

(1) The three queries that I use for the benchmarking are:

Query1. SELECT * FROM Sailors, Reserves WHERE Sailors.A = Reserves.G AND Sailors.B > 1000 AND Sailors.B < 1500;

Query2. SELECT * FROM Sailors S1, Sailors S2, Sailors S3 WHERE S1.A = S2.A AND S3.B = S2.B AND S1.B = S2.B AND S3.C = S1.C AND S1.B > 1000 AND S1.B < 1500 AND S3.C > 3000 AND S3.C < 4000;

Query3. SELECT * FROM Boats B, Reserves R1, Reserves R2 WHERE B.D = R1.H AND R2.G = R1.G AND B.F > 1000 AND B.F < 2000 AND B1.G >= 2000 AND B1.G <= 3000;

(2) The schema of the relations are:

Sailors A B C

Reserves G H

Boats D E F

There are 10000 tuples in each relation.

For all attribute in all relation, the range of the value is between 0 to 9999.

(3) I use 5 pages as buffer size for the sort in the Sort Merge Join.

(4) The bar graph compare the running time for three queries and 4 algorithms are:

