**Report “Lab 10”**

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# Oracle Architecture - Parallel execution

I have created table BIG\_TABLE:

CREATE TABLE big\_table

AS

SELECT ROWNUM numb, 'row number ' || ROWNUM row\_name

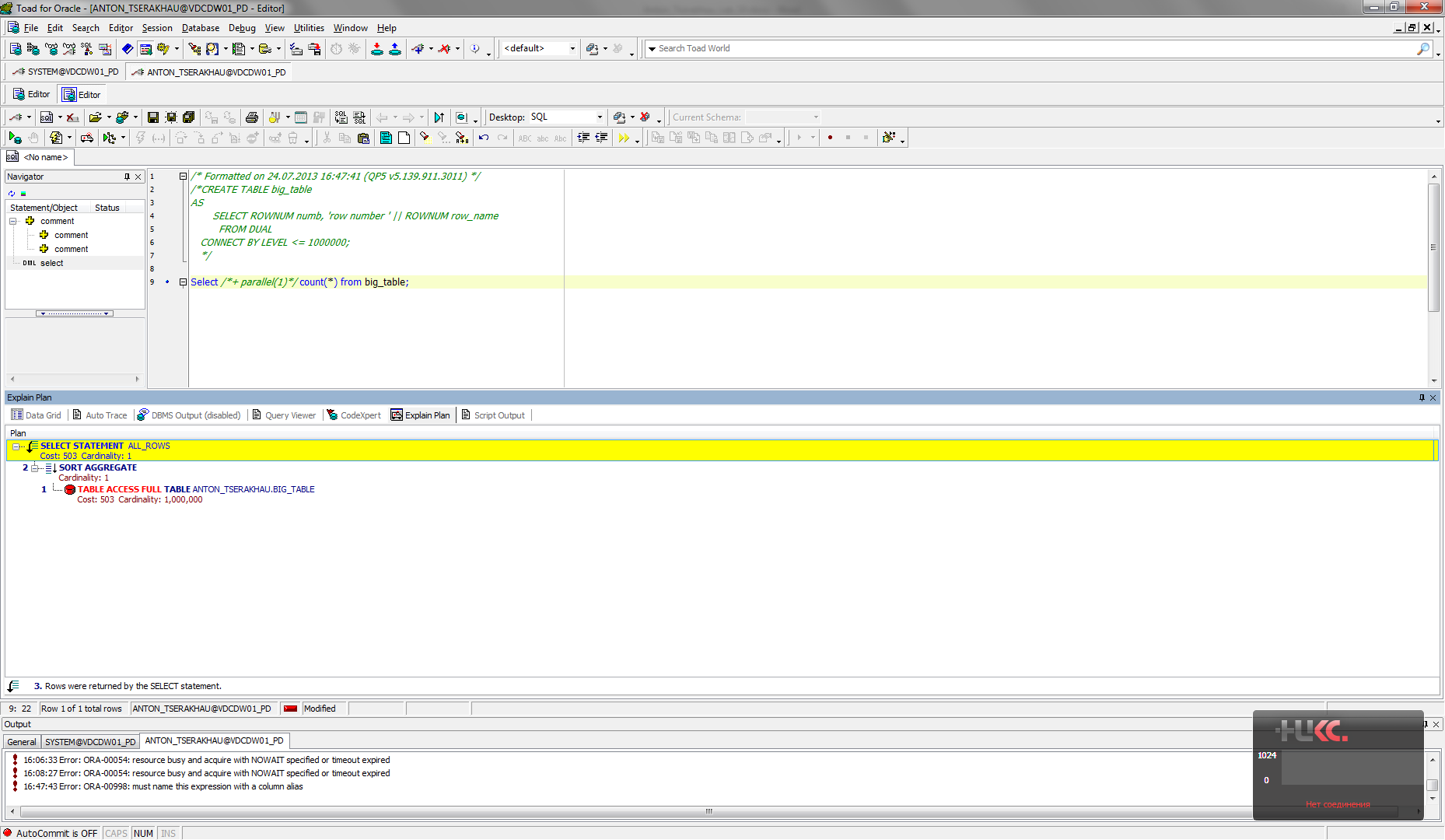
FROM DUAL

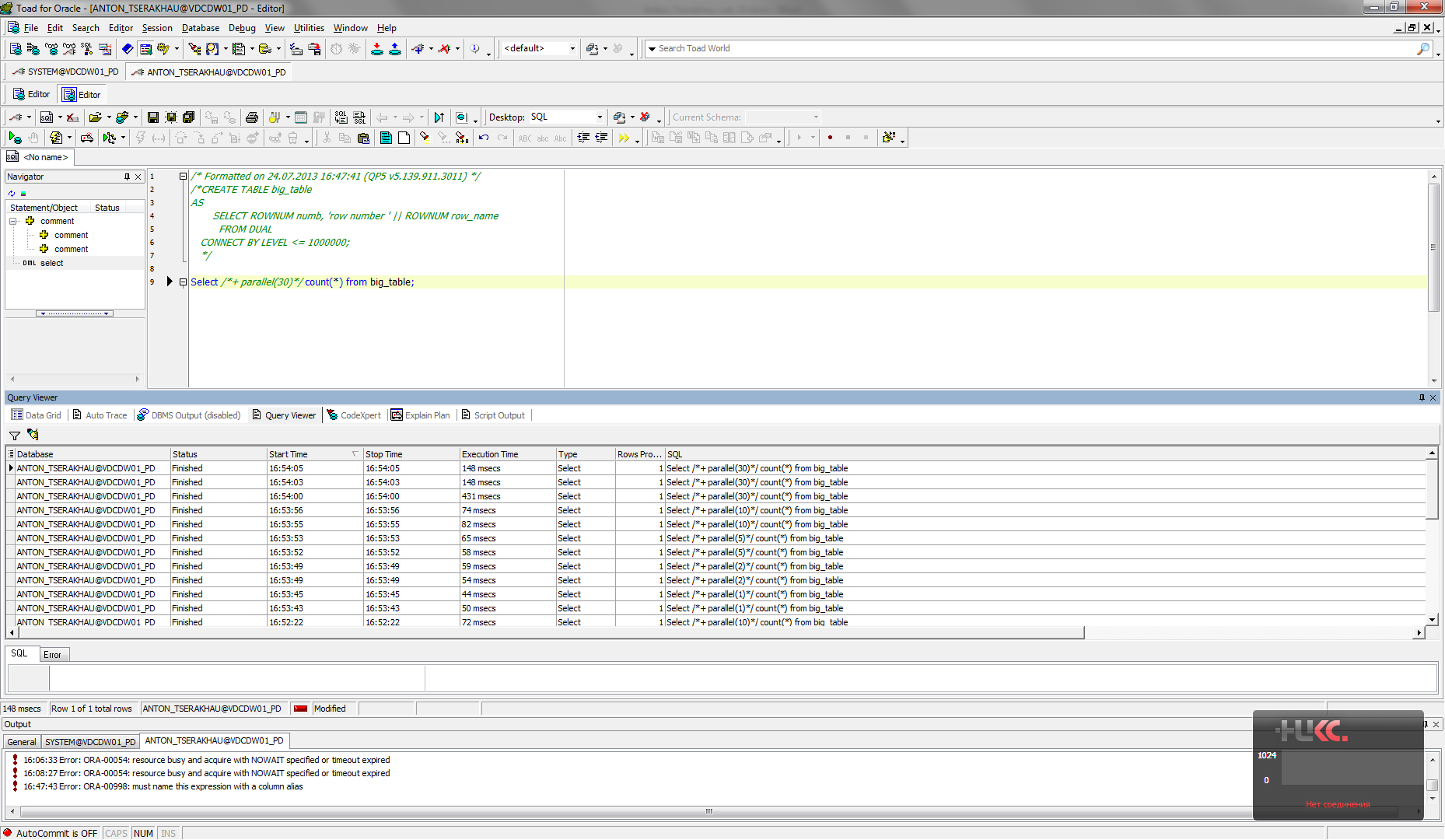
CONNECT BY LEVEL <= 1000000;

## Task 01: CREATE Example of Select Parallel execution

Amount of parallel: 1.

