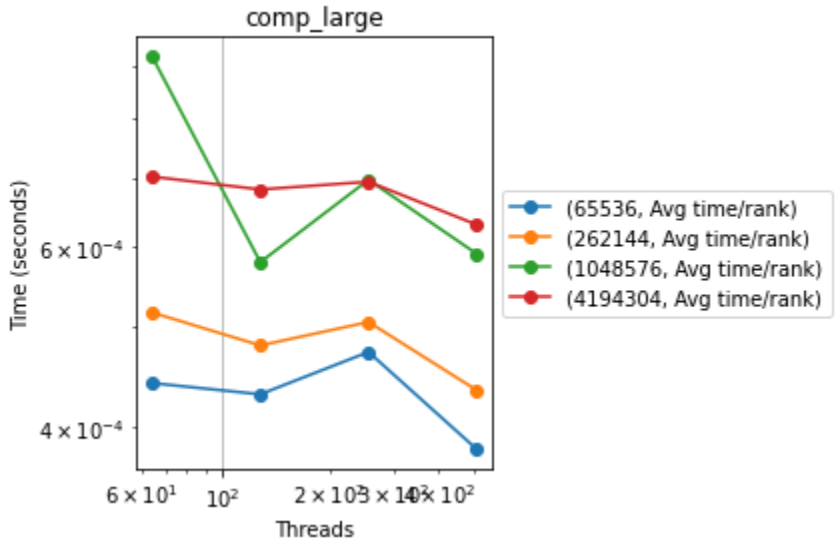
1. Data init



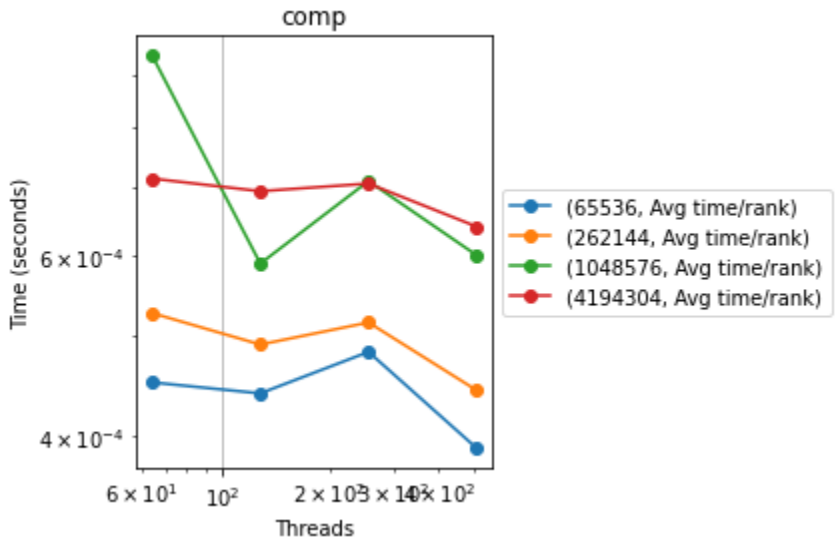
2. cudaMemcpy_1



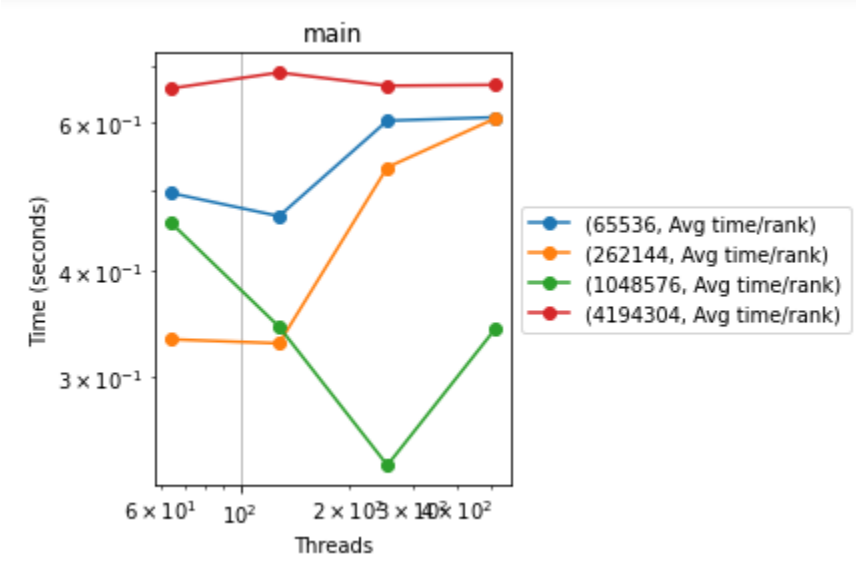
3. Comp_large



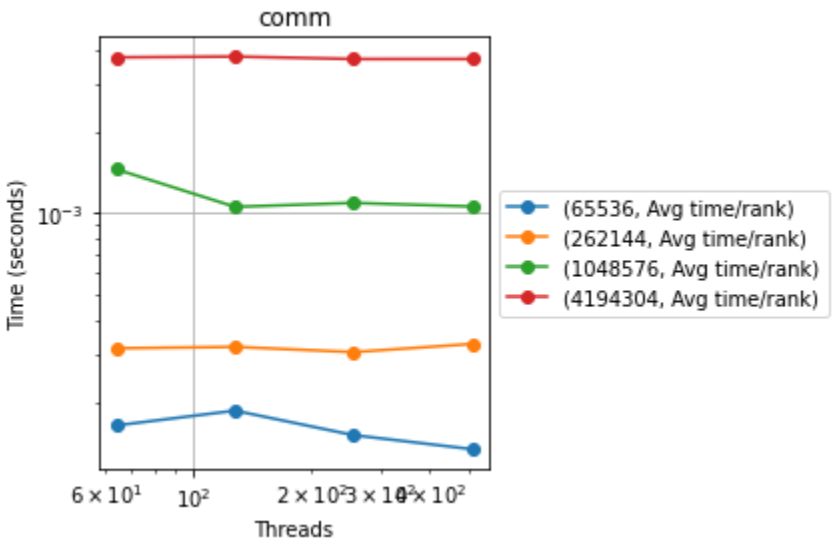
4. Comp



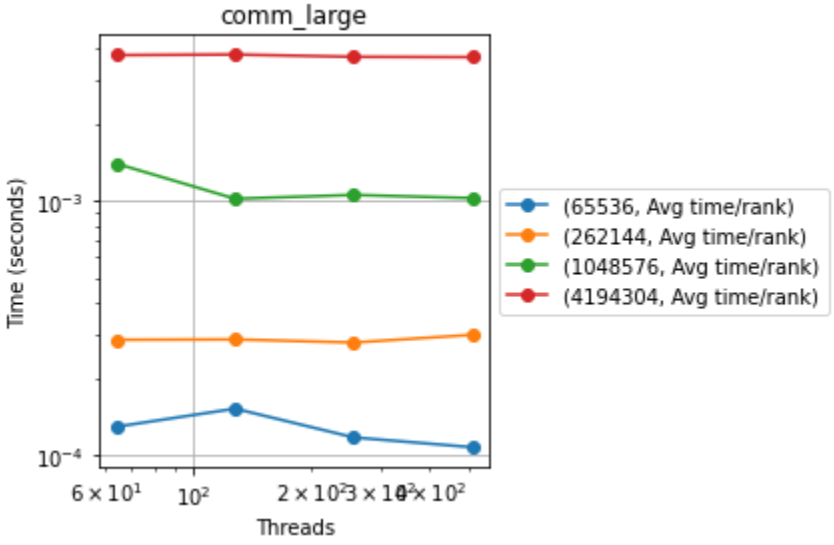
5. Main



6. Comm

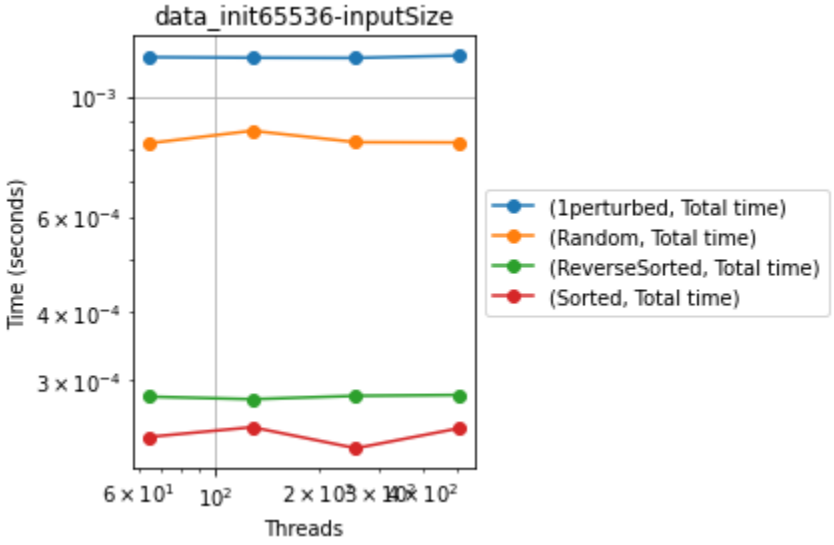


7. Comm_large

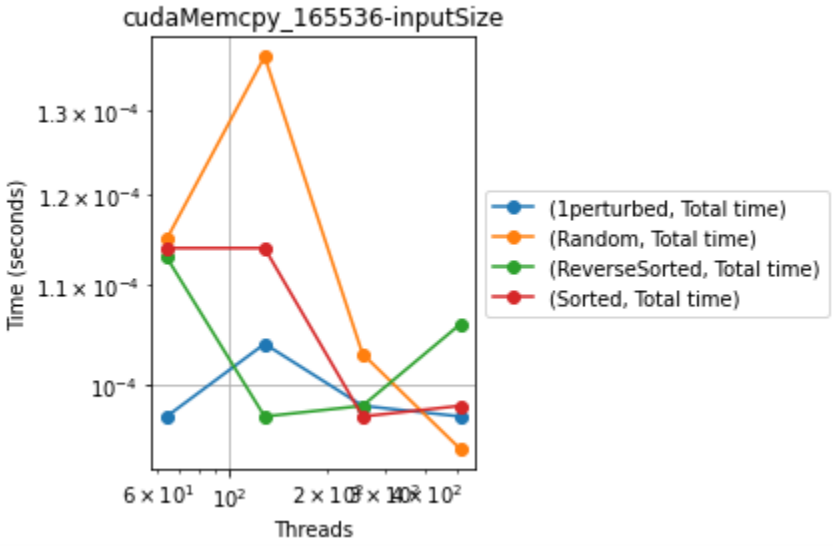


Strong Scaling inputSize=65536

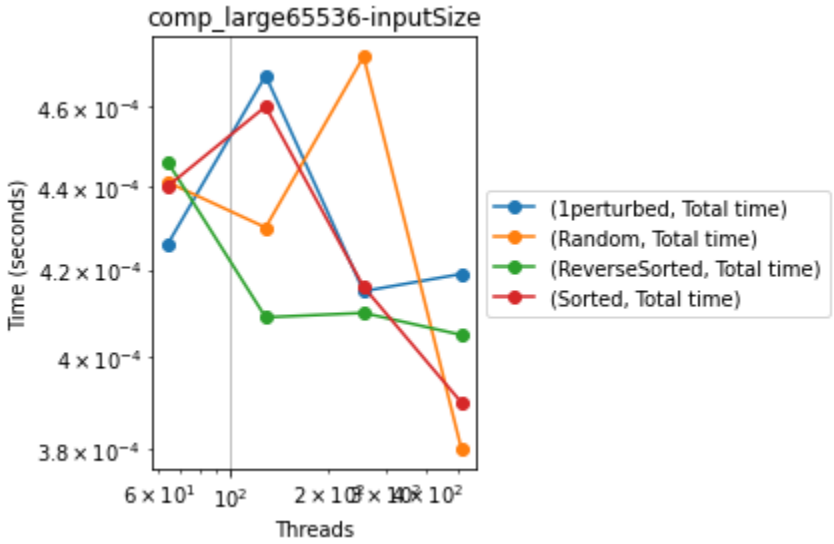
1. Data init



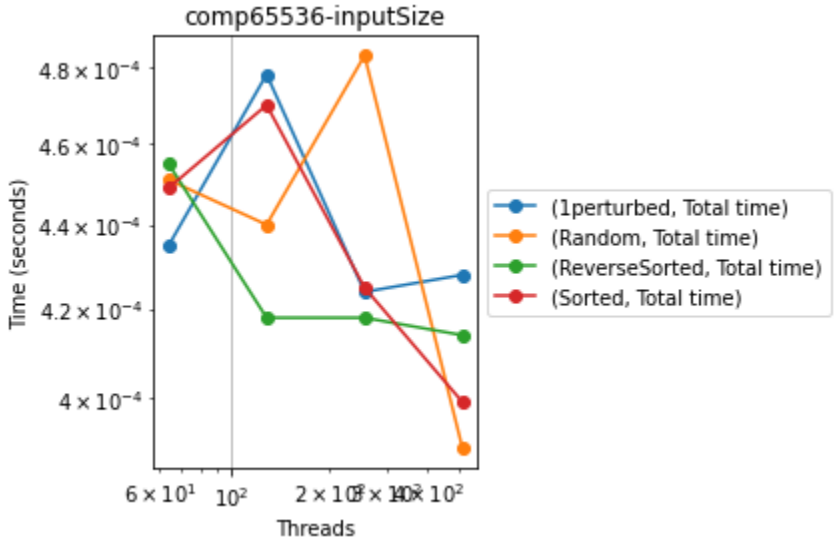
2. cudaMemcpy_1



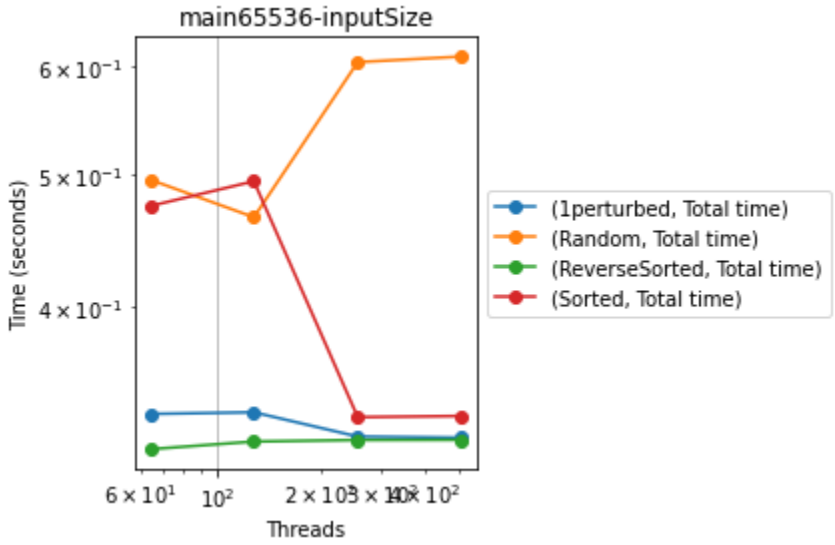
3. Comp_large



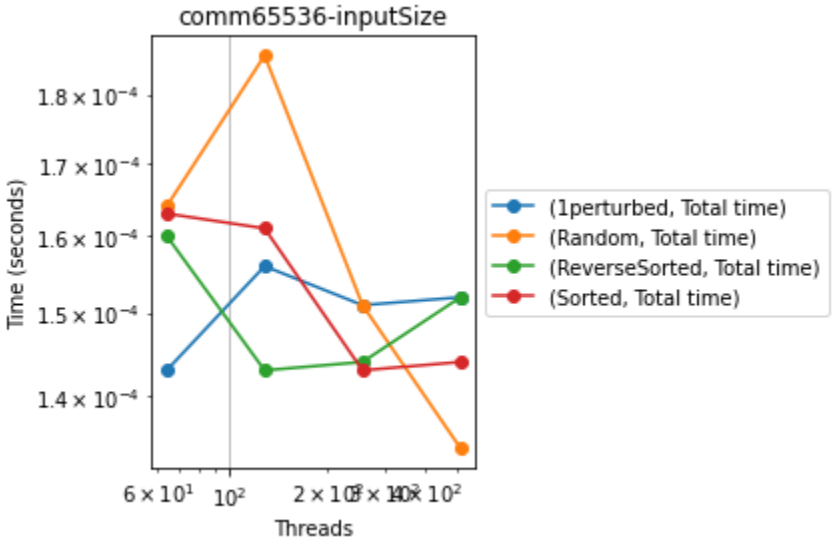
4. Comp



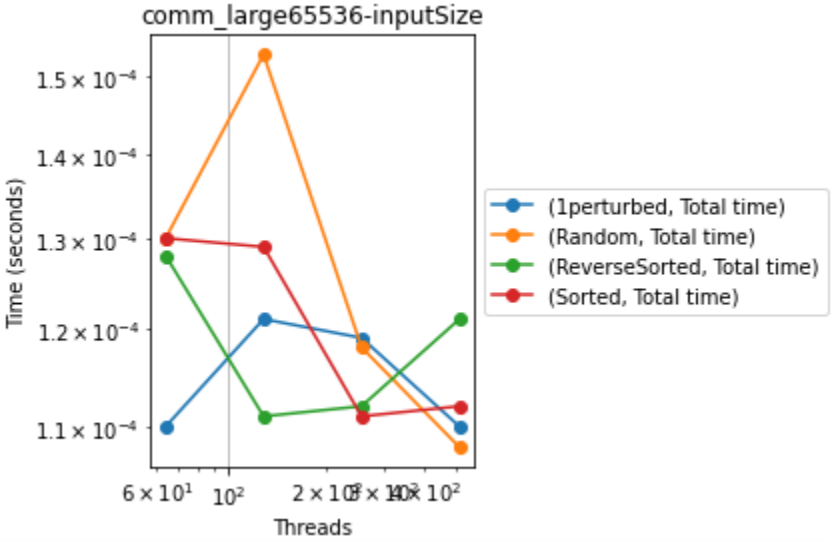
