

Balanced
File Read

Data
Distribution

Local Join

Join Result
Distribution

Local
Aggregation

Edge
(Local)

Edge
(Distributed)

CC
(Delta, Full)

Join result
(Local)

Join result
(Distributed)

CC
(Full) ($CC_{Full} - CC_{PrevFull}$)

CC_{Delta}

MPI_Alltoallv

MPI_Alltoallv

Node ID

Inner

Outer

ID 1 < 2
ID 4 < 6

ID 2 < 3
ID 4 < 5

1	2
2	1
2	3
3	2

2	1
2	3
6	4

2	2
6	6

1	2
3	2
4	6

2	1
2	3
6	4

2	1
6	4

2	1
6	4

4	5
4	6
5	4
6	4

1	2
3	2
4	5
4	6
5	4

1	1
3	3
4	4
5	5

2	1
2	3
5	4
6	4
4	5

1	2
3	2
4	5
4	6
5	4

1	1
3	2
4	4
5	4

3	2
5	4