

Max Budget (GB)	Metric	Drop	Extend	DB2Advis	AutoAdmin
0.25	% of initial cost New Indexes	100.00 -	99.09 I[PS.PS.supkey]	99.70 I[P.P.brand], I[C.C.custkey], I[S.S.nationkey,S.S.supkey], I[P.P.container,P.P.size], I[S.S.supkey,S.S.nationkey], I[S.S.nationkey]	100.00 -
0.5	% of initial cost New Indexes	100.00 -	97.60 I[0.0.orderkey]	99.42 I[C.C.custkey,C.C.nationkey], I[C.C.nationkey,C.C.custkey], I[P.P.type,P.P.partkey]	100.00 -
1	% of initial cost New Indexes	100.00 -	95.06 I[0.0.custkey,0.0.orderkey]	98.69 I[P.P.size], I[0.0.orderstatus,0.0.orderkey]	100.00 -
1.5	% of initial cost New Indexes	100.00 -	94.15 I[C.C.custkey]	96.68 I[0.0.custkey]	100.00 -
2	% of initial cost New Indexes	83.03 I[L.L.orderkey]	80.62 I[L.L.orderkey]	95.58 I[C.C.mktsegment,C.C.custkey], I[PS.PS.supkey]	83.03 I[L.L.orderkey]
2.5	% of initial cost New Indexes	83.03 -	79.63 -	93.97 I[0.0.orderkey,0.0.orderdate]	80.29 I[0.0.orderkey, 0.0.orderpriority]
3	% of initial cost New Indexes	83.03 -	77.18 -	80.61 I[L.L.orderkey]	80.29 -
3.5	% of initial cost New Indexes	77.03 I[L.L.partkey]	77.18 -	78.73 -	76.83 I[0.0.custkey, 0.0.orderkey], I[PS.PS.supkey], I[C.C.custkey]
4.25	% of initial cost New Indexes	71.89 I[0.0.orderkey], I[PS.PS.supkey], I[0.0.custkey], I[C.C.custkey]	71.71 I[L.L.partkey,L.L.supkey]	77.11 -	76.83 -
5	% of initial cost New Indexes	71.89 -	71.49 I[0.0.orderkey,0.0.orderpriority]	76.55 I[0.0.custkey,0.0.orderkey]	76.83 -
5.75	% of initial cost New Indexes	71.69 I[L.L.shipdate]	69.03 -	76.32 I[0.0.orderkey,0.0.orderpriority]	76.83 -
6.5	% of initial cost New Indexes	71.53 I[P.P.partkey], I[S.S.supkey], I[P.P.brand], I[S.S.nationkey], I[0.0.shippriority], I[C.C.phone], I[C.C.comment]	69.03 -	74.73 I[L.L.orderkey,L.L.quantity]	70.70 I[L.L.partkey, L.L.shipmode], I[P.P.partkey, P.P.type]
8	% of initial cost New Indexes	71.44 I[PS.PS.availqty], I[PS.PS.partkey], I[S.S.phone], I[0.0.orderstatus]	69.03 -	74.09 -	70.70 -
10	% of initial cost New Indexes	71.44 I[L.L.extendedprice]	69.03 -	74.09 I[L.L.orderkey,L.L.supkey]	70.31 I[L.L.shipdate], I[0.0.custkey], I[P.P.brand], P.P.size], I[S.S.supkey], I[S.S.nationkey, S.S.supkey]
12.5	% of initial cost New Indexes	71.44 I[L.L.shipinstruct]	69.03 -	71.05 I[L.L.shipmode,L.L.partkey]	70.31 I[L.L.partkey]
15	% of initial cost New Indexes	71.44 I[C.C.address], I[L.L.returnflag], I[C.C.nationkey]	69.03 -	69.44 I[L.L.supkey,L.L.partkey]	70.31 -

Table 4: Comparison of index selection sequence for the TPC-H benchmark (scale factor 10) on PostgreSQL with index combinations identified by the different algorithms for memory budgets from 0 to 15 GB. The table demonstrates which indexes are added by the different algorithms in which step. This illustration highlights the differences between the algorithms. Queries 2, 17, and 20 are excluded.