Broadcast stage(end node id 18): date dim,10000FileScan->Filter->Project->BroadcastExchange Broadcast stage(end node id 22): store,10000FileScan->Filter->Project->BroadcastExchange Broadcast stage(end node id 26): household demographics, 10000FileScan->Filter->Project->BroadcastExchange First stage (end node id 8): File Scan store sales, 15217.4FileScan->Filter->BroadcastHashJoin->Project->BroadcastHashJoin->Project->BroadcastHashJoin->Project->HashAggregate->ExchangeHashpartitioning NormalStage (end_node_id 5): length of beginNodesToChains is 1 [1,0,0,1,0,0,1,0]First stage (end_node_id 31): File Scan customer,3687.5FileScan->Filter->ExchangeHashpartitioning Chain 0 is: HashAggregate(keys=[ss_ticket_number#11L, ss_customer_sk#5], functions=[count(1)]) HashAggregate->Filter->ExchangeHashpartitioning NormalStage (end_node_id 0): length of beginNodesToChains is 2 [2,0,2,0,4,2,0,0] Chain 0 is: Sort [ss customer sk#5 ASC NULLS FIRST], false, 0 Sort->SortMergeJoin->Project->Empty->Sort Chain 1 is: Sort [c customer sk#87 ASC NULLS FIRST], false, 0

Sort->SortMergeJoin->Project->Empty->Sort