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--*****
-- Name      : CurSelCubeHybridNonPopWithoutEndPoint
-- Date      : October 2017
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-- Purpose   : gives the selectivity low and high value range of a Hybrid
--             non-popular histogram bind variable which has not been
--             captured by the histogram gathering program.
--             This low-high value range corresponds to the low-high
--             selectivity range of a bind aware cursor using this
--             bind variable value
--*****
var num_rows    number
var new_density number

begin
  select num_rows into :num_rows from all_tables where table_name = 'ACS_TEST_TAB';
end;
/

begin
  SELECT
    trunc(((BktCnt-PopBktCnt)/BktCnt)/(NDV-PopValCnt),10)
      into :new_density
  FROM
    (SELECT
      COUNT(1) PopValCnt,
      SUM(endpoint_repeat_count) PopBktCnt,
      ndv,
      BktCnt,
      pop_bucketSize
    FROM
      (SELECT
        (sample_size - num_nulls) BktCnt,
        num_distinct ndv,
        num_buckets,
        density OldDensity,
        (sample_size-num_nulls)/num_buckets pop_bucketSize
      FROM user_tab_col_statistics
      WHERE
        table_name = 'ACS_TEST_TAB'
        AND column_name = 'RECORD_TYPE'
      ),
      user_histograms
    WHERE table_name      = 'ACS_TEST_TAB'
          AND column_name  = 'RECORD_TYPE'
          AND endpoint_repeat_count > pop_bucketSize
    GROUP BY ndv,
             BktCnt,
             pop_bucketSize
    );
end;
/

col bind format a10
select
  &bind
  ,round((sel_of_bind - offset),6) low
  ,round((sel_of_bind + offset),6) high
from
  (select
    &bind
    ,:new_density      sel_of_bind
    ,0.1*(:new_density) offset
  from dual
  );

```