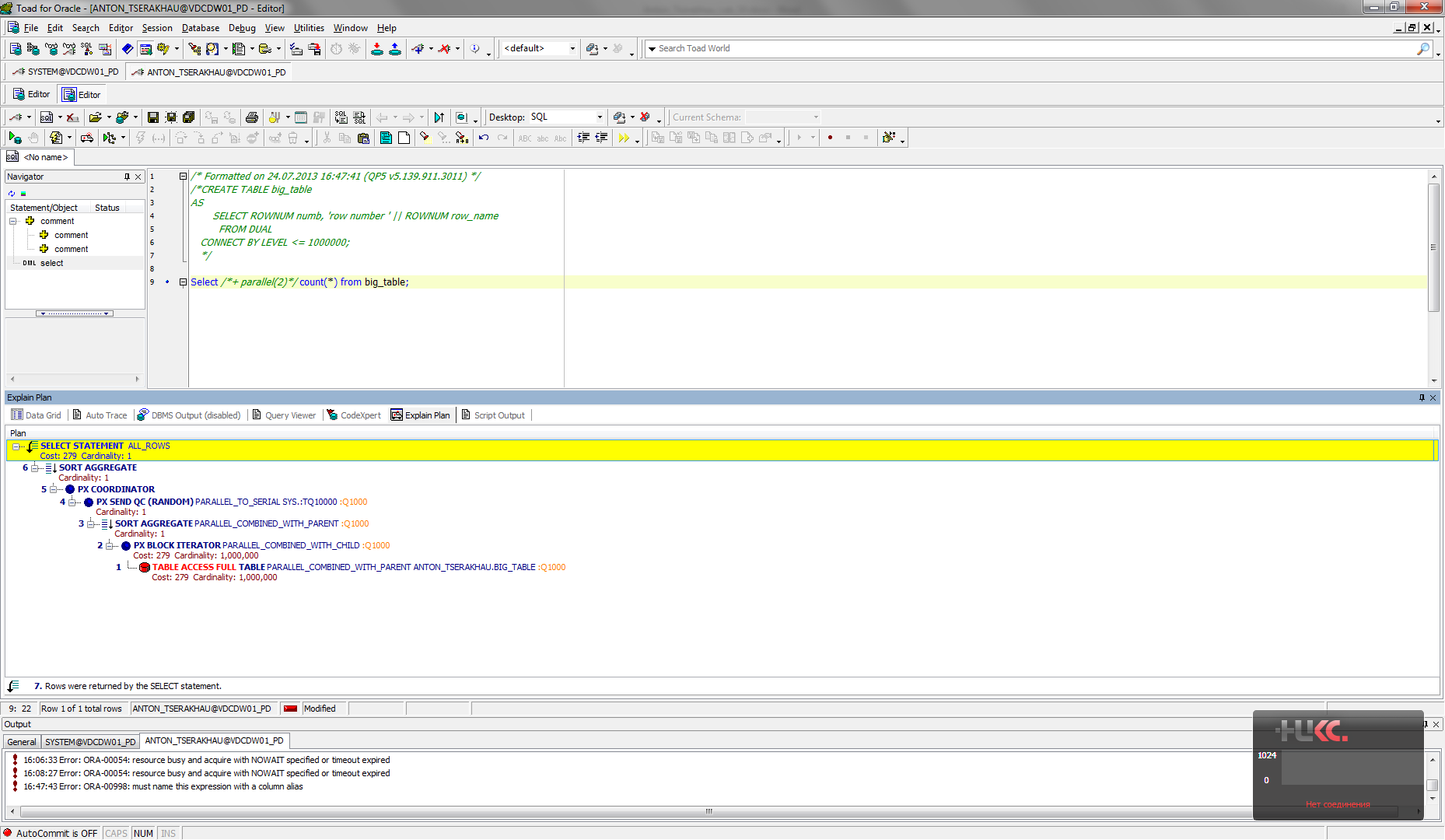
Select /\*+ parallel(1)\*/ count(\*) from big\_table;

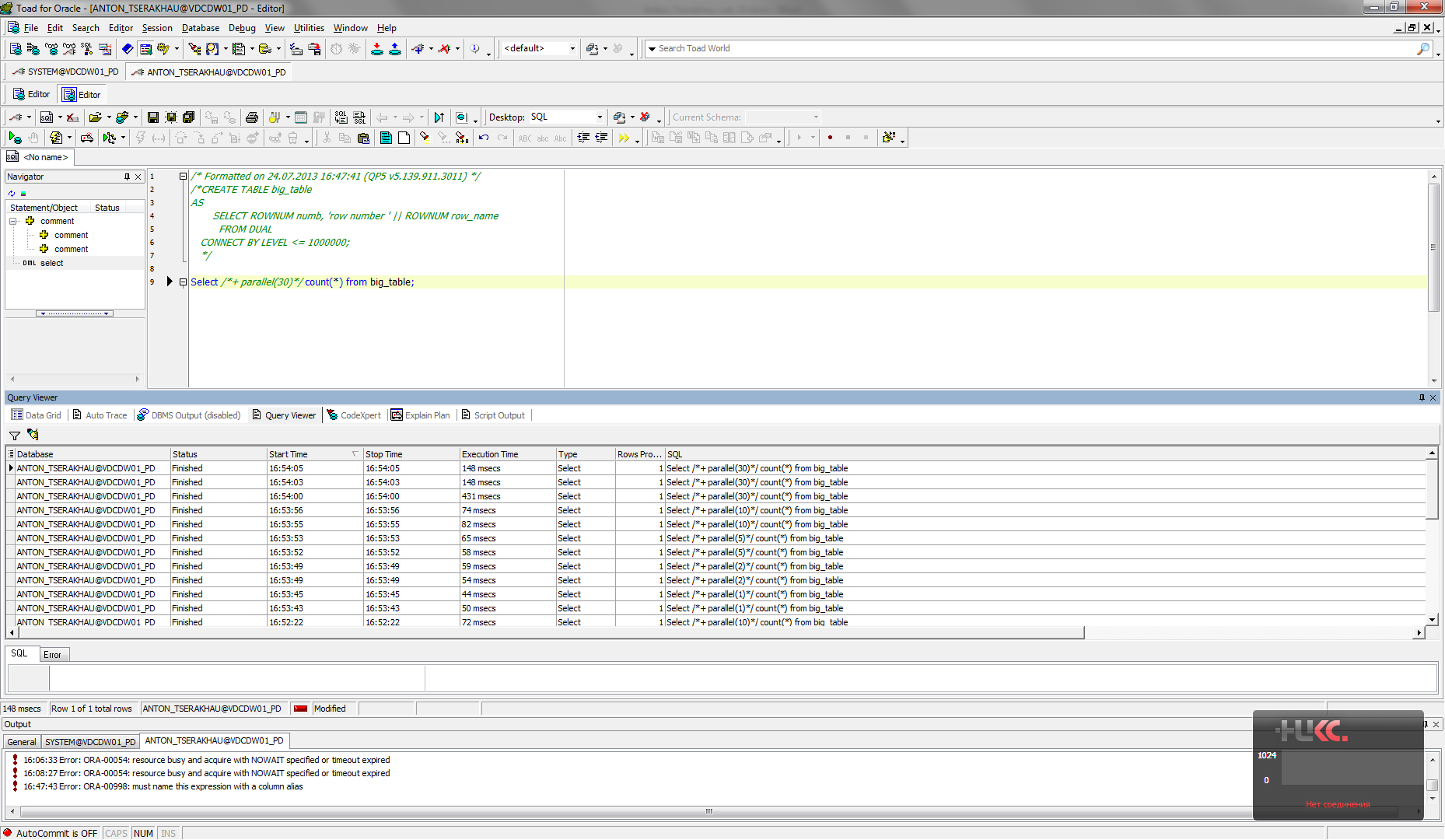




Amount of parallel: 2.