5. Main



6. Comm



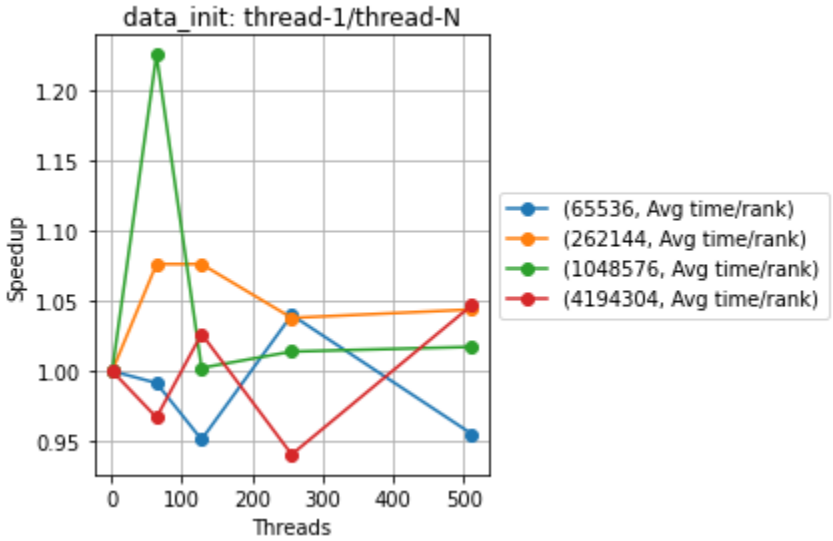
7. Comm_large


comm_large65536-inputSize
Time (seconds)
Threads
(1perturbed, Total time)
(Random, Total time)
(ReverseSorted, Total time)
(Sorted, Total time)

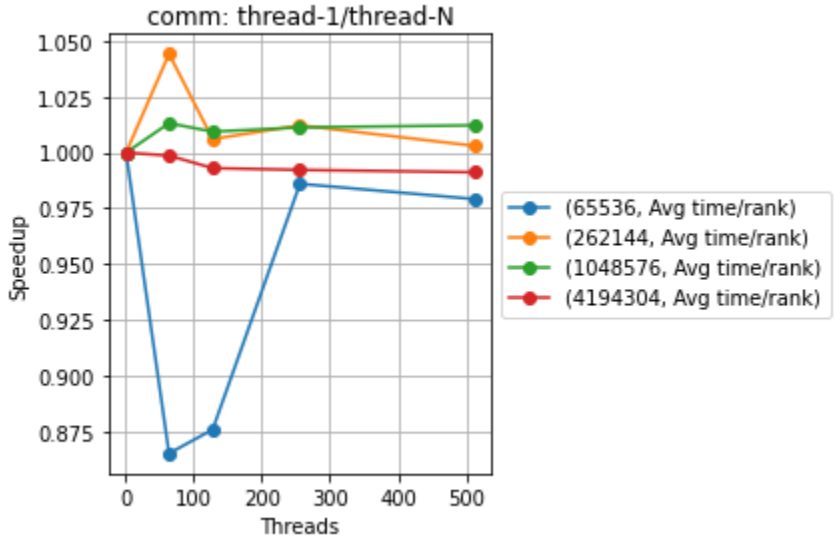
Sorted input

Speedup:

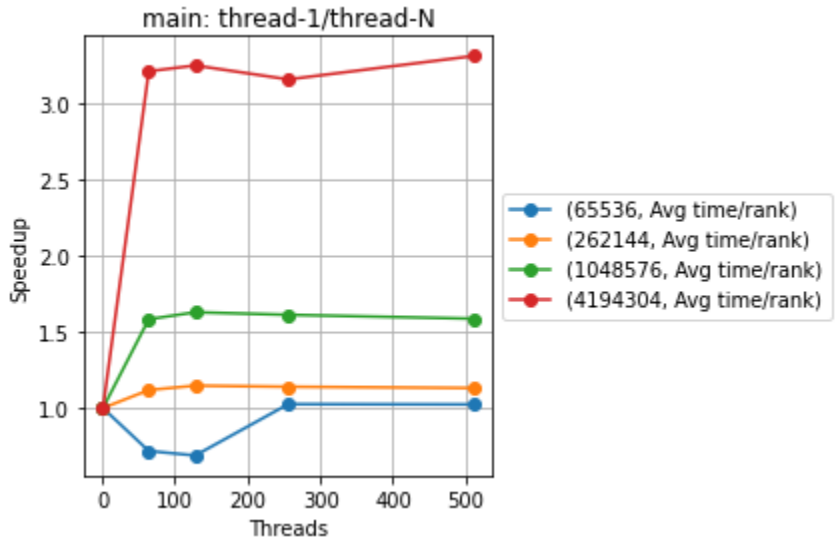
1. Data init



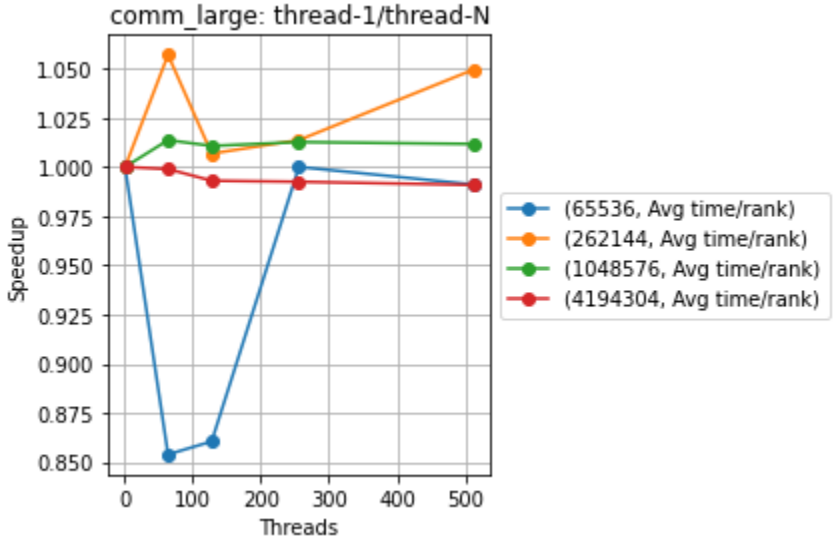
2. Comm



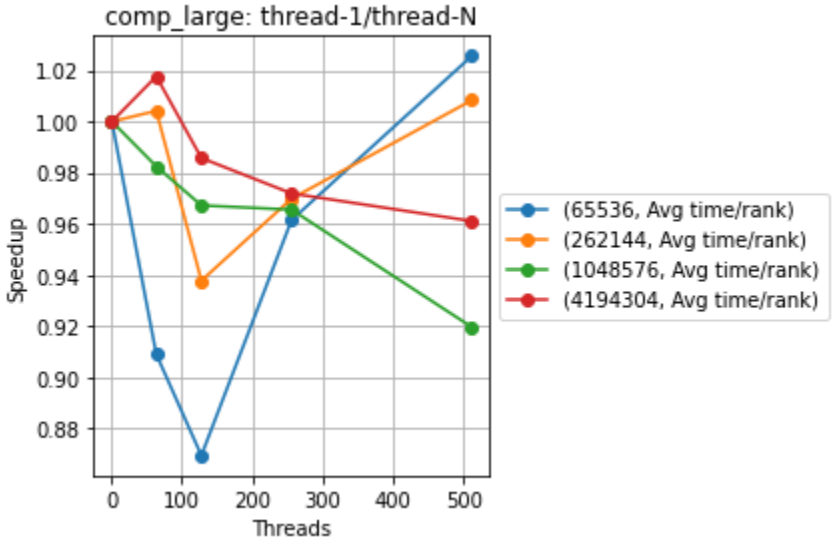
3. Main



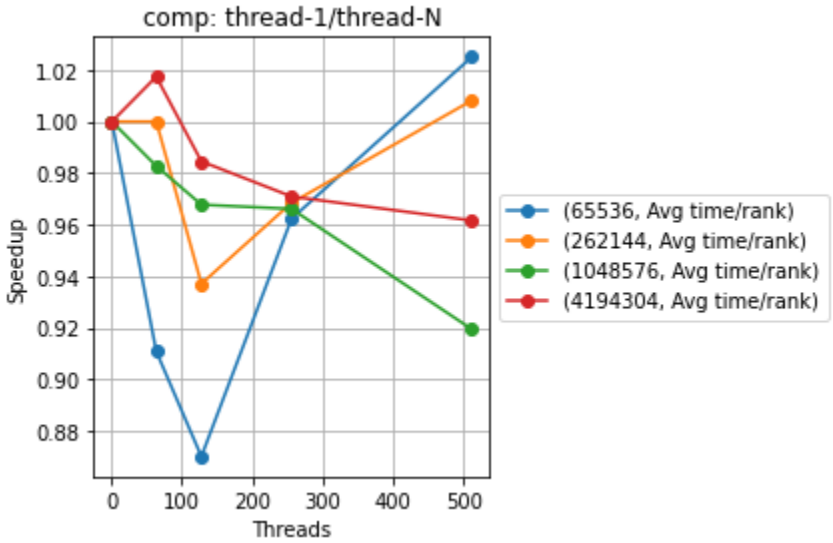
4. Comm large



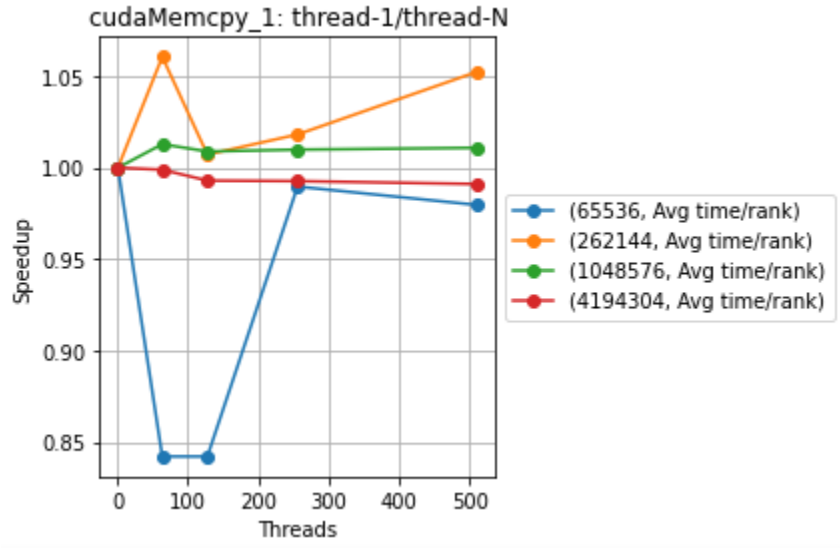
5. Comp large



6. Comp

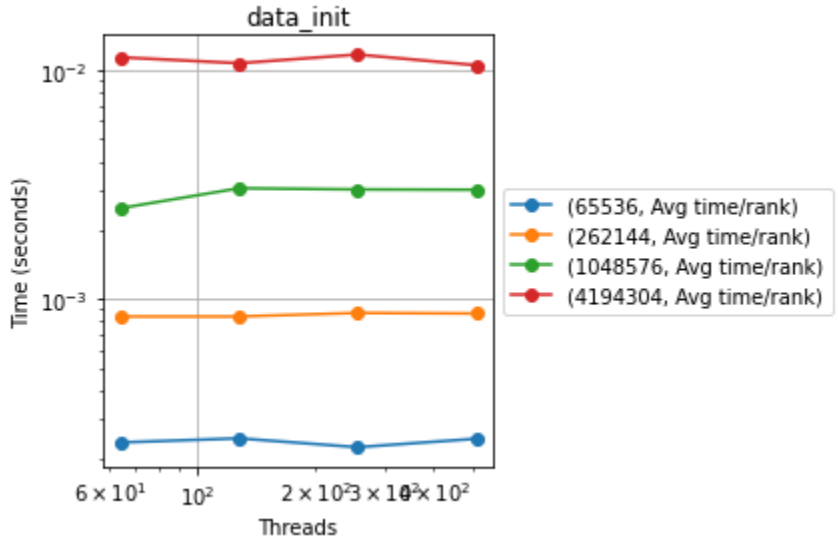


7. Cudamemcpy

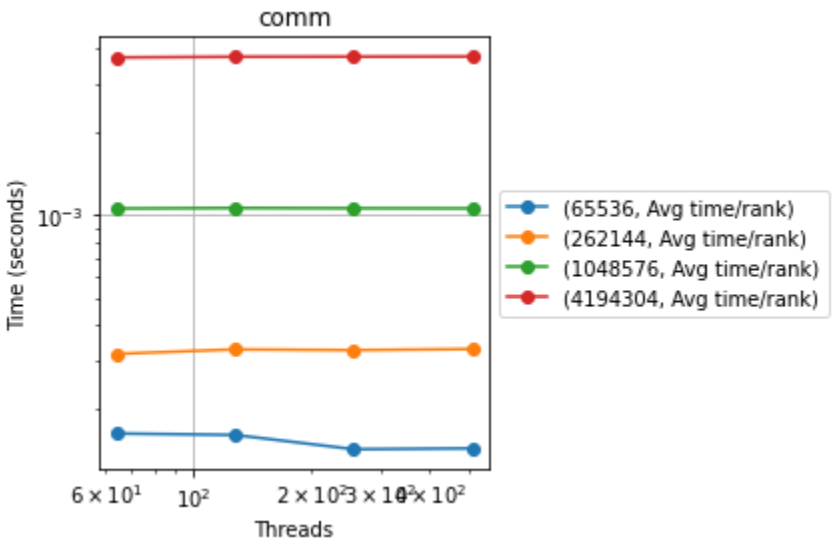


Weak Scaling:

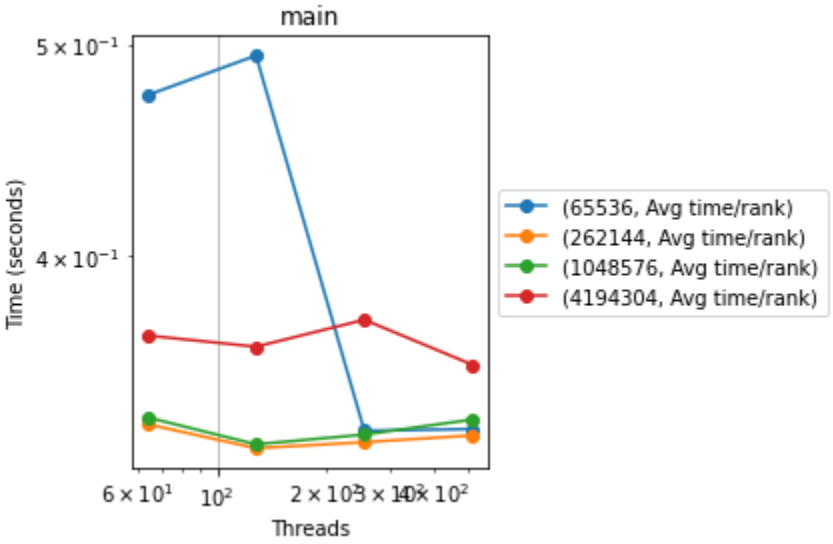
1. Data init



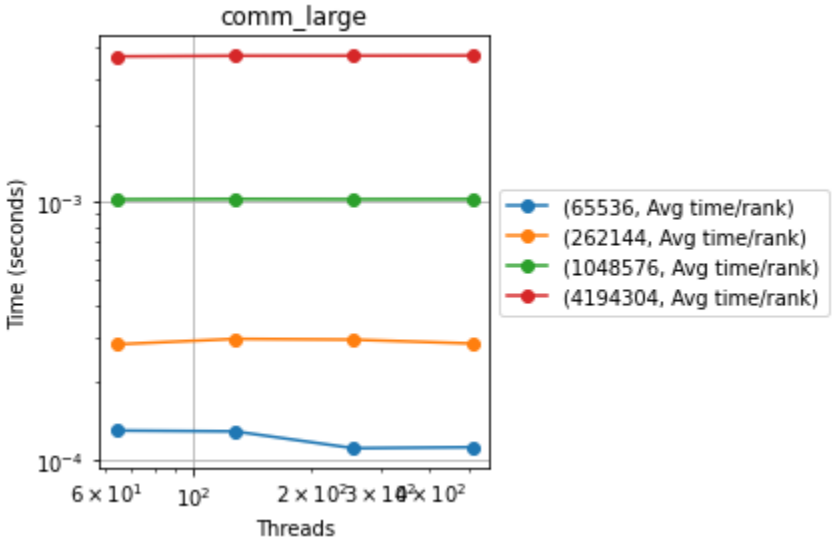
2. Comm



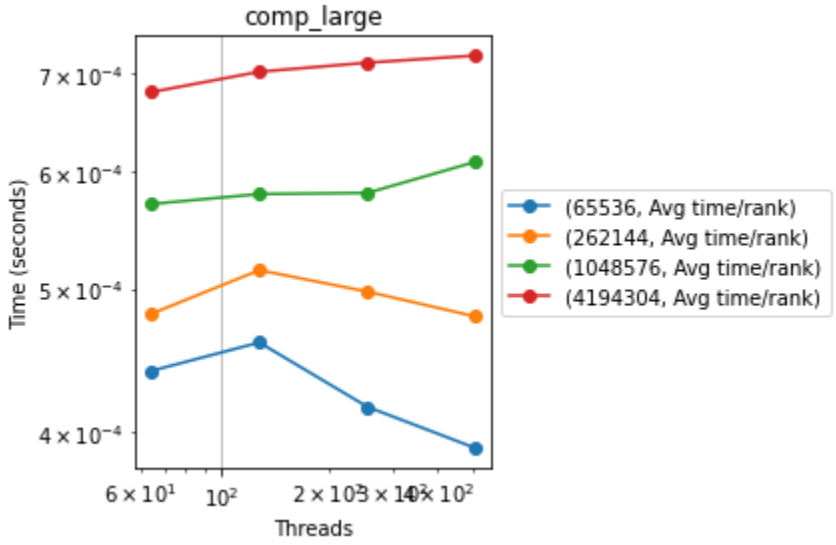
3. Main



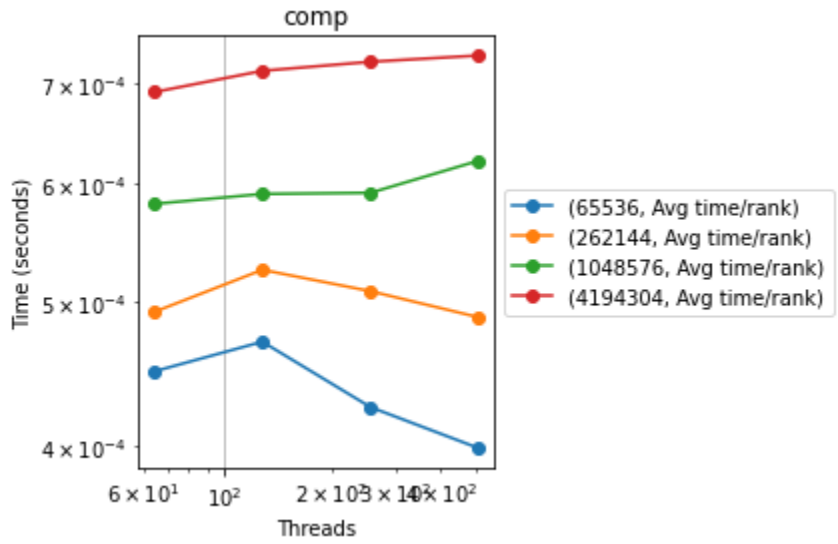
4. Comm large



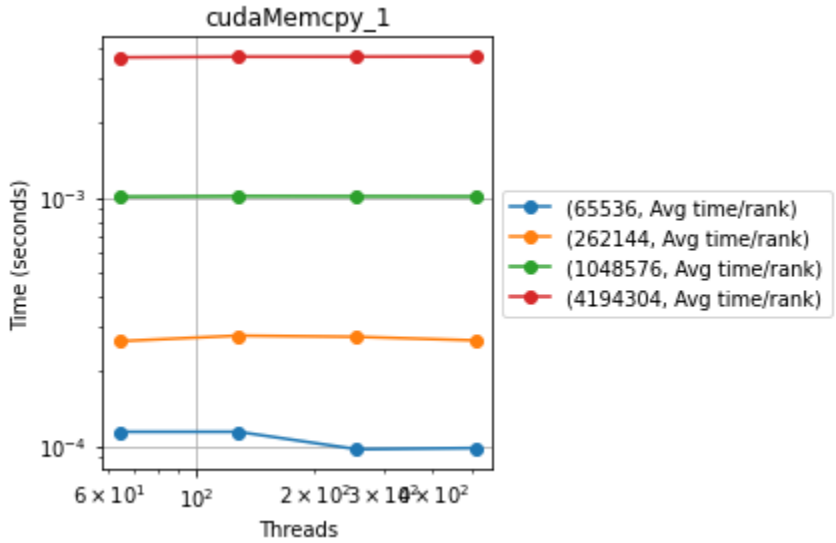
5. Comp large



6. Comp

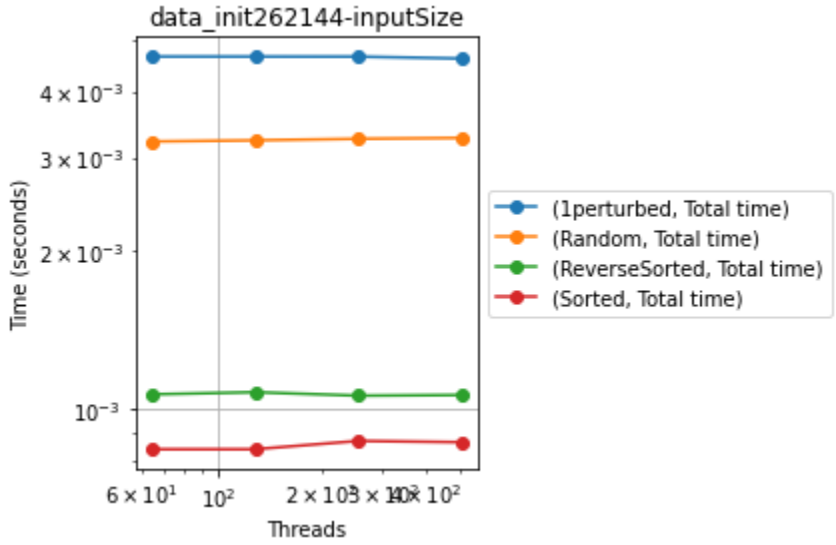


7. Cudamemcpy

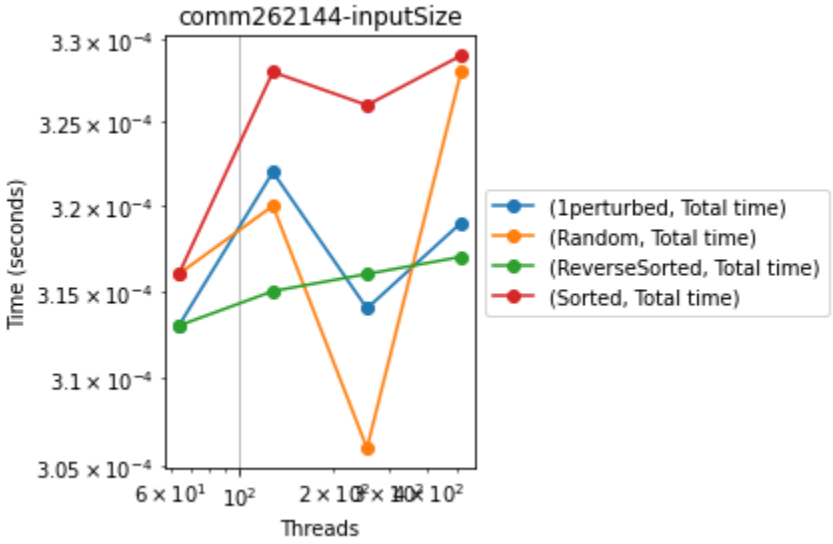


Strong Scaling input=263144:

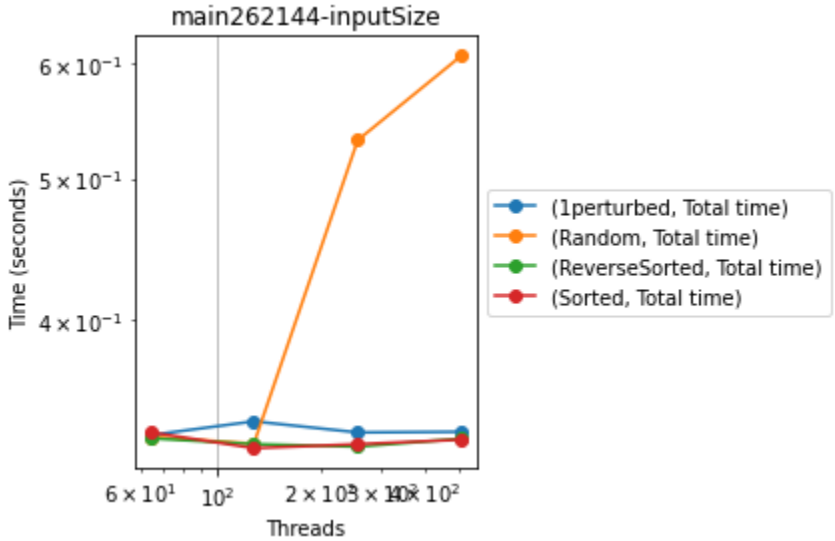
1. Data init



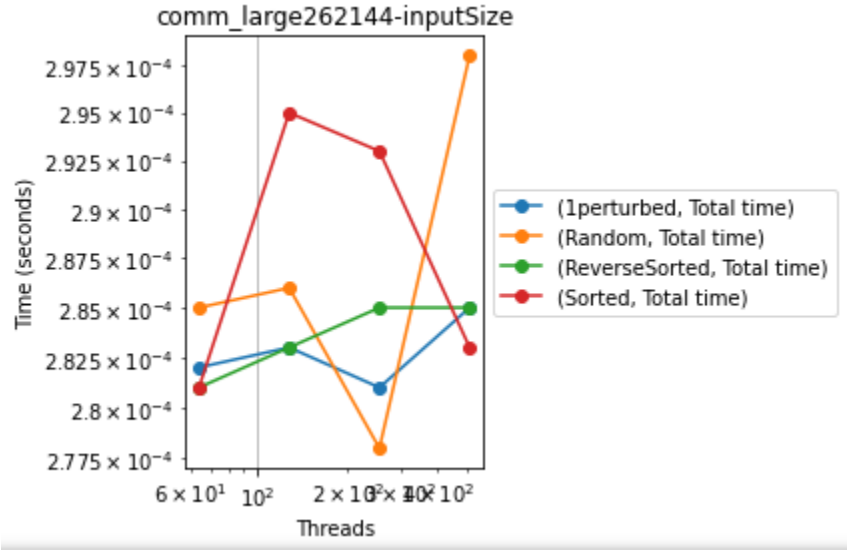
2. Comm



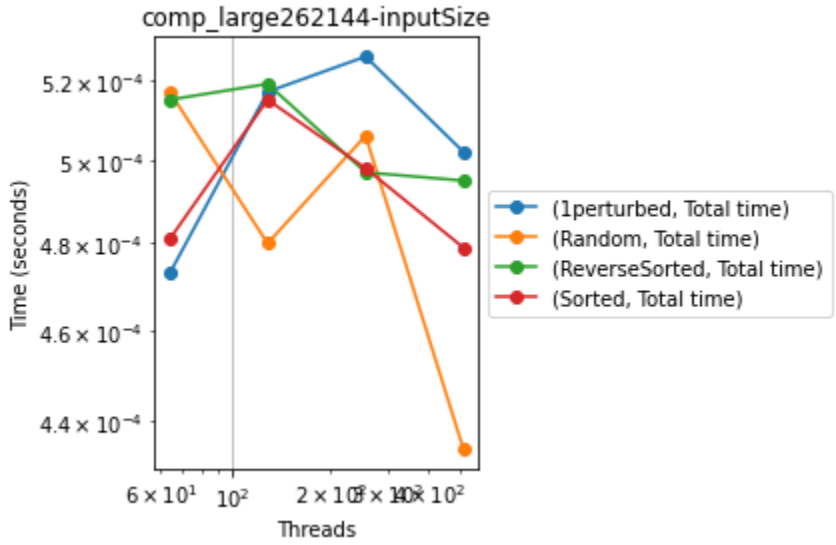
3. Main



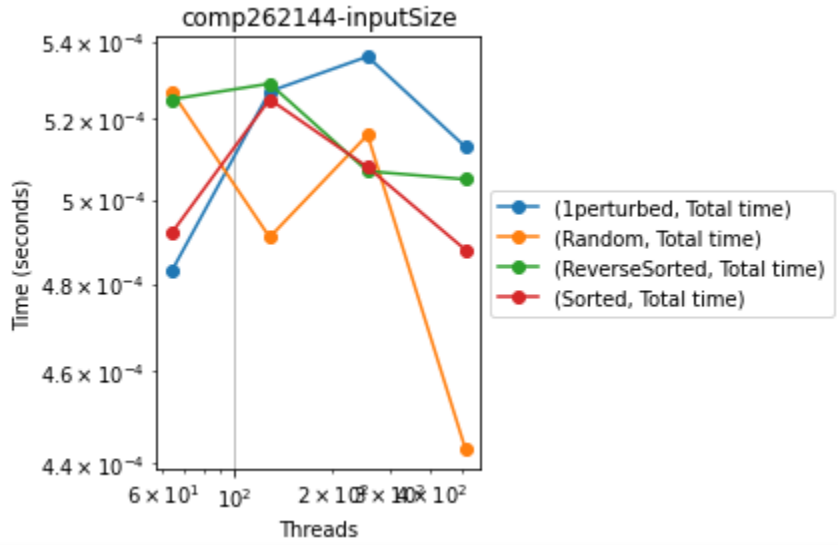
4. Comm large



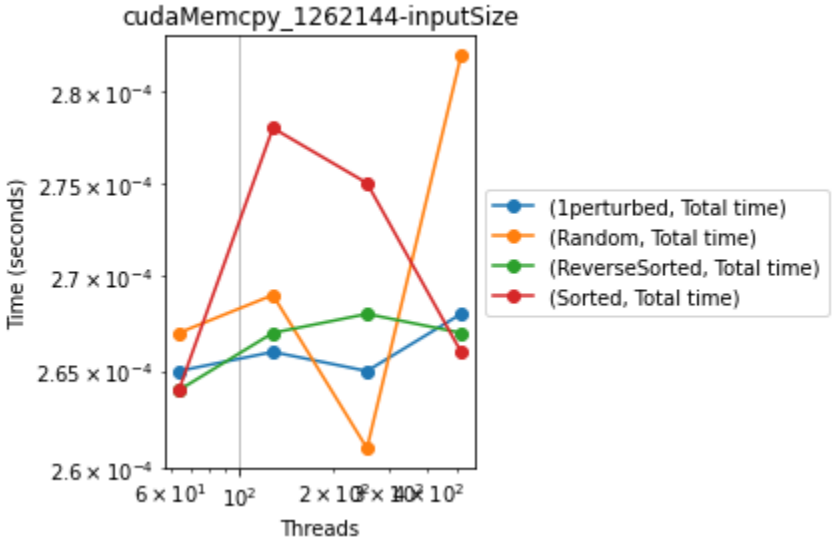
5. Comp large



6. Comp



7. Cudamemcpy

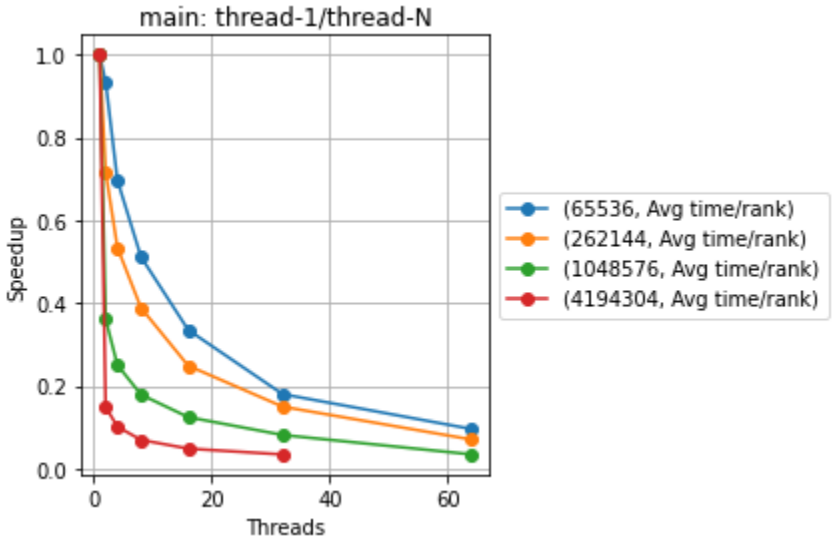

cudaMemcpy_1262144-inputSize
Time (seconds)
Threads
(1perturbed, Total time)
(Random, Total time)
(ReverseSorted, Total time)
(Sorted, Total time)

MPI

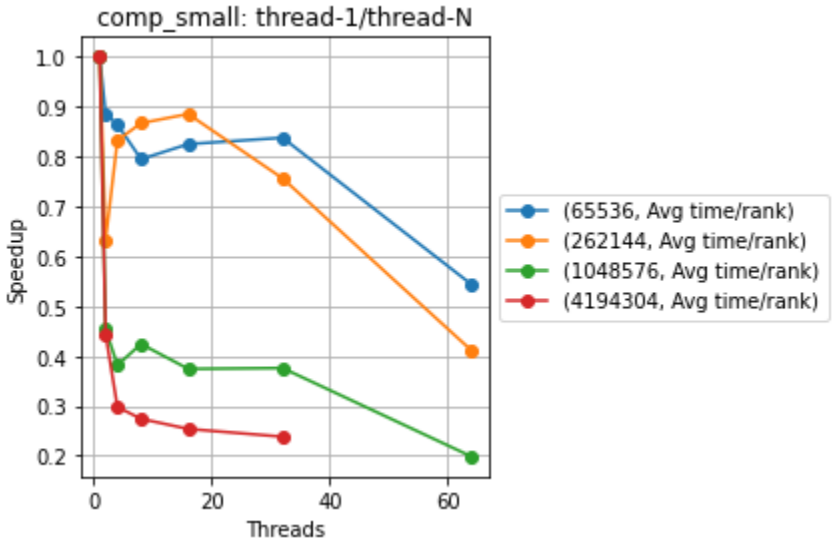
Random input

Speedup:

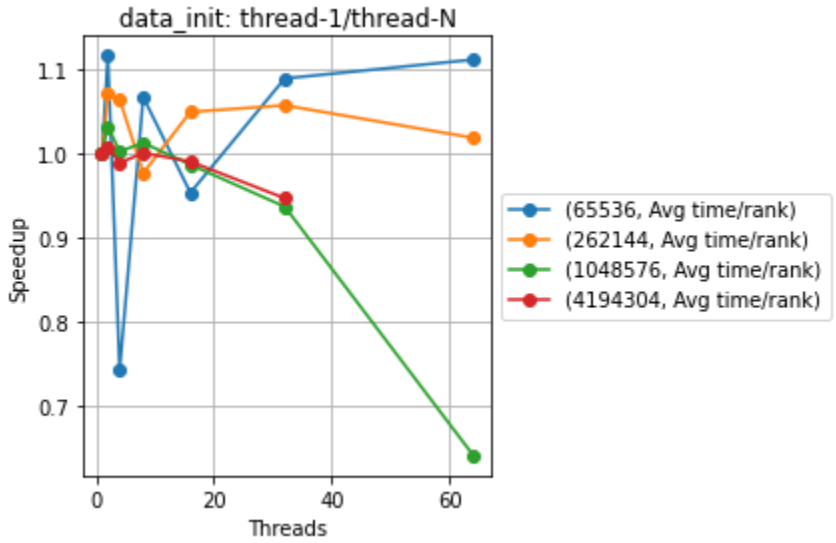
1. Main



2. Comp small

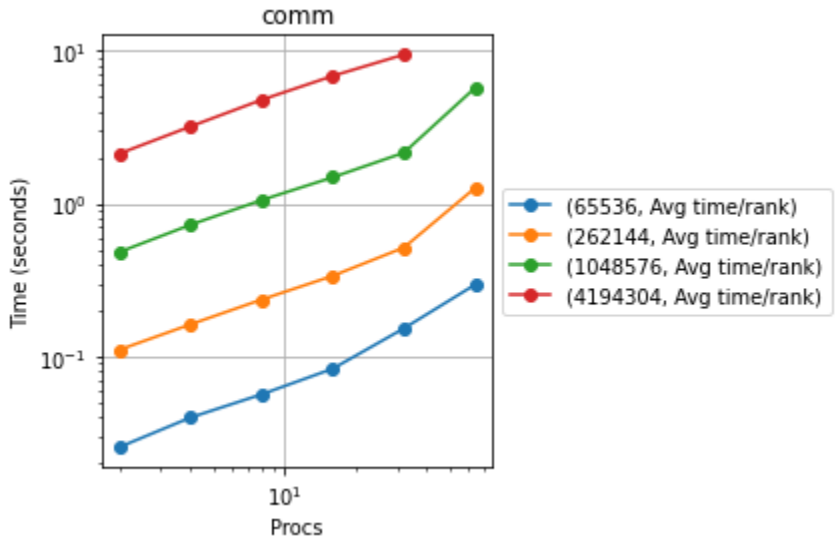


3. Data init

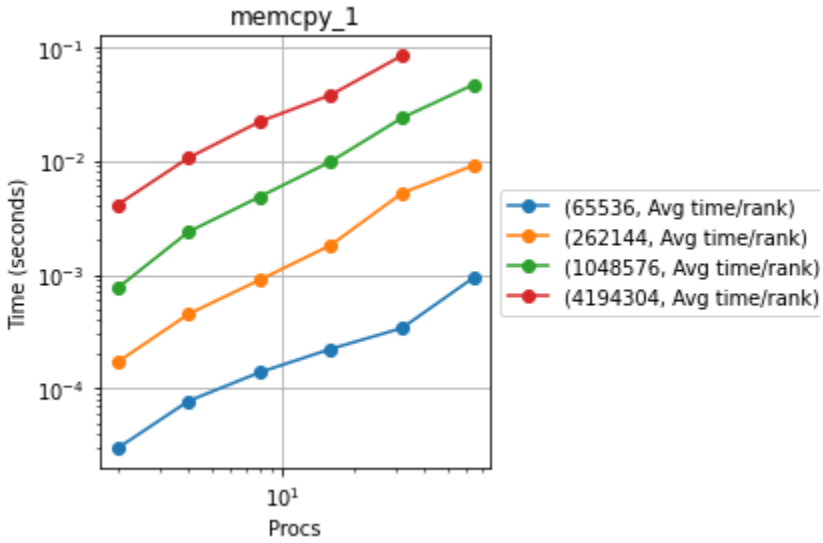


Weak Scaling:

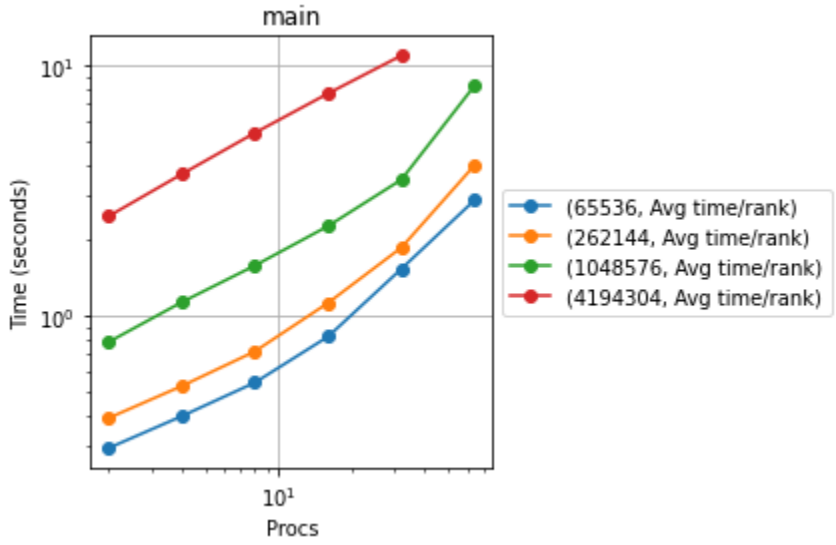
1.comm



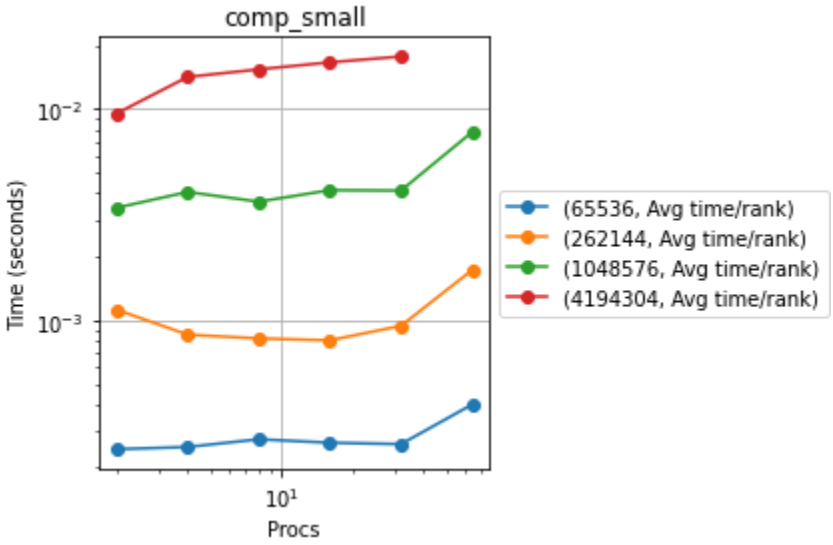
2. Memcpy



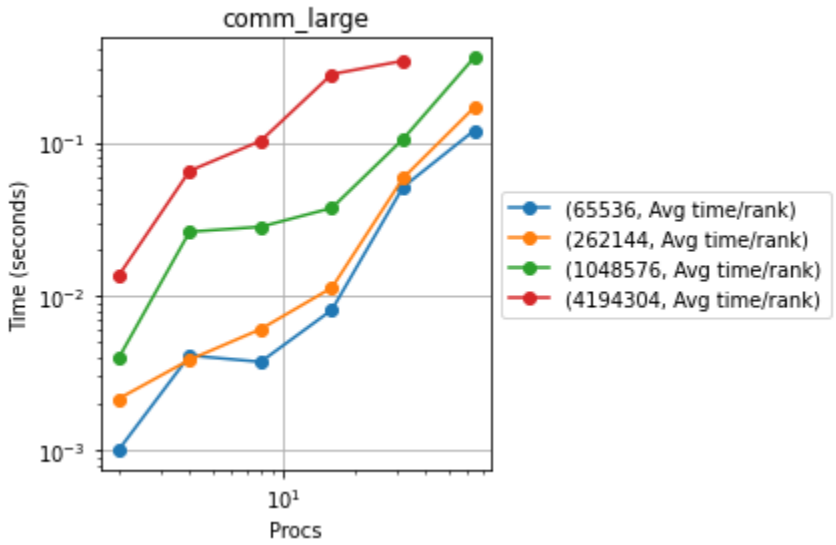
3. main



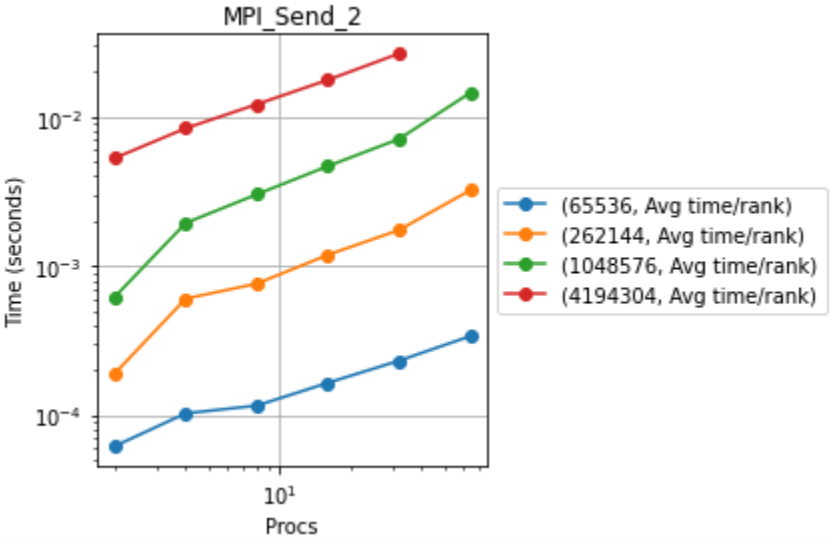
4. Comp small



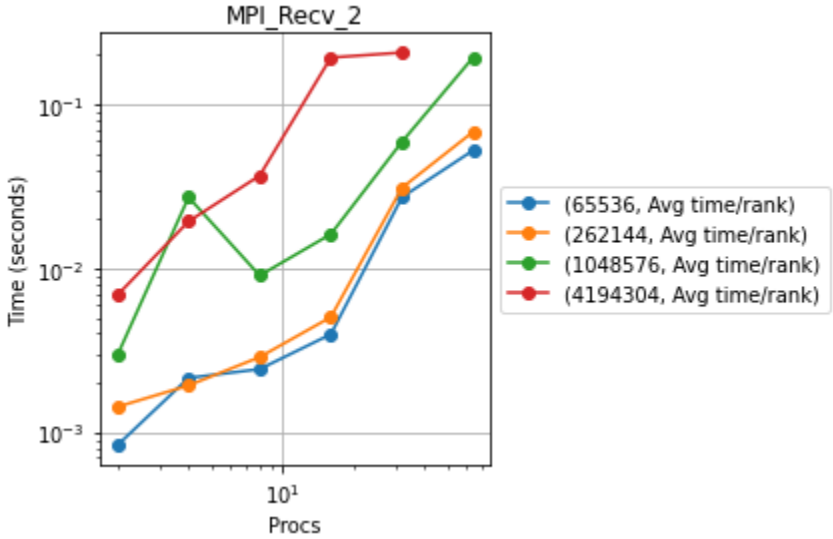
5. Comm large



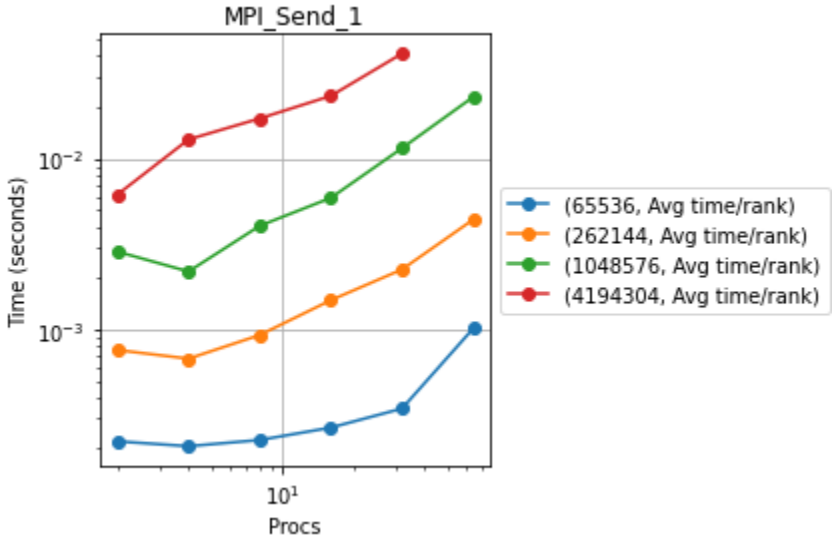
6. Mpi send 2



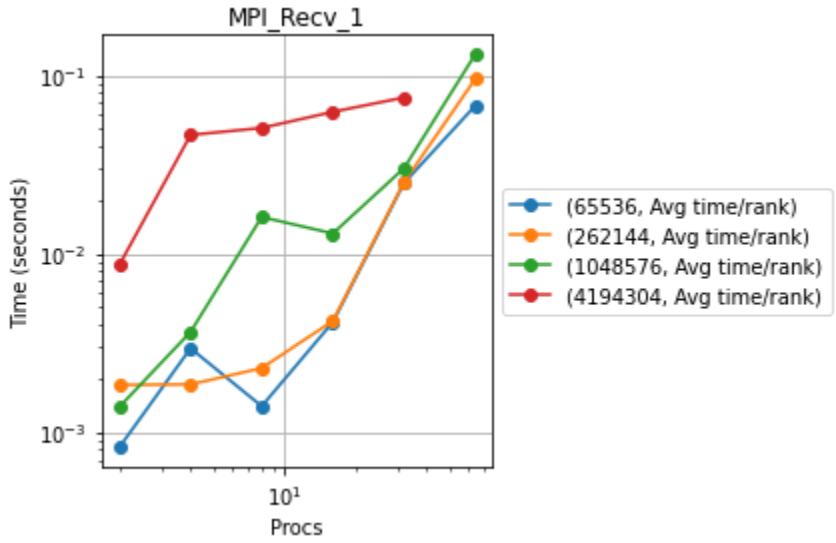
7. Mpi recv 2



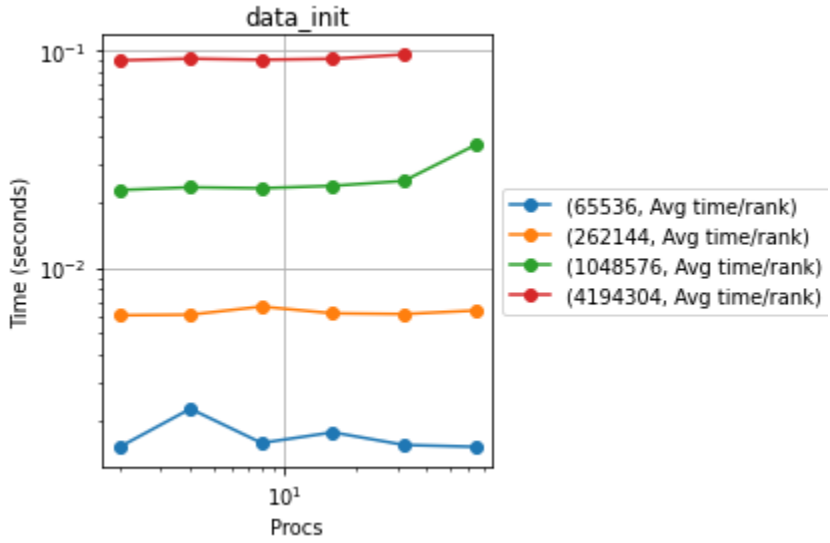
8. Mpi send 1



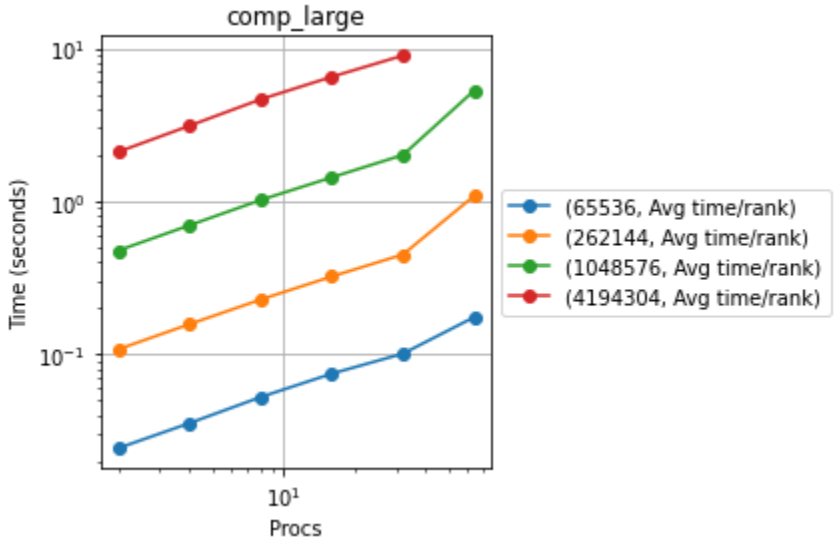
9. Mpi recv 1



10. Data init

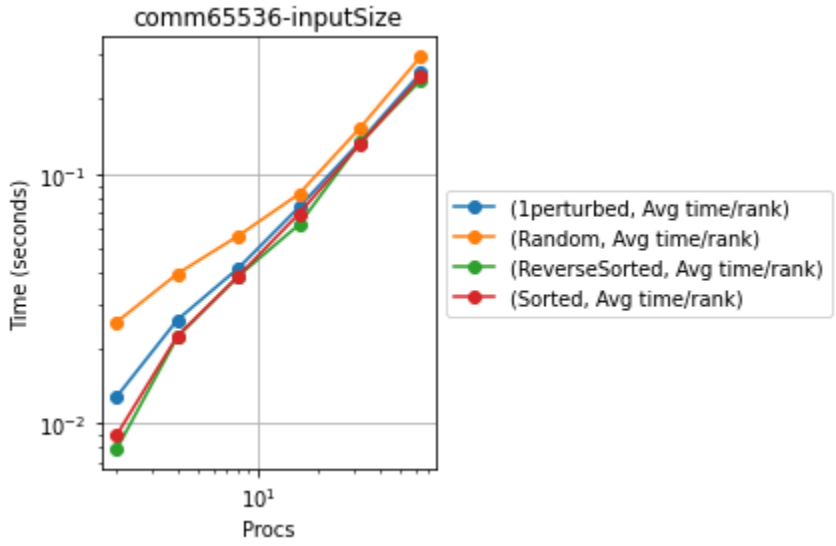


11. Comm large

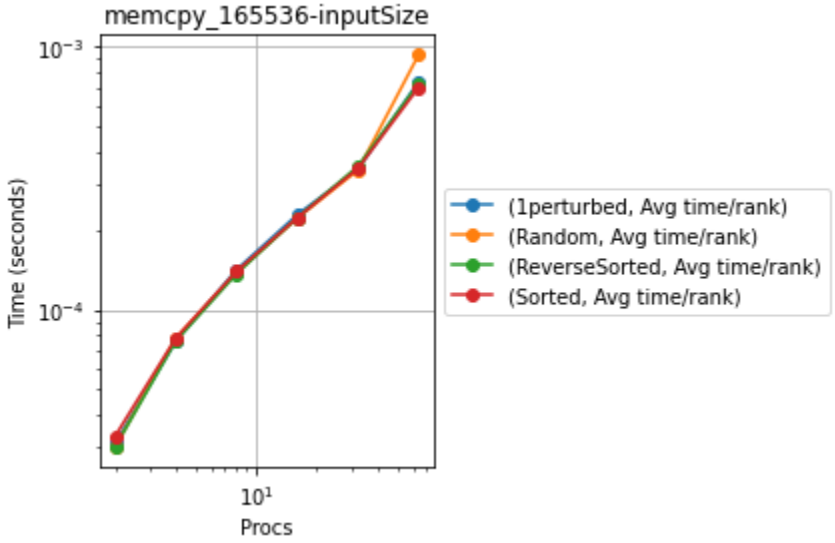


Strong Scaling:

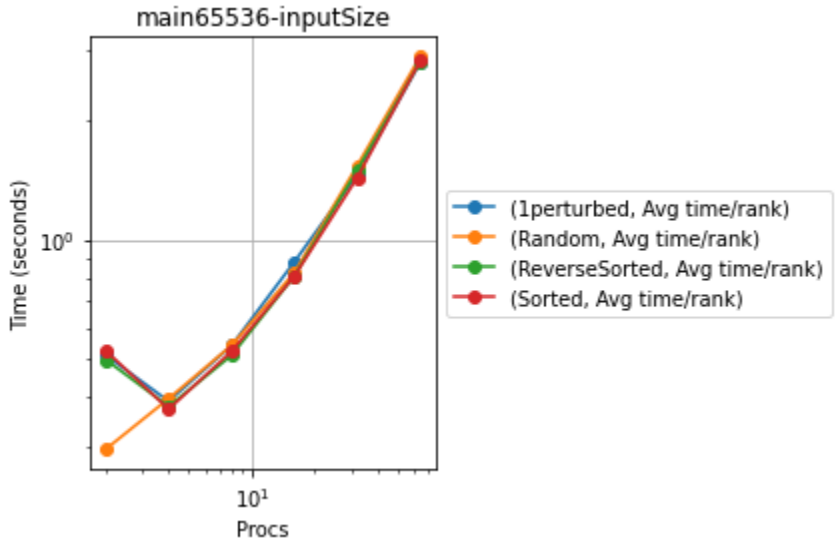
1.comm



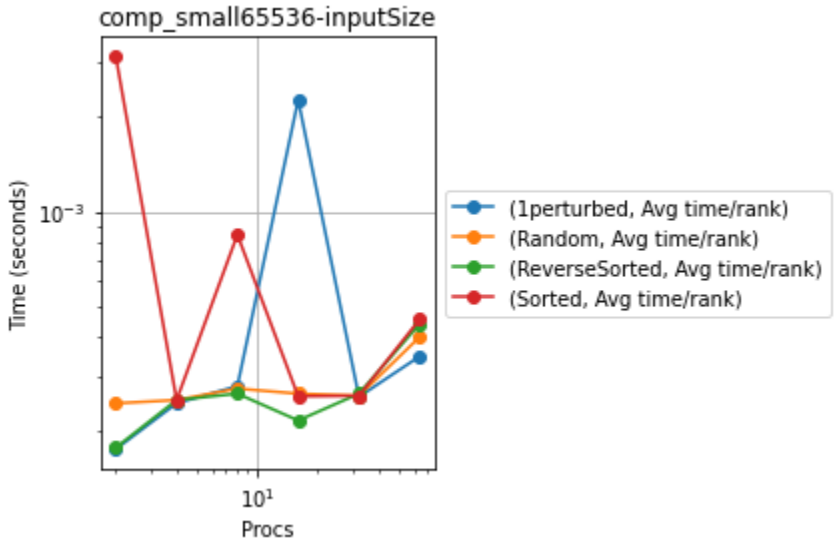
2. Memcpy



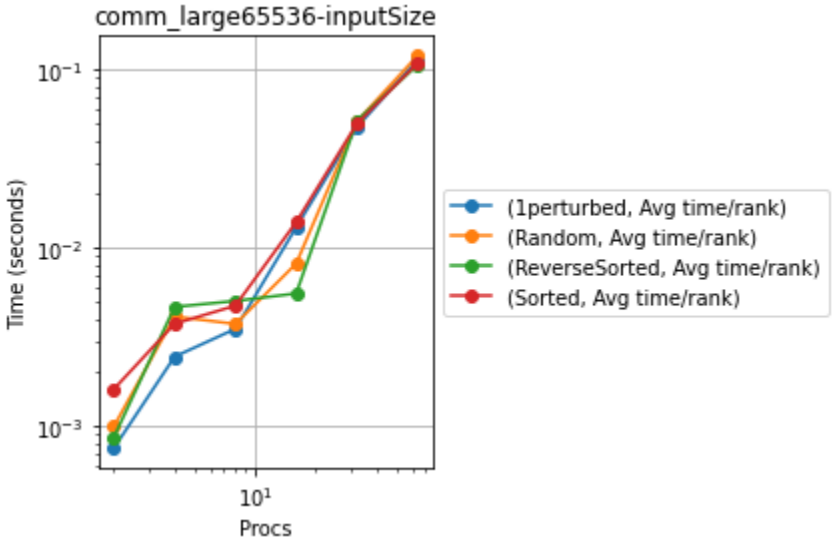
3. main



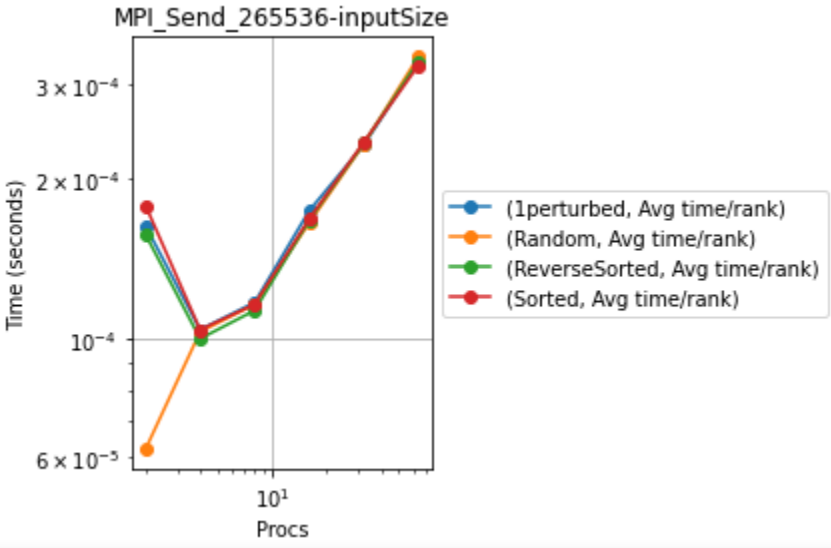
4. Comp small



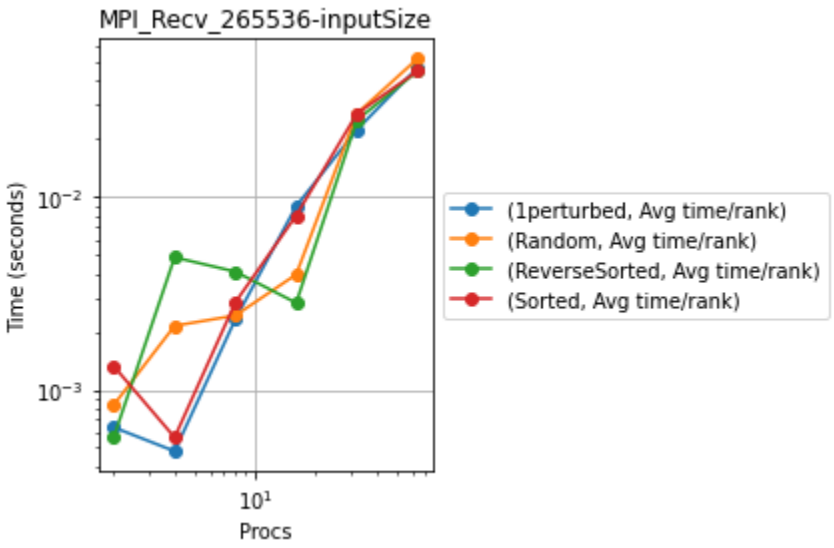
5. Comm large



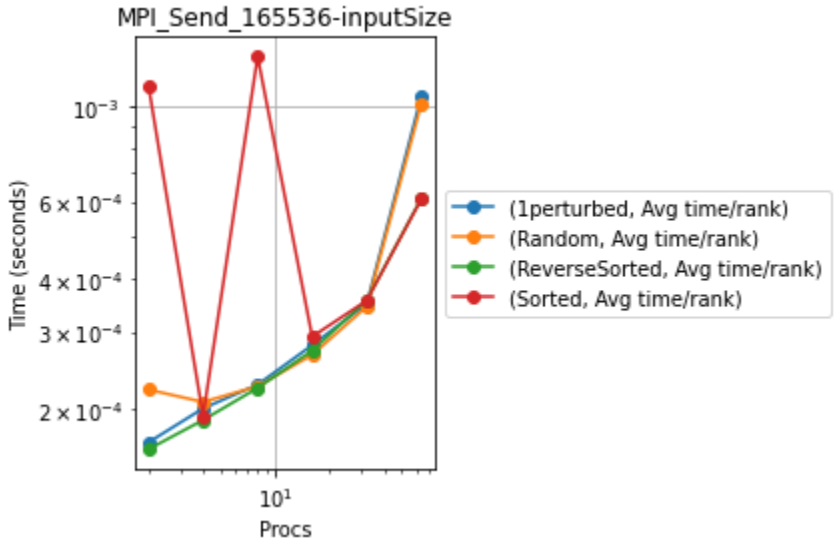
6. Mpi send 2



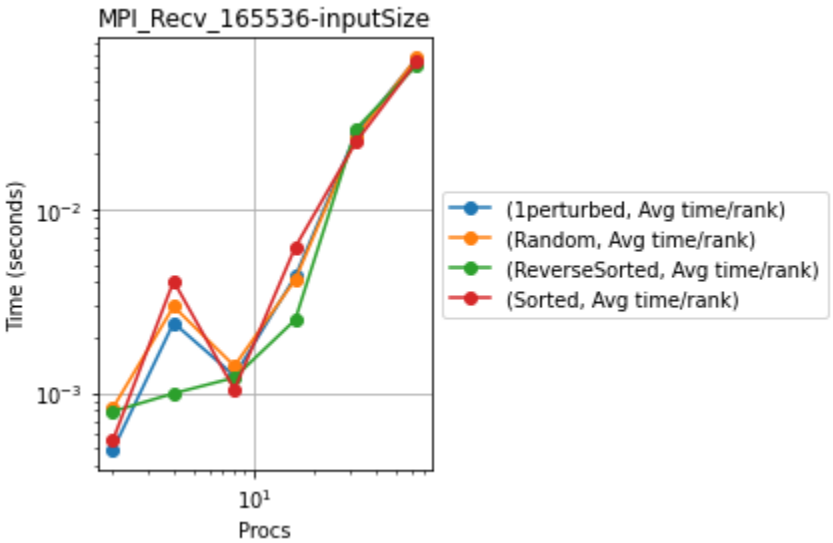
7. Mpi recv 2



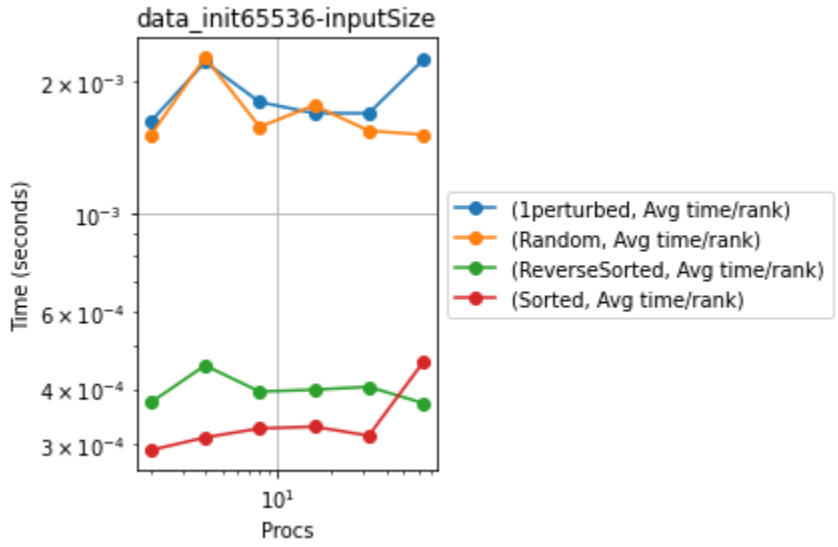
8. Mpi send 1



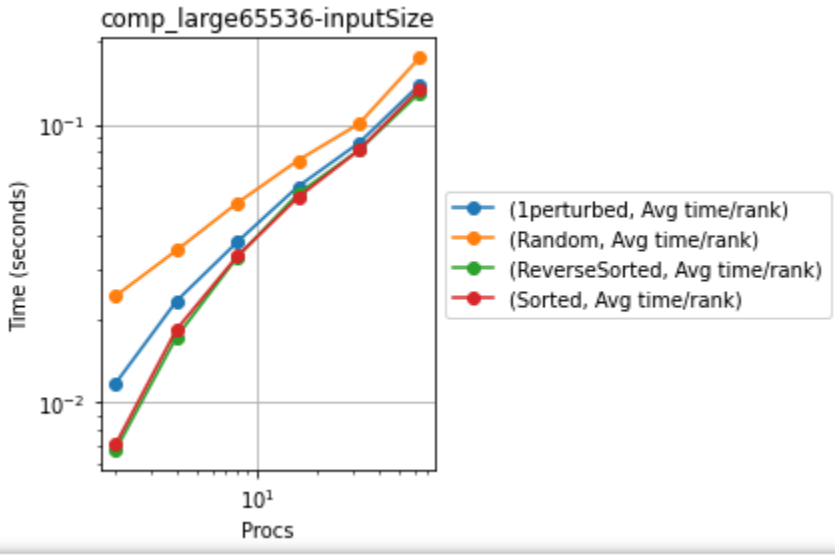
9. Mpi recv 1



10. Data init



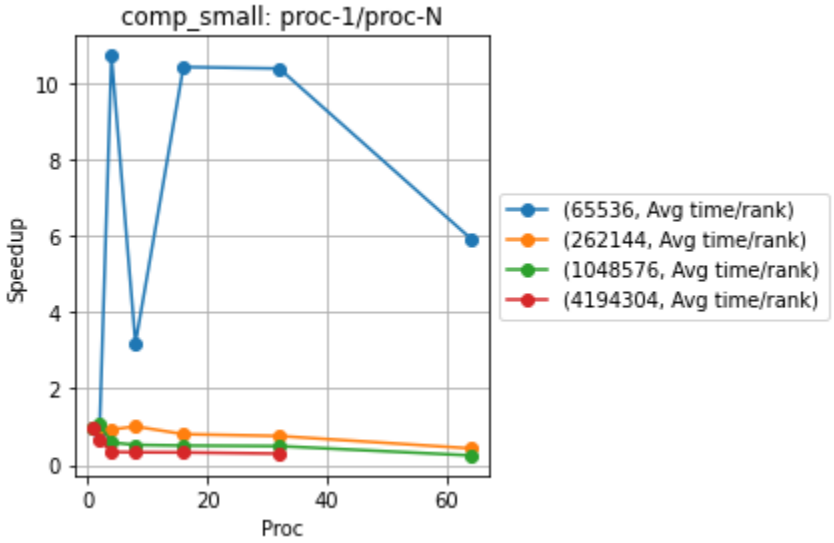
11. Comm large



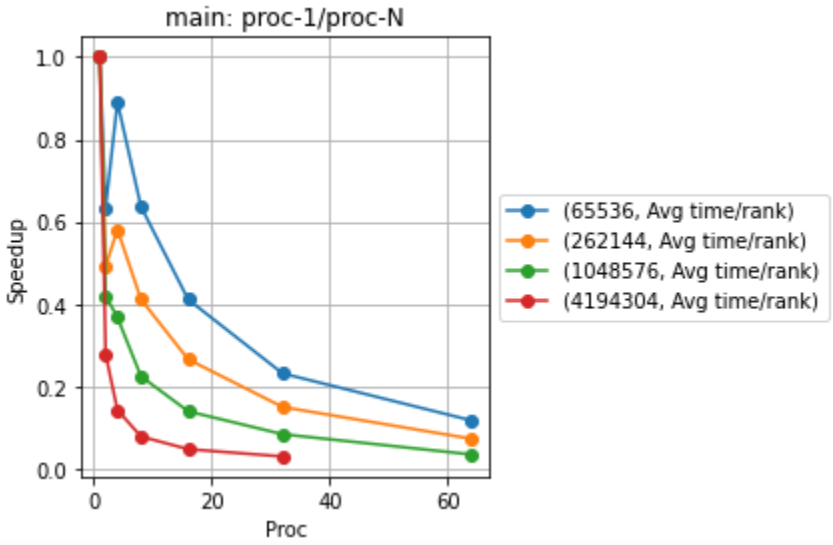
Sorted input

Speedup:

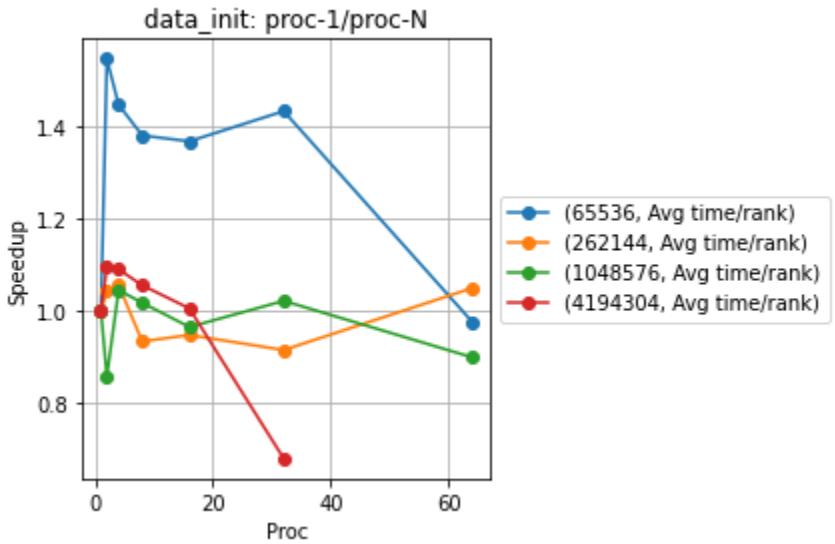
1. comp small



2. Main

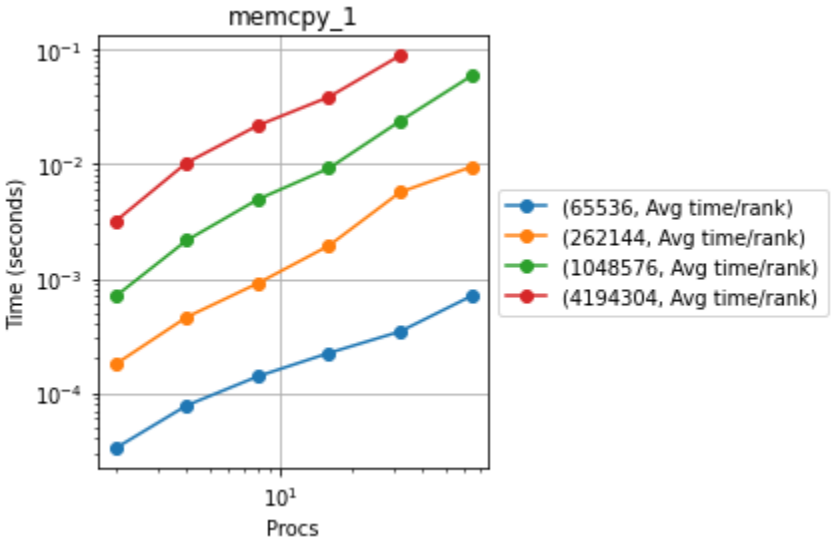


3. Data init

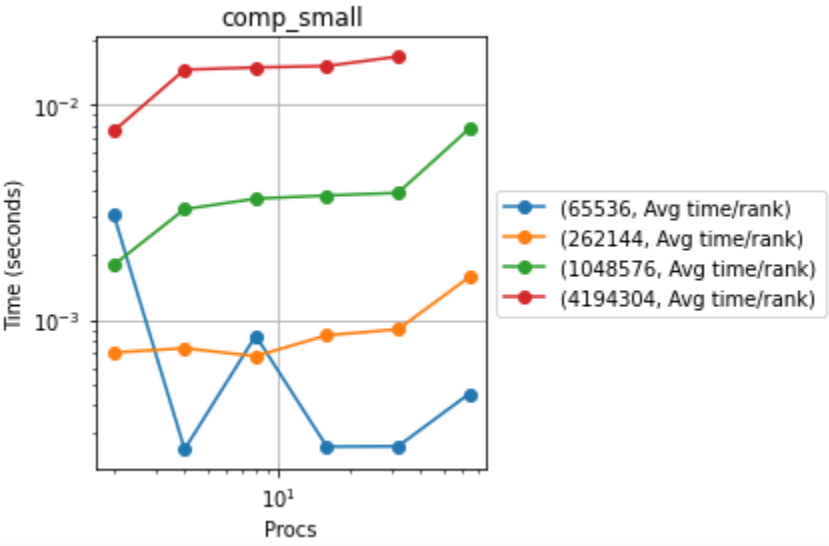


Weak Scaling:

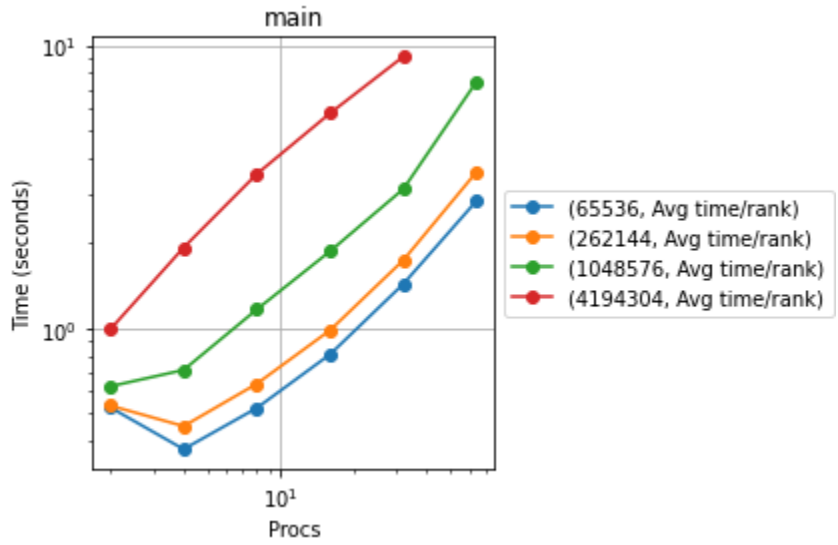
1. Memcpy 1



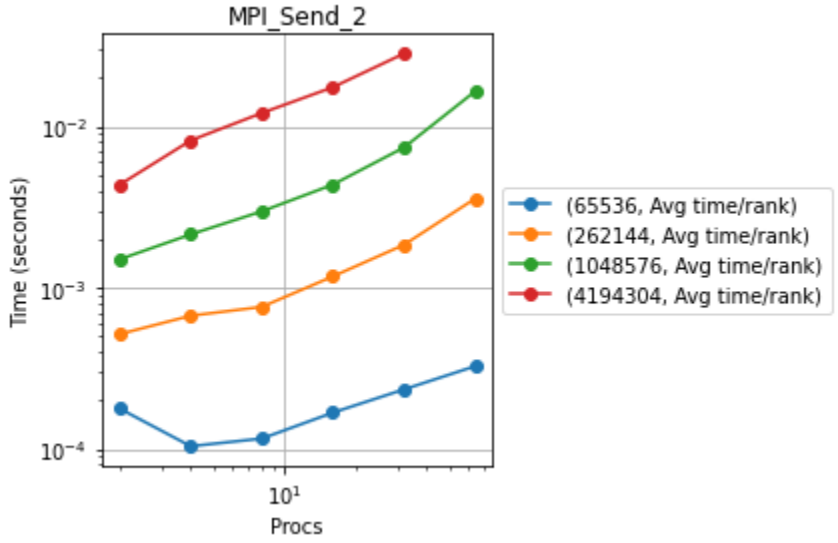
2. Comp small



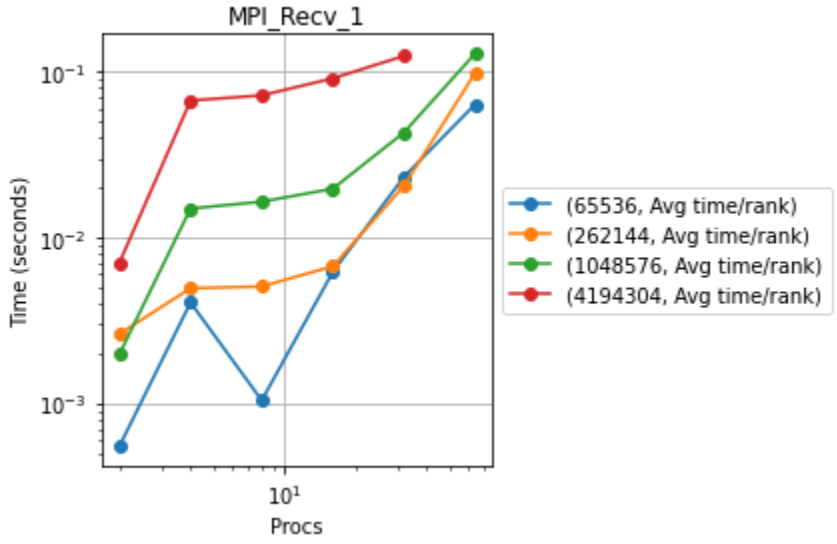
3. Main



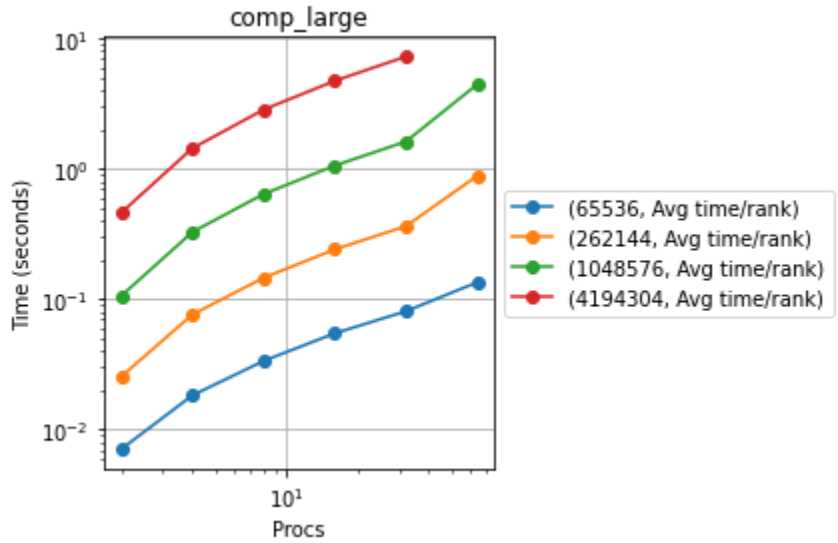
4. Mp1 send 2



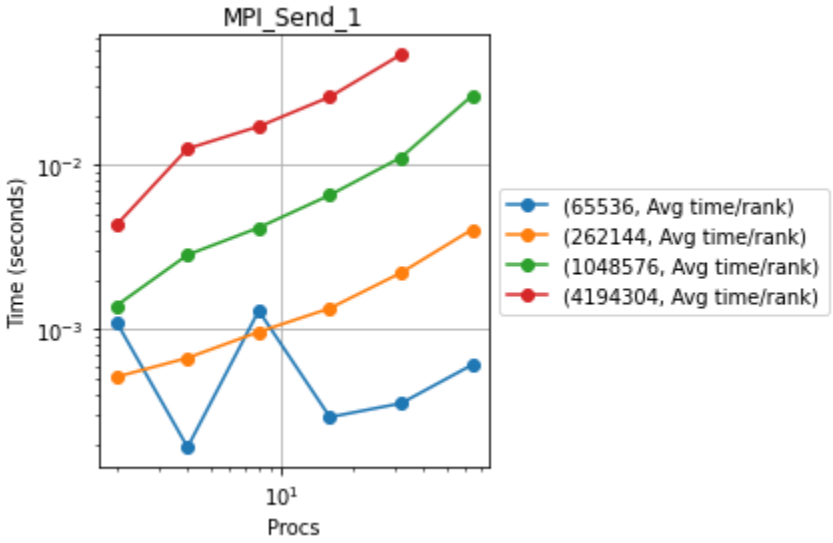
5. Mpi recv 1



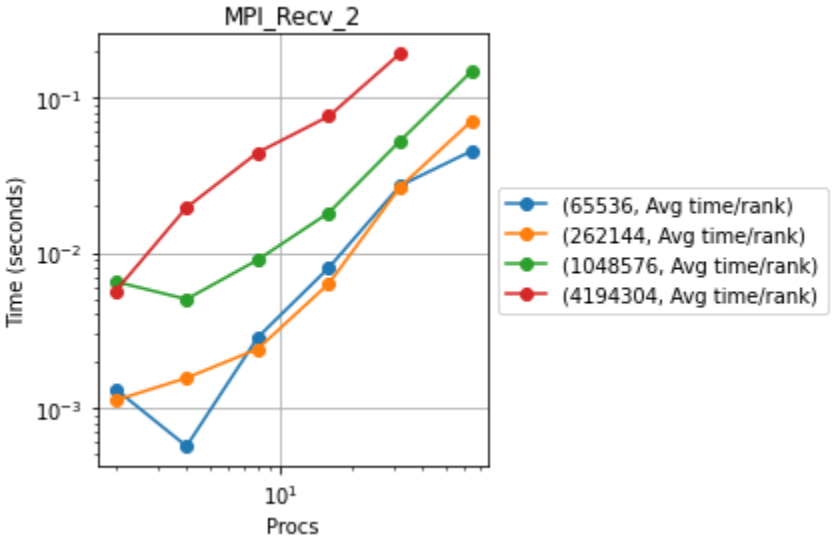
6. Comp large



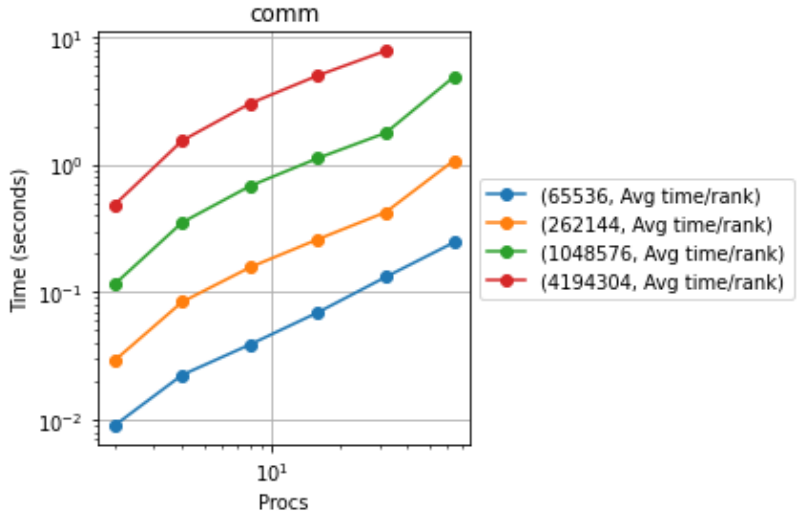
7. Mpi send 1



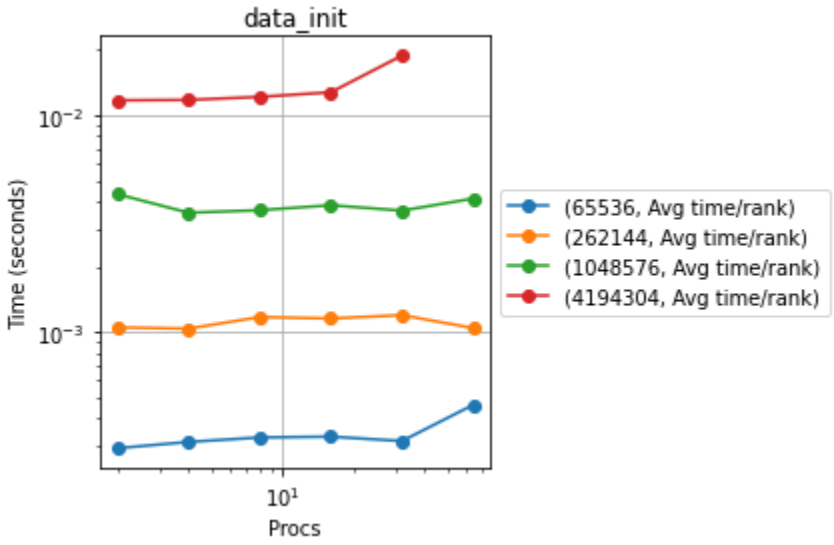
8. Mpi recv 2



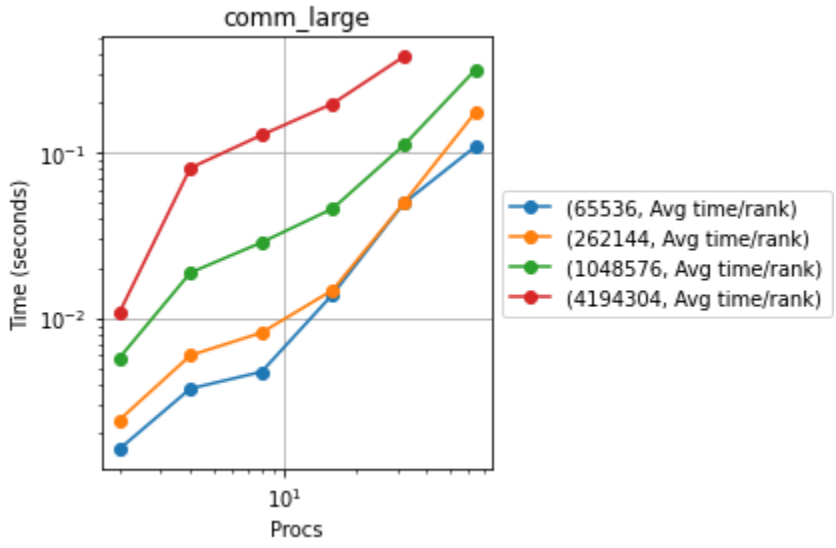
9. Comm



10. Data init

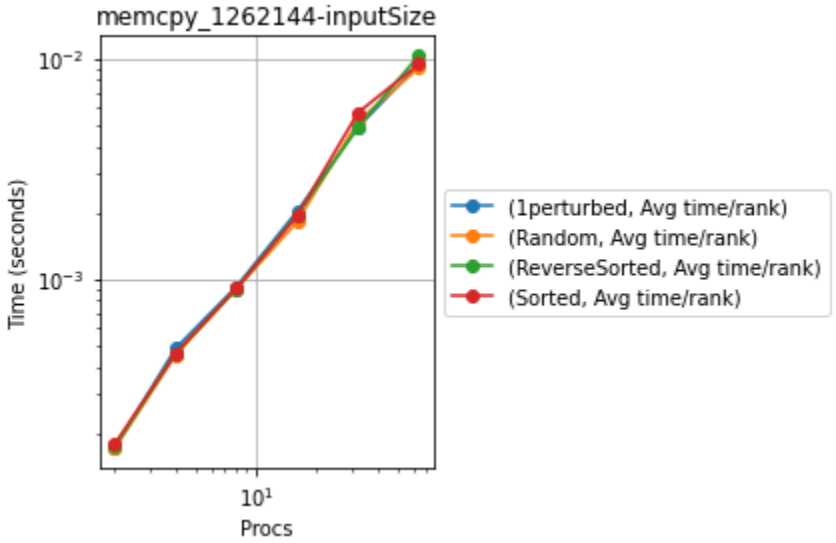


11. Comm large

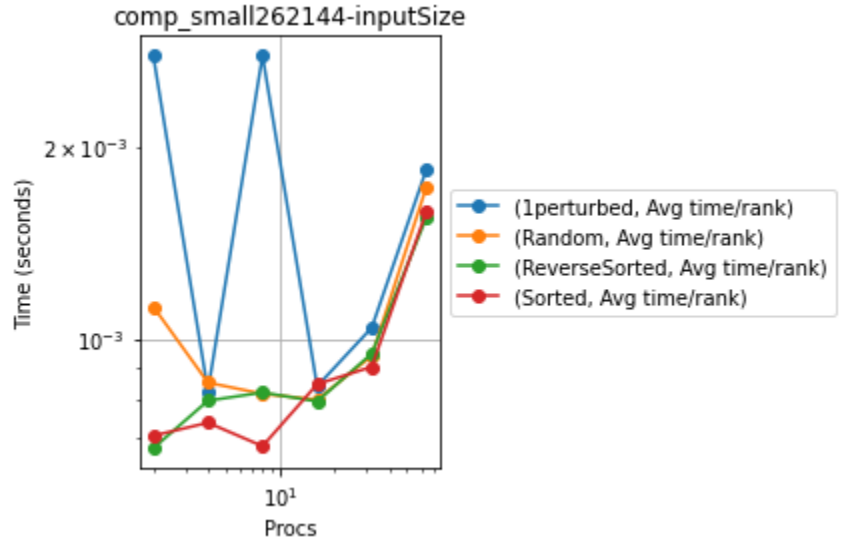


Strong Scaling:

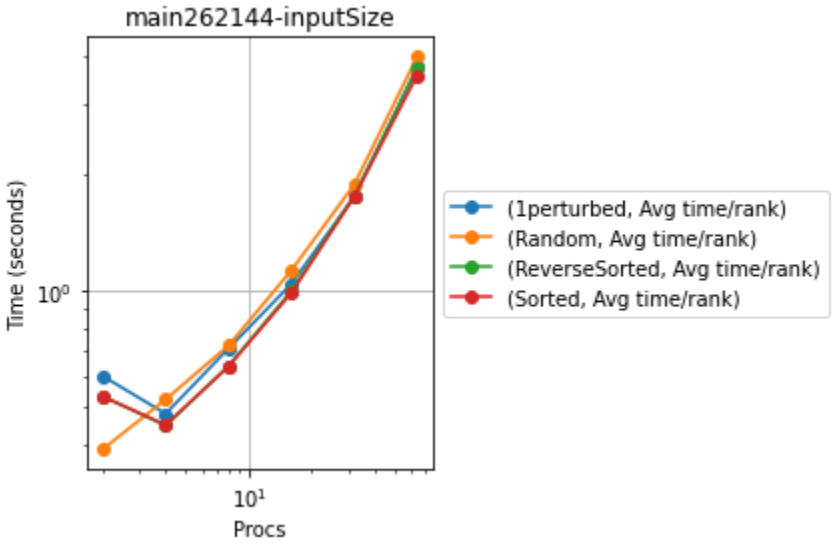
1. Memcpy 1



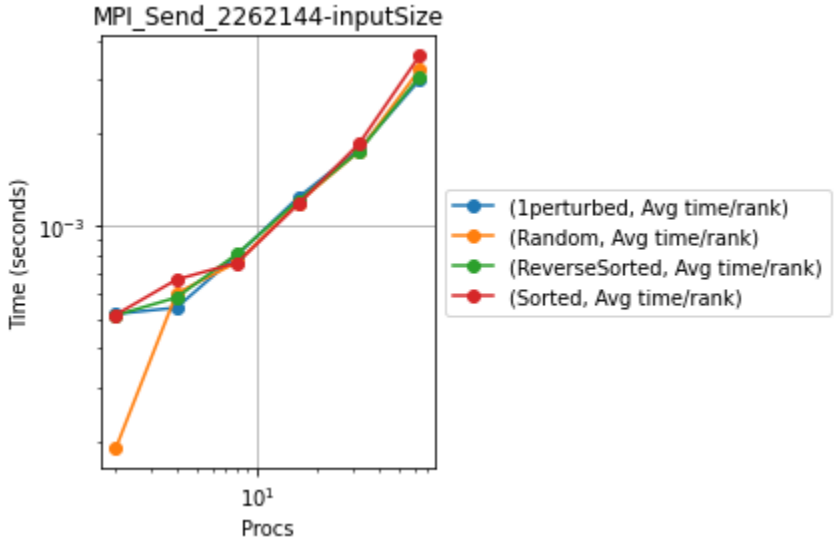
2. Comp small



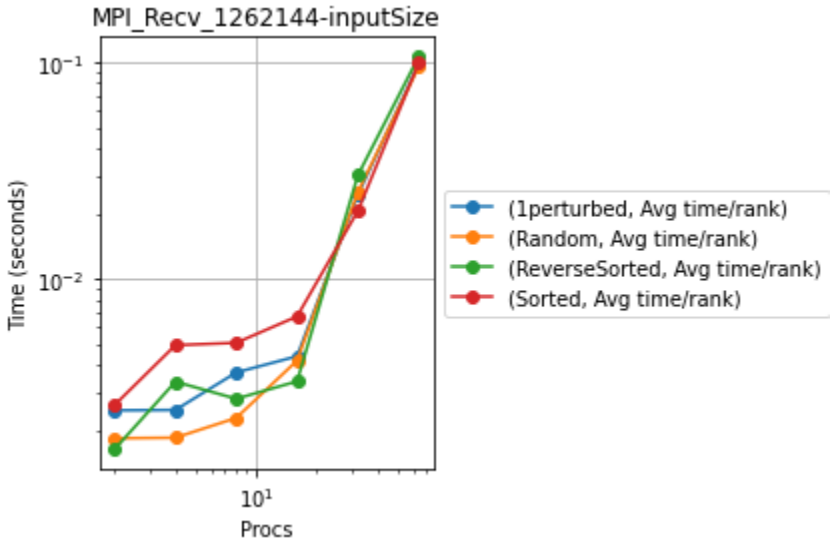
3. Main



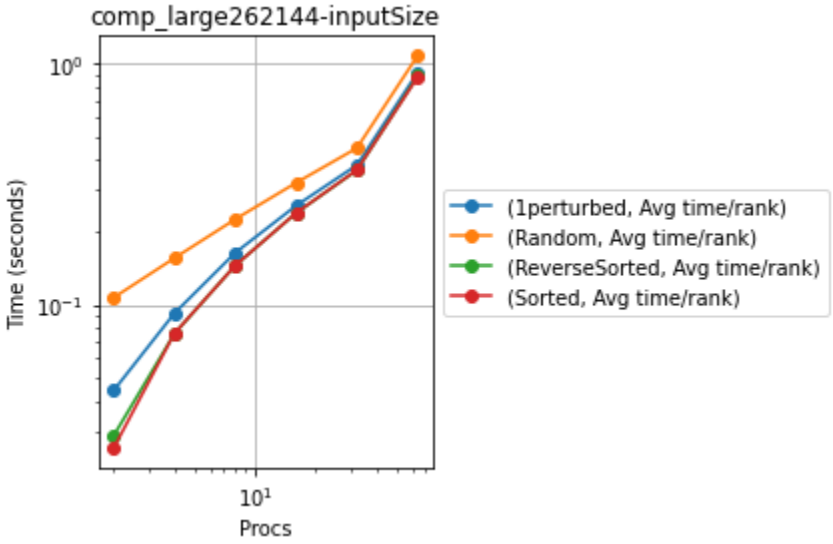
4. Mp1 send 2



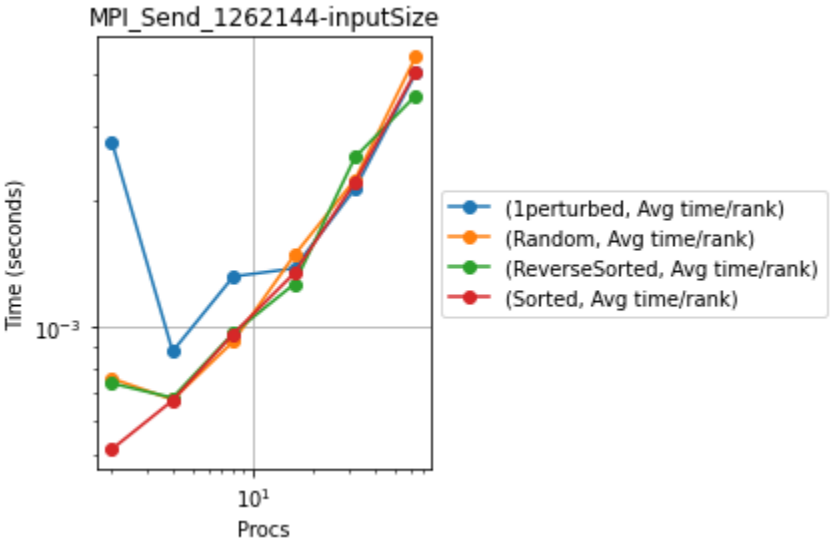
5. Mpi recv 1



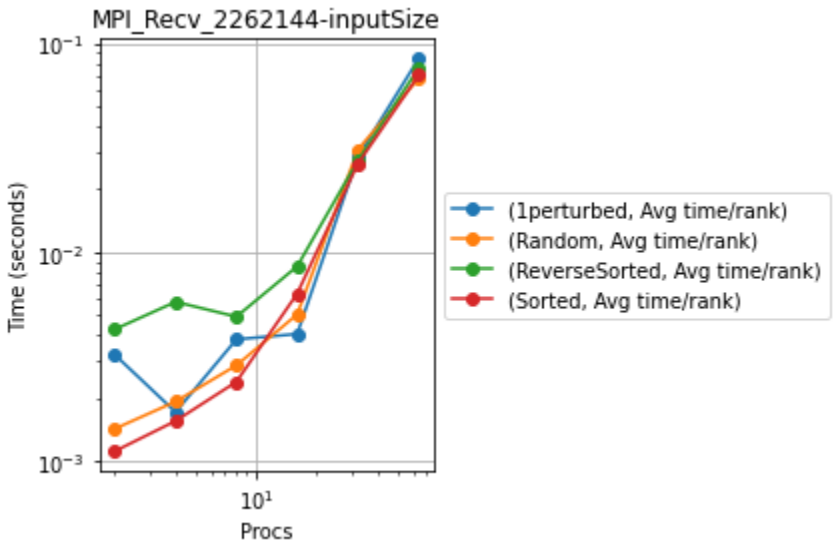
6. Comp large



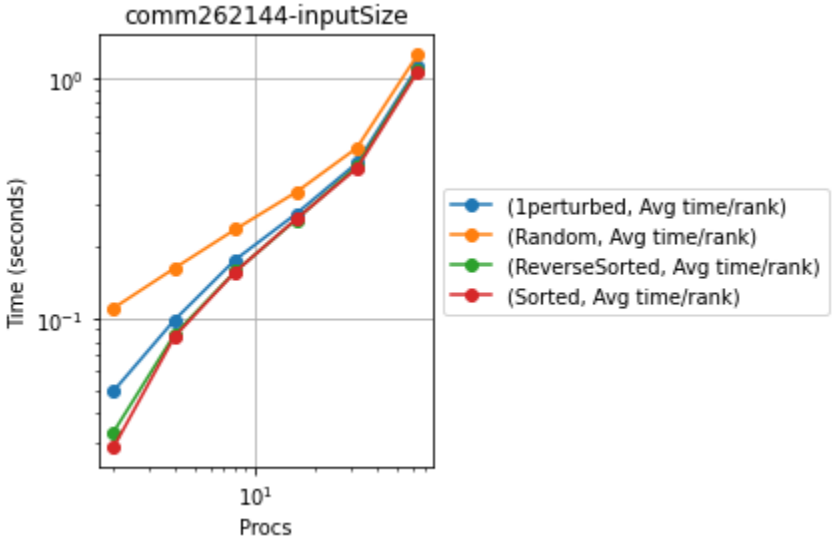
7. Mpi send 1



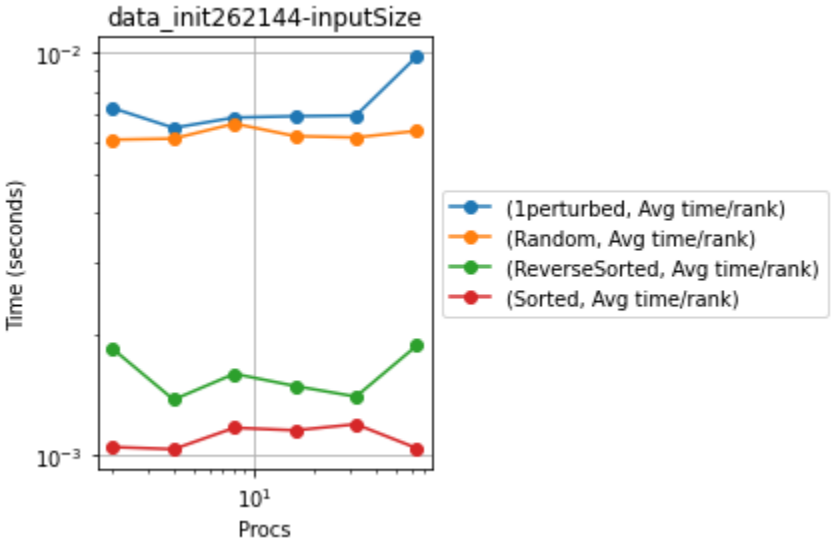
8. Mpi recv 2



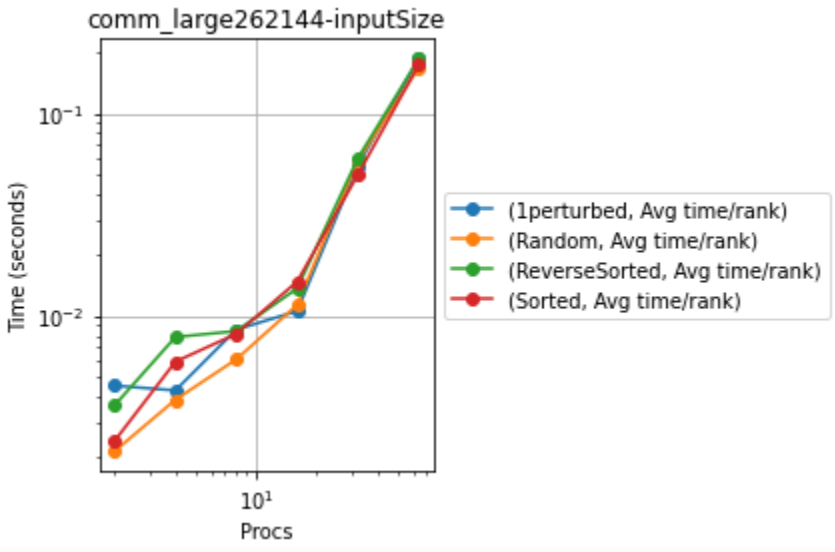
9. Comm



10. Data init



11. Comm large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