

Broadcast stage(end\_node\_id 14): item,10000FileScan->Filter->BroadcastExchange

Broadcast stage(end\_node\_id 17): date\_dim,10000FileScan->Filter->Project->BroadcastExchange

First stage (end\_node\_id 6): File Scan catalog\_sales,4967.6FileScan->Filter->BroadcastHashJoin->Project->BroadcastHashJoin->Project->HashAggregate->ExchangeHashpartitioning

NormalStage (end\_node\_id 4): length of beginNodesToChains is 1  
Chain 0 is : HashAggregate(keys=[i\_item\_id#37, i\_item\_desc#40, i\_category#48, i\_class#46, i\_current\_price#41], functions=[sum(cs\_ext\_sales\_price#25)])  
HashAggregate->ExchangeHashpartitioning

NormalStage (end\_node\_id 0): length of beginNodesToChains is 1  
Chain 0 is : Sort [i\_class#46 ASC NULLS FIRST], false, 0  
Sort->Empty->Project->Project