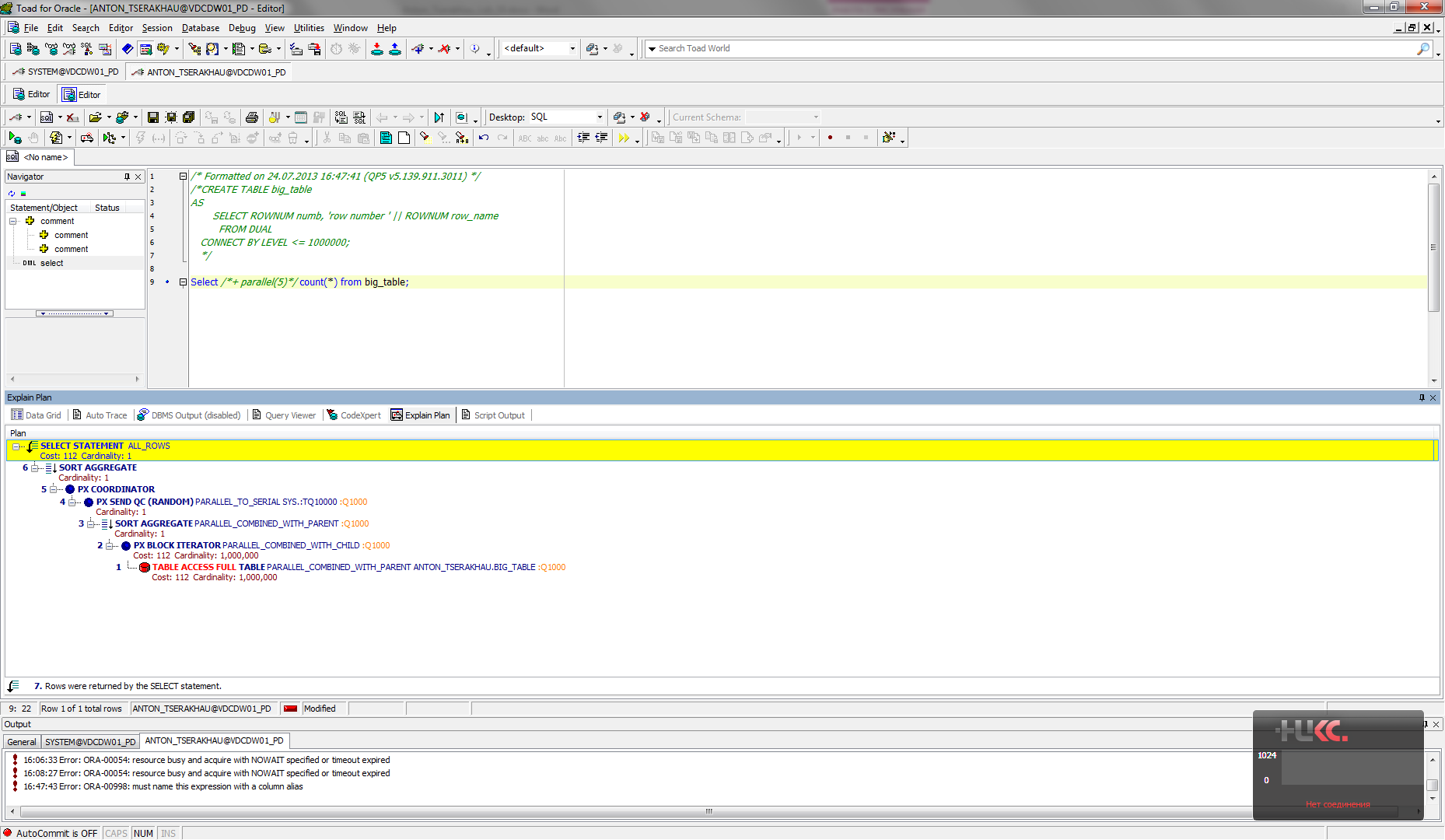
Select /\*+ parallel(2)\*/ count(\*) from big\_table;

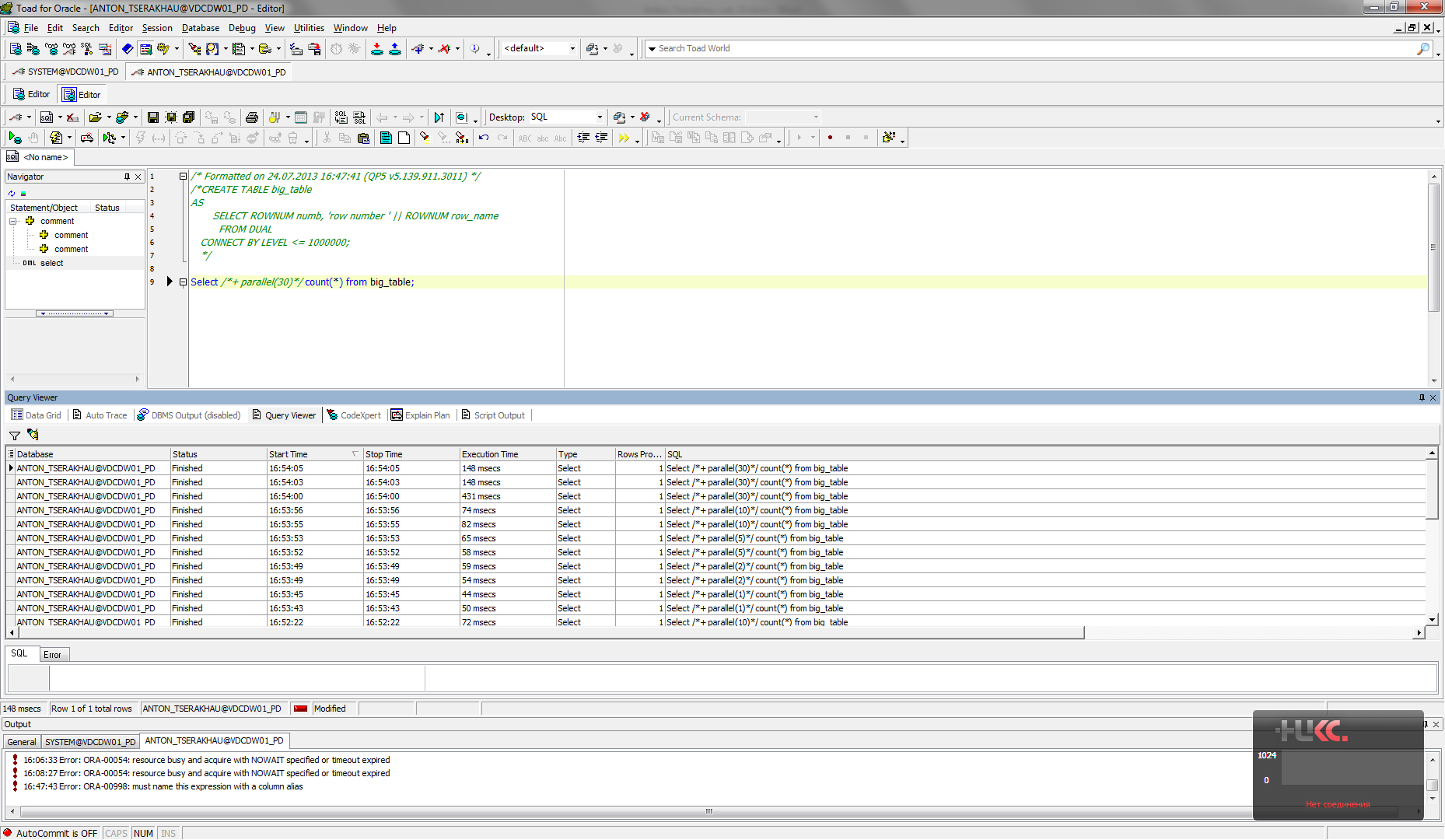




Amount of parallel: 5.

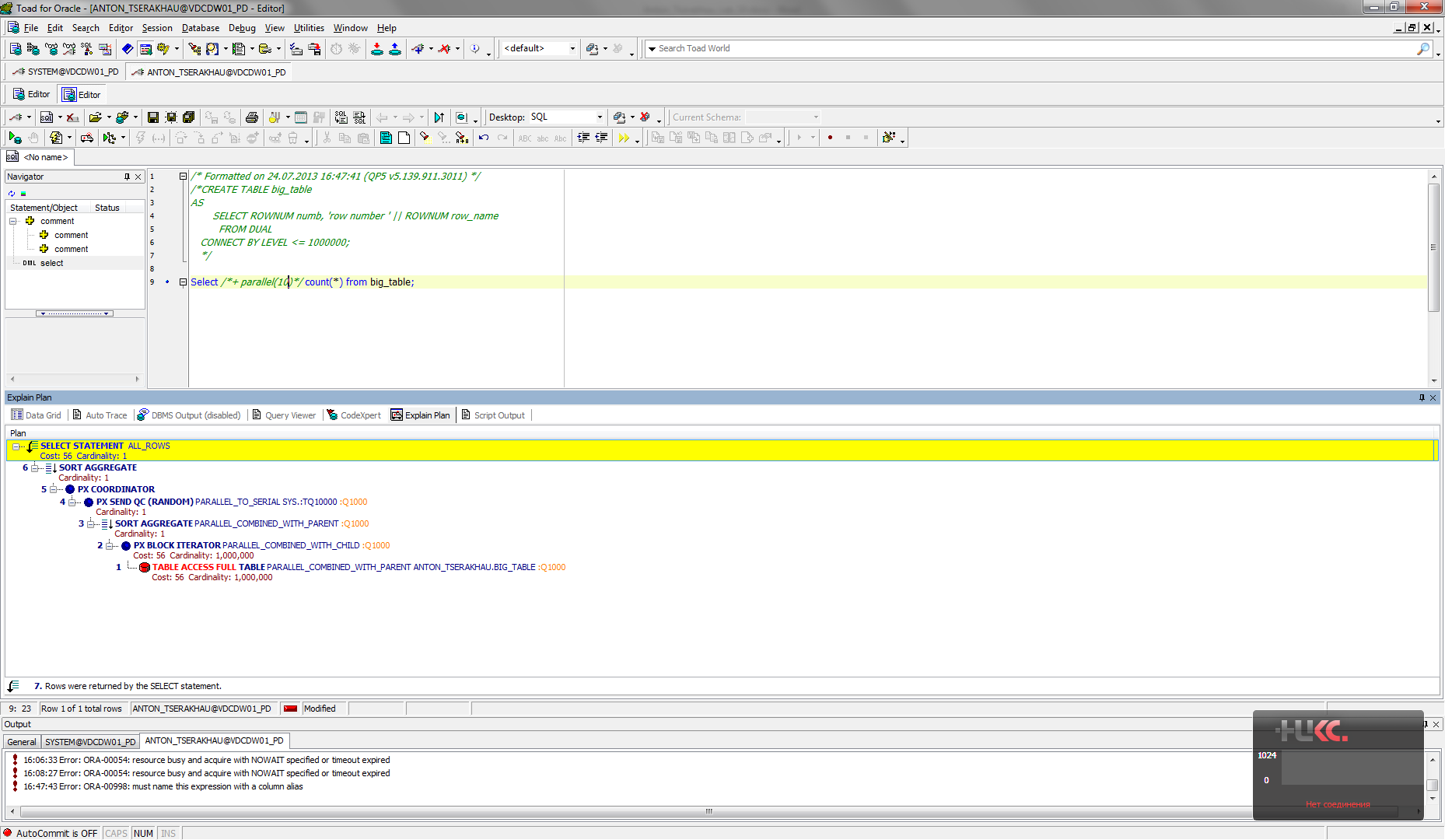
Select /\*+ parallel(5)\*/ count(\*) from big\_table;

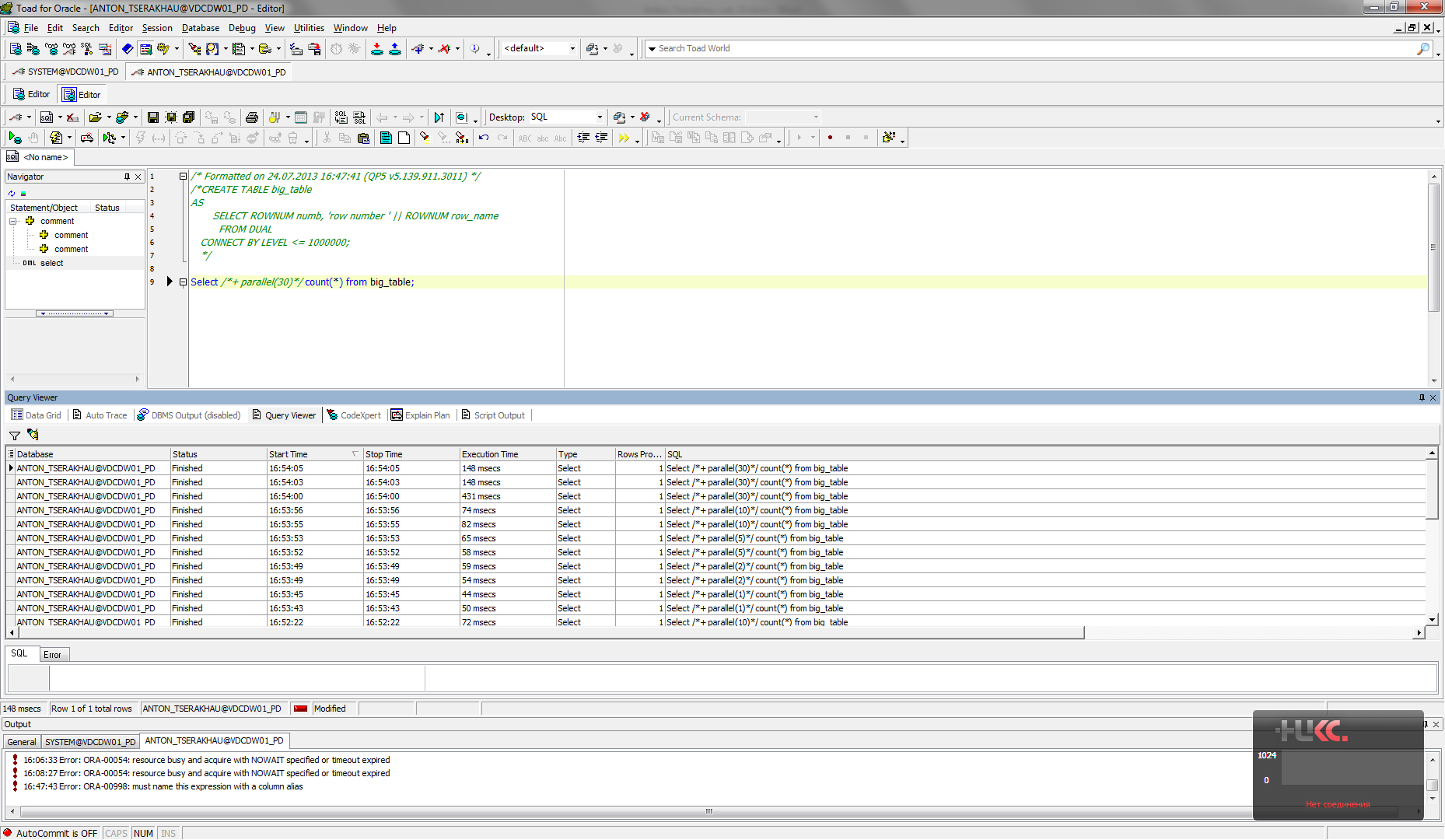




Amount of parallel: 10.

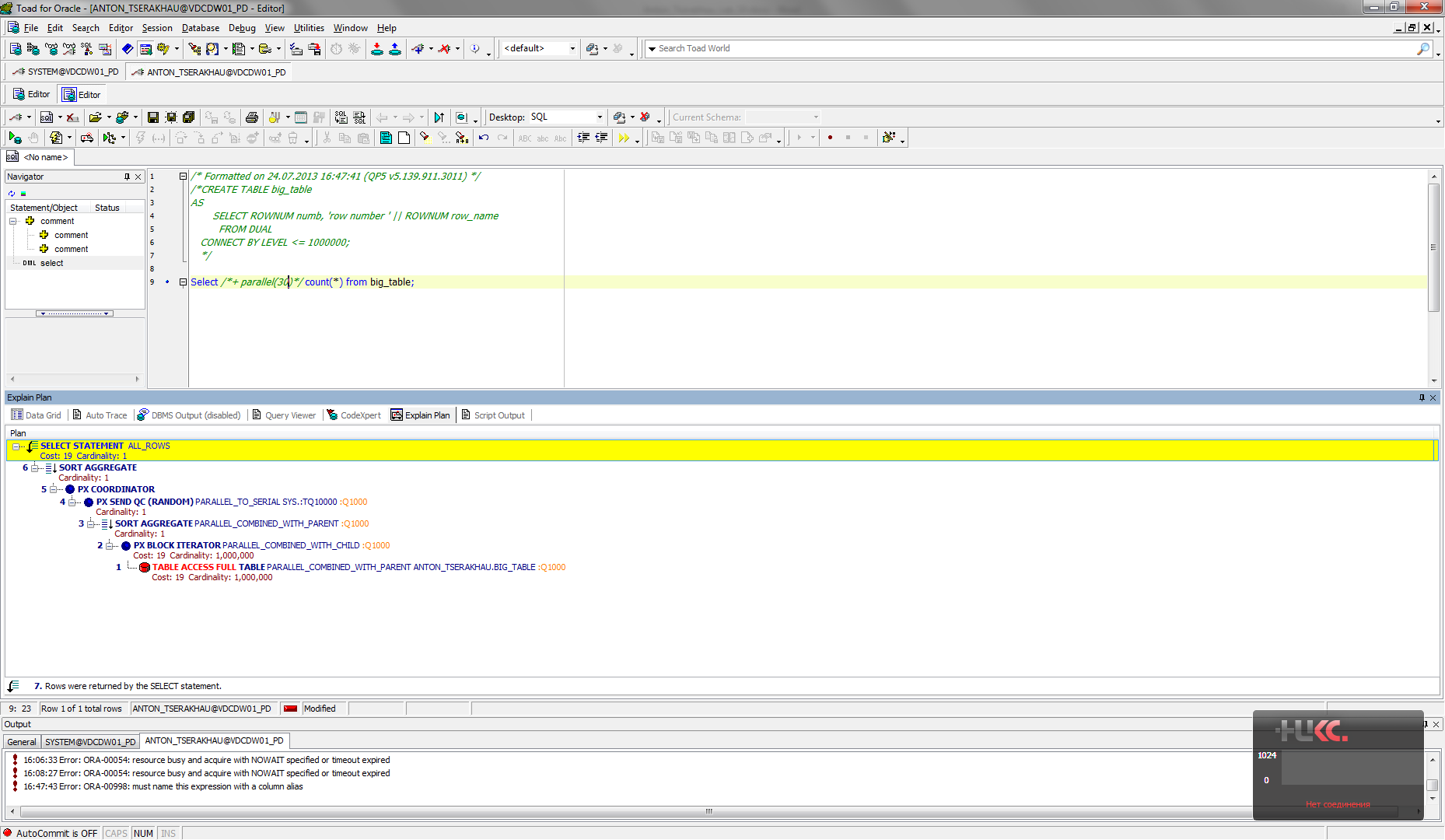
Select /\*+ parallel(10)\*/ count(\*) from big\_table;

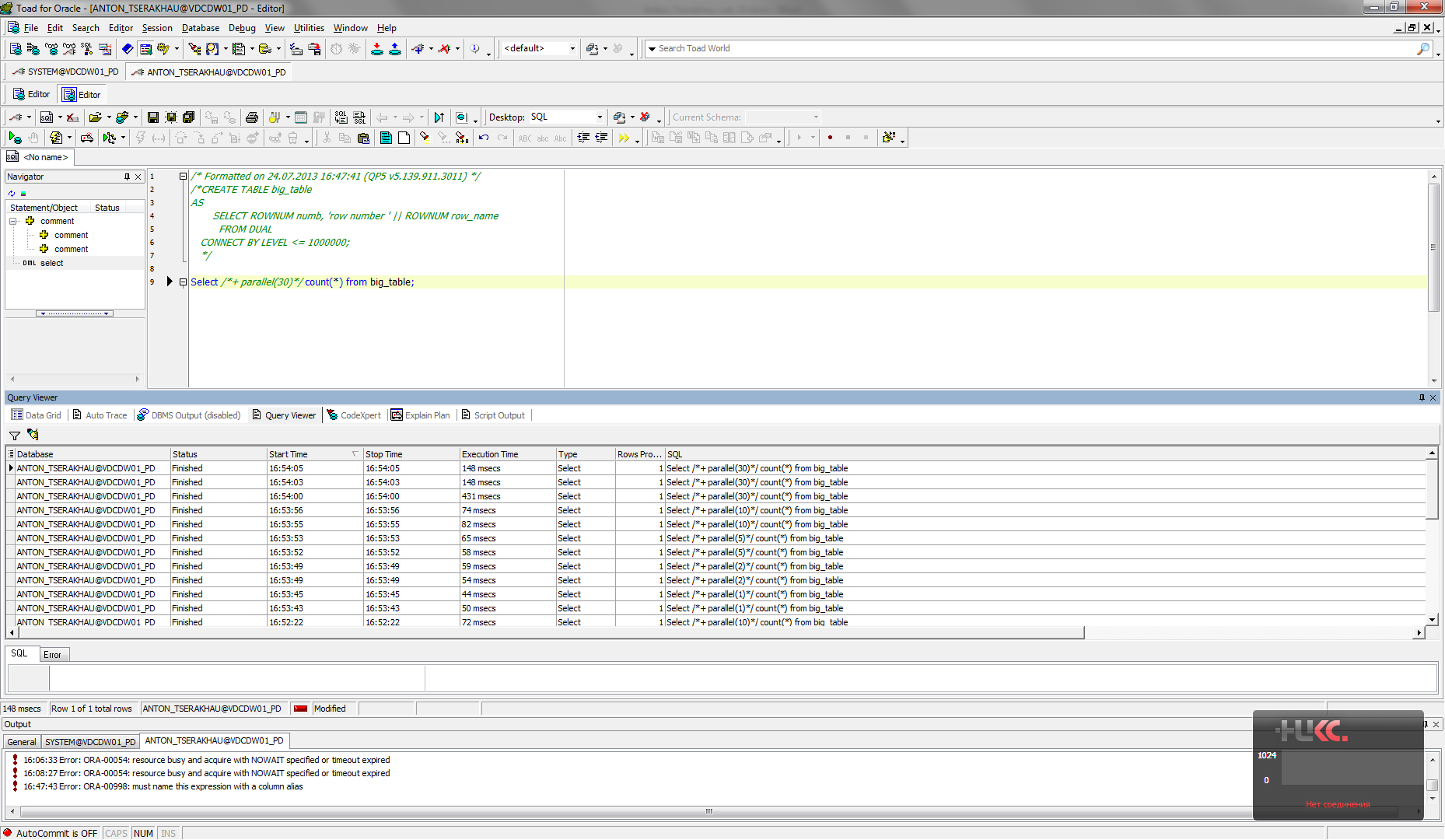




Amount of parallel: 30.

Select /\*+ parallel(30)\*/ count(\*) from big\_table;





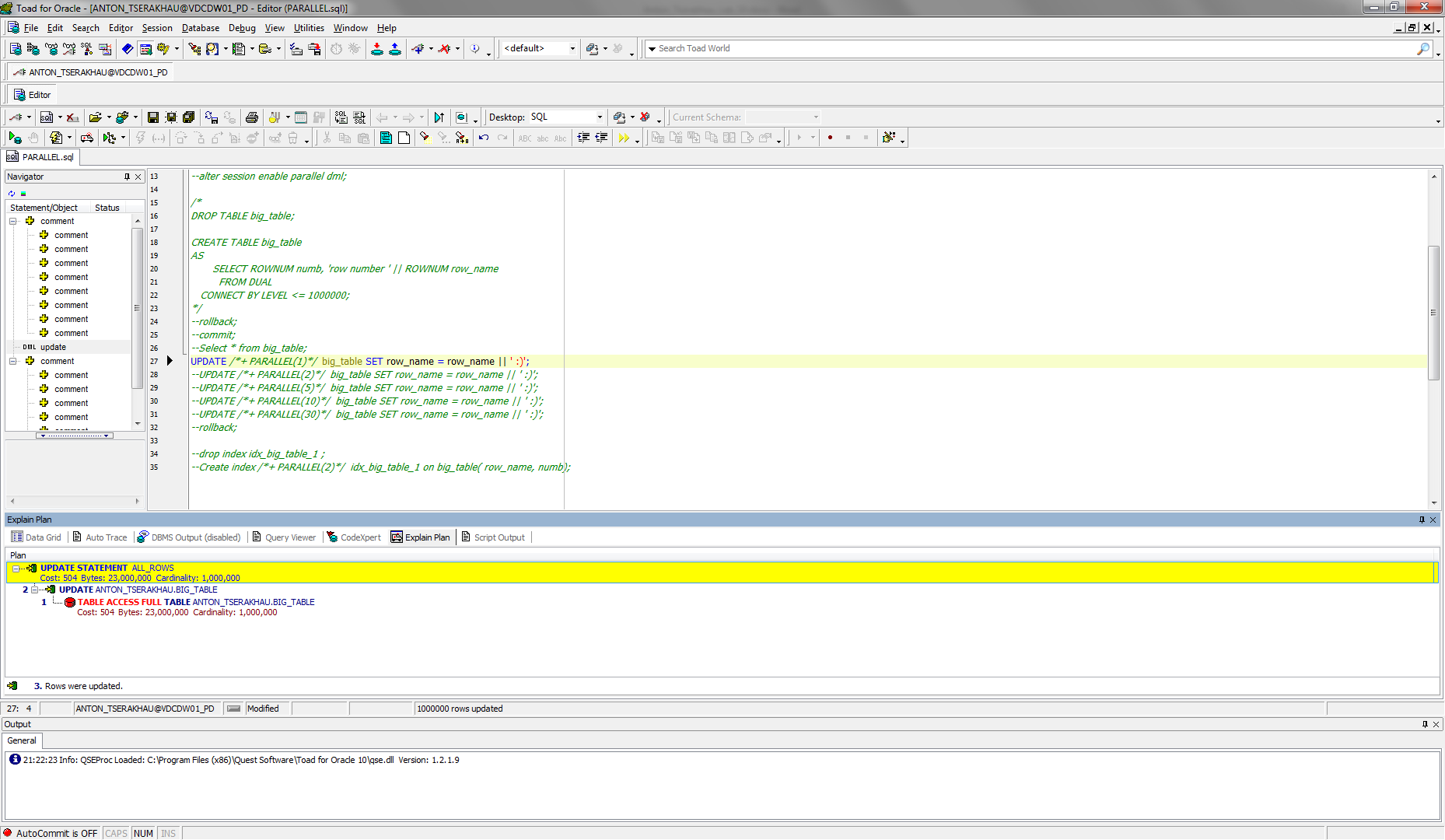
Summarize table:

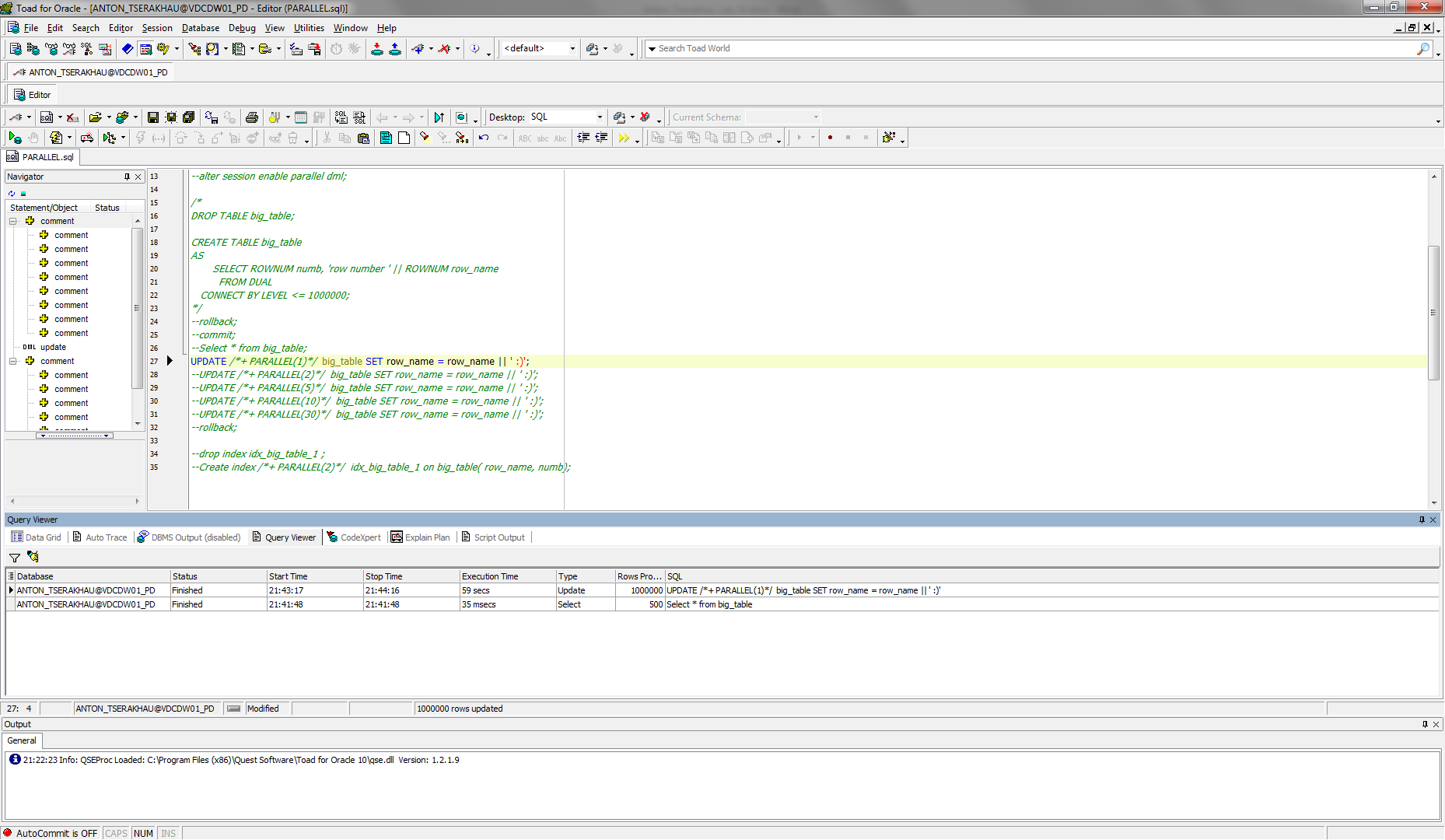
|  |  |  |
| --- | --- | --- |
| **Amount of parallel process** | **Cost** | **Time** |
| 1 | 503 | 148 msecs |
| 2 | 279 | 74-82 msecs |
| 5 | 112 | 58-65 msecs |
| 10 | 56 | 54-59 msecs |
| 30 | 19 | 44-50 msecs |

## Task 02: CREATE Example of Parallel DML

Amount of parallel: 1.

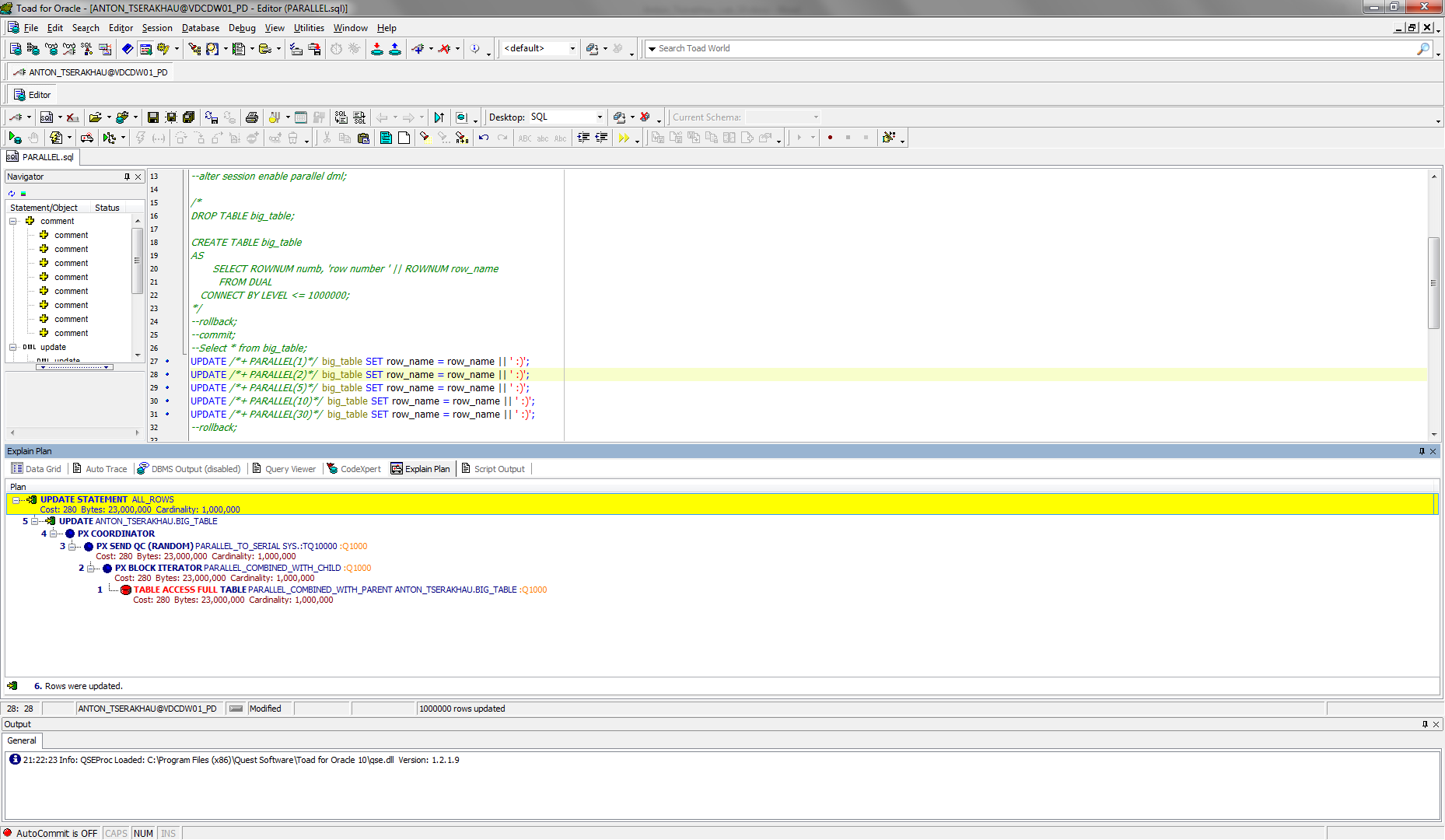
UPDATE /\*+ PARALLEL(1)\*/ big\_table SET row\_name = row\_name || ' :)';

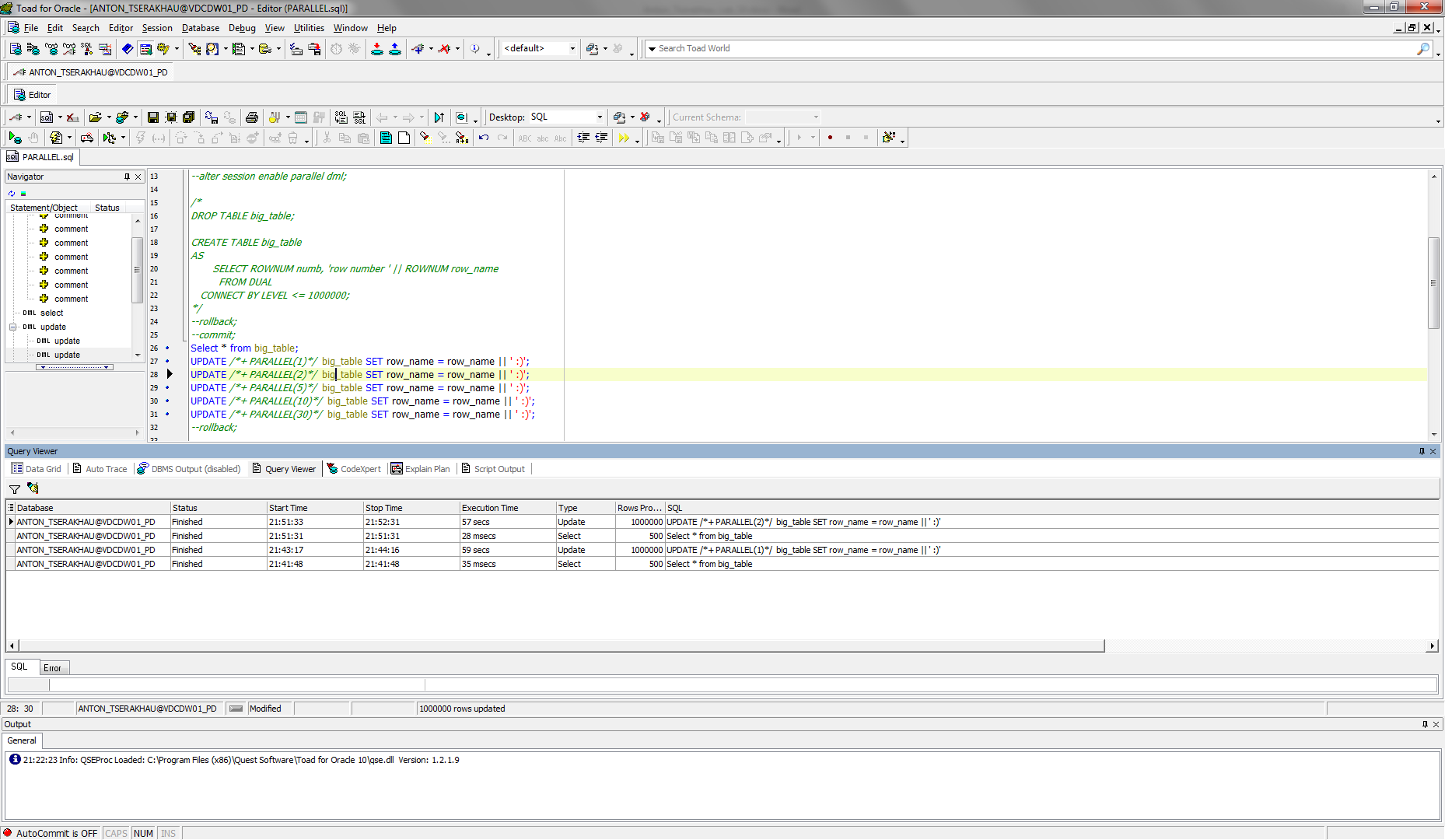




Amount of parallel: 2.

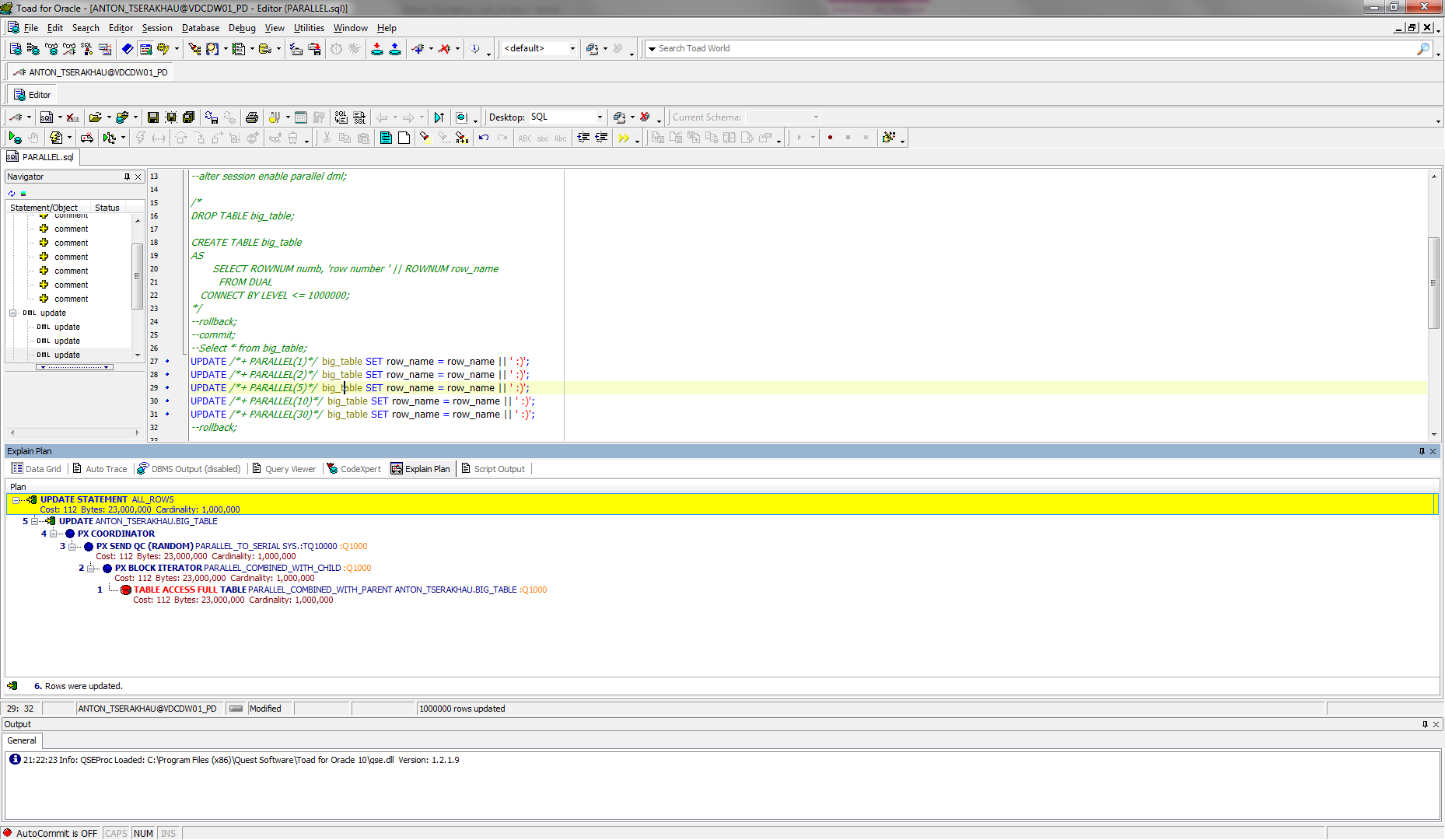
UPDATE /\*+ PARALLEL(2)\*/ big\_table SET row\_name = row\_name || ' :)';

