Q2: When , pure OpenMP runs faster than OpenMP + MPI. When , OpenMP + MPI runs faster than OpenMP. In this way, for a smaller size array, I will choose pure OpenMP; for a larger size array, I will choose OpenMP + MPI. When the array is small enough to fit in the memory of a single node, then there is no distributed system involved, so need to do communication with MPI – pure OpenMP can directly do the work. But if the array size is large and the data spreads in different nodes, then the low latency communication with MPI is needed, and thus the combination approach will have a better result.