nodeID(19) FileScan parquet tpcds_500_parquet.customer[c_customer_sk#12,c_customer_id#13,c_first_name#20,c_last_name#21
nodeID(23) FileScan parquet tpcds_500_parquet.store_sales[ss_sold_date_sk#30,ss_customer_sk#33,ss_net_paid#50
nodeID(18) Filter (isnotnull(c_customer_sk#12) AND isnotnull(c_customer_id#13))
nodeID(22) Filter (isnotnull(ss_customer_sk#33) AND isnotnull(ss_sold_date_sk#30))
nodeID(39) FileScan parquet tpcds_500_parquet.customer[c_customer_sk#655,c_customer_id#656,c_first_name#663,c_last_name#664
nodeID(43) FileScan parquet tpcds_500_parquet.store_sales[ss_sold_date_sk#673,ss_customer_sk#676,ss_net_paid#693
nodeID(60) FileScan parquet tpcds_500_parquet.customer[c_customer_sk#879,c_customer_id#880,c_first_name#887,c_last_name#888
nodeID(64) FileScan parquet tpcds_500_parquet.web_sales[ws_sold_date_sk#897,ws_bill_customer_sk#901,ws_net_paid#926
nodeID(17) Exchange hashpartitioning(c_customer_sk#12, 200), ENSURE_REQUIREMENTS, [plan_id=255]
nodeID(21) Exchange hashpartitioning(ss_customer_sk#33, 200), ENSURE_REQUIREMENTS, [plan_id=256]
nodeID(38) Filter (isnotnull(c_customer_sk#655) AND isnotnull(c_customer_id#656))
nodeID(42) Filter (isnotnull(ss_customer_sk#676) AND isnotnull(ss_sold_date_sk#673))
nodeID(59) Filter (isnotnull(c_customer_sk#879) AND isnotnull(c_customer_id#880))
nodeID(63) Filter (isnotnull(ws_bill_customer_sk#901) AND isnotnull(ws_sold_date_sk#897))
nodeID(16) Sort [c_customer_sk#12 ASC NULLS FIRST], false, 0
nodeID(20) Sort [ss_customer_sk#33 ASC NULLS FIRST], false, 0
nodeID(26) FileScan parquet tpcds_500_parquet.date_dim[d_date_sk#53,d_year#59
nodeID(37) Exchange hashpartitioning(c_customer_sk#655, 200), ENSURE_REQUIREMENTS, [plan_id=271]
nodeID(41) Exchange hashpartitioning(ss_customer_sk#676, 200), ENSURE_REQUIREMENTS, [plan_id=272]
nodeID(58) Exchange hashpartitioning(c_customer_sk#879, 200), ENSURE_REQUIREMENTS, [plan_id=293]
nodeID(62) Exchange hashpartitioning(ws_bill_customer_sk#901, 200), ENSURE_REQUIREMENTS, [plan_id=294]
nodeID(15) SortMergeJoin [c_customer_sk#12], [ss_customer_sk#33], Inner
nodeID(25) Filter (((isnotnull(d_year#59) AND (d_year#59 = 2001)) AND d_year#59 IN (2001,2002)) AND isnotnull(d_date_sk#53))
nodeID(36) Sort [c_customer_sk#655 ASC NULLS FIRST], false, 0
nodeID(40) Sort [ss_customer_sk#676 ASC NULLS FIRST], false, 0
nodeID(46) FileScan parquet tpcds_500_parquet.date_dim[d_date_sk#696,d_year#702
nodeID(57) Sort [c_customer_sk#879 ASC NULLS FIRST], false, 0
nodeID(61) Sort [ws_bill_customer_sk#901 ASC NULLS FIRST], false, 0
nodeID(67) FileScan parquet tpcds_500_parquet.date_dim[d_date_sk#931,d_year#937
nodeID(80) FileScan parquet tpcds_500_parquet.customer[c_customer_sk#1034,c_customer_id#1035,c_first_name#1042,c_last_name#1043
nodeID(84) FileScan parquet tpcds_500_parquet.web_sales[ws_sold_date_sk#1052,ws_bill_customer_sk#1056,ws_net_paid#1081
nodeID(14) Project [c_customer_id#13, c_first_name#20, c_last_name#21, ss_sold_date_sk#30, ss_net_paid#50]
nodeID(24) BroadcastExchange HashedRelationBroadcastMode(List(cast(input[0, int, false] as bigint)),false), [plan_id=262]
nodeID(35) SortMergeJoin [c_customer_sk#655], [ss_customer_sk#676], Inner
nodeID(45) Filter (((isnotnull(d_year#702) AND (d_year#702 = 2002)) AND d_year#702 IN (2001,2002)) AND isnotnull(d_date_sk#696))
nodeID(56) SortMergeJoin [c_customer_sk#879], [ws_bill_customer_sk#901], Inner
nodeID(66) Filter (((isnotnull(d_year#937) AND (d_year#937 = 2001)) AND d_year#937 IN (2001,2002)) AND isnotnull(d_date_sk#931))
nodeID(79) Filter (isnotnull(c_customer_sk#1034) AND isnotnull(c_customer_id#1035))
nodeID(83) Filter (isnotnull(ws_bill_customer_sk#1056) AND isnotnull(ws_sold_date_sk#1052))
nodeID(13) BroadcastHashJoin [ss_sold_date_sk#30], [d_date_sk#53], Inner, BuildRight, false
nodeID(34) Project [c_customer_id#656, c_first_name#663, c_last_name#664, ss_sold_date_sk#673, ss_net_paid#693]
nodeID(44) BroadcastExchange HashedRelationBroadcastMode(List(cast(input[0, int, false] as bigint)),false), [plan_id=278]
nodeID(55) Project [c_customer_id#880, c_first_name#887, c_last_name#888, ws_sold_date_sk#897, ws_net_paid#926]
nodeID(65) BroadcastExchange HashedRelationBroadcastMode(List(cast(input[0, int, false] as bigint)),false), [plan_id=300]
nodeID(78) Exchange hashpartitioning(c_customer_sk#1034, 200), ENSURE_REQUIREMENTS, [plan_id=315]
nodeID(82) Exchange hashpartitioning(ws_bill_customer_sk#1056, 200), ENSURE_REQUIREMENTS, [plan_id=316]
nodeID(12) Project [c_customer_id#13, c_first_name#20, c_last_name#21, ss_net_paid#50, d_year#59]
nodeID(33) BroadcastHashJoin [ss_sold_date_sk#673], [d_date_sk#696], Inner, BuildRight, false
nodeID(54) BroadcastHashJoin [ws_sold_date_sk#897], [d_date_sk#931], Inner, BuildRight, false
nodeID(77) Sort [c_customer_sk#1034 ASC NULLS FIRST], false, 0
nodeID(81) Sort [ws_bill_customer_sk#1056 ASC NULLS FIRST], false, 0
nodeID(87) FileScan parquet tpcds_500_parquet.date_dim[d_date_sk#1086,d_year#1092
nodeID(11) HashAggregate(keys=[c_customer_id#13, c_first_name#20, c_last_name#21, d_year#59], functions=[partial_sum(ss_net_paid#50)])
nodeID(32) Project [c_customer_id#656, c_first_name#663, c_last_name#664, ss_net_paid#693, d_year#702]
nodeID(53) Project [c_customer_id#880, c_first_name#887, c_last_name#888, ws_net_paid#926, d_year#937]
nodeID(76) SortMergeJoin [c_customer_sk#1034], [ws_bill_customer_sk#1056], Inner
nodeID(86) Filter (((isnotnull(d_year#1092) AND (d_year#1092 = 2002)) AND d_year#1092 IN (2001,2002)) AND isnotnull(d_date_sk#1086))
nodeID(10) Exchange hashpartitioning(c_customer_id#13, c_first_name#20, c_last_name#21, d_year#59, 200), ENSURE_REQUIREMENTS, [plan_id=267]
nodeID(31) HashAggregate(keys=[c_customer_id#656, c_first_name#663, c_last_name#664, d_year#702], functions=[partial_sum(ss_net_paid#693)])
nodeID(52) HashAggregate(keys=[c_customer_id#880, c_first_name#887, c_last_name#888, d_year#937], functions=[partial_sum(ws_net_paid#926)])
nodeID(75) Project [c_customer_id#1035, c_first_name#1042, c_last_name#1043, ws_sold_date_sk#1052, ws_net_paid#1081]
nodeID(85) BroadcastExchange HashedRelationBroadcastMode(List(cast(input[0, int, false] as bigint)),false), [plan_id=322]
nodeID(9) HashAggregate(keys=[c_customer_id#13, c_first_name#20, c_last_name#21, d_year#59], functions=[sum(ss_net_paid#50)])
nodeID(30) Exchange hashpartitioning(c_customer_id#656, c_first_name#663, c_last_name#664, d_year#702, 200), ENSURE_REQUIREMENTS, [plan_id=283]
nodeID(51) Exchange hashpartitioning(c_customer_id#880, c_first_name#887, c_last_name#888, d_year#937, 200), ENSURE_REQUIREMENTS, [plan_id=305]
nodeID(74) BroadcastHashJoin [ws_sold_date_sk#1052], [d_date_sk#1086], Inner, BuildRight, false
nodeID(8) Filter (isnotnull(year_total#4) AND (year_total#4 > 0.0))
nodeID(29) HashAggregate(keys=[c_customer_id#656, c_first_name#663, c_last_name#664, d_year#702], functions=[sum(ss_net_paid#693)])
nodeID(50) HashAggregate(keys=[c_customer_id#880, c_first_name#887, c_last_name#888, d_year#937], functions=[sum(ws_net_paid#926)])
nodeID(73) Project [c_customer_id#1035, c_first_name#1042, c_last_name#1043, ws_net_paid#1081, d_year#1092]
nodeID(7) Exchange hashpartitioning(customer_id#0, 200), ENSURE_REQUIREMENTS, [plan_id=287]
nodeID(28) Exchange hashpartitioning(customer_id#169, 200), ENSURE_REQUIREMENTS, [plan_id=288]
nodeID(49) Filter (isnotnull(year_total#10) AND (year_total#10 > 0.0))
nodeID(72) HashAggregate(keys=[c_customer_id#1035, c_first_name#1042, c_last_name#1043, d_year#1092], functions=[partial_sum(ws_net_paid#1081)])
nodeID(6) Sort [customer_id#0 ASC NULLS FIRST], false, 0
nodeID(27) Sort [customer_id#169 ASC NULLS FIRST], false, 0
nodeID(48) Exchange hashpartitioning(customer_id#6, 200), ENSURE_REQUIREMENTS, [plan_id=310]
nodeID(71) Exchange hashpartitioning(c_customer_id#1035, c_first_name#1042, c_last_name#1043, d_year#1092, 200), ENSURE_REQUIREMENTS, [plan_id=327]
nodeID(5) SortMergeJoin [customer_id#0], [customer_id#169], Inner
nodeID(47) Sort [customer_id#6 ASC NULLS FIRST], false, 0
nodeID(70) HashAggregate(keys=[c_customer_id#1035, c_first_name#1042, c_last_name#1043, d_year#1092], functions=[sum(ws_net_paid#1081)])
nodeID(4) SortMergeJoin [customer_id#0], [customer_id#6], Inner
nodeID(69) Exchange hashpartitioning(customer_id#181, 200), ENSURE_REQUIREMENTS, [plan_id=331]
nodeID(3) Project [customer_id#0, year_total#4, customer_id#169, customer_first_name#170, customer_last_name#171, year_total#173, year_total#10]
nodeID(68) Sort [customer_id#181 ASC NULLS FIRST], false, 0
nodeID(2) SortMergeJoin [customer_id#0], [customer_id#181], Inner, (CASE WHEN (year_total#10 > 0.0) THEN (year_total#185 / year_total#10) END > CASE WHEN (year_total#4 > 0.0) THEN (year_total#173 / year_total#4) END)
nodeID(1) Project [customer_id#169, customer_first_name#170, customer_last_name#171]
nodeID(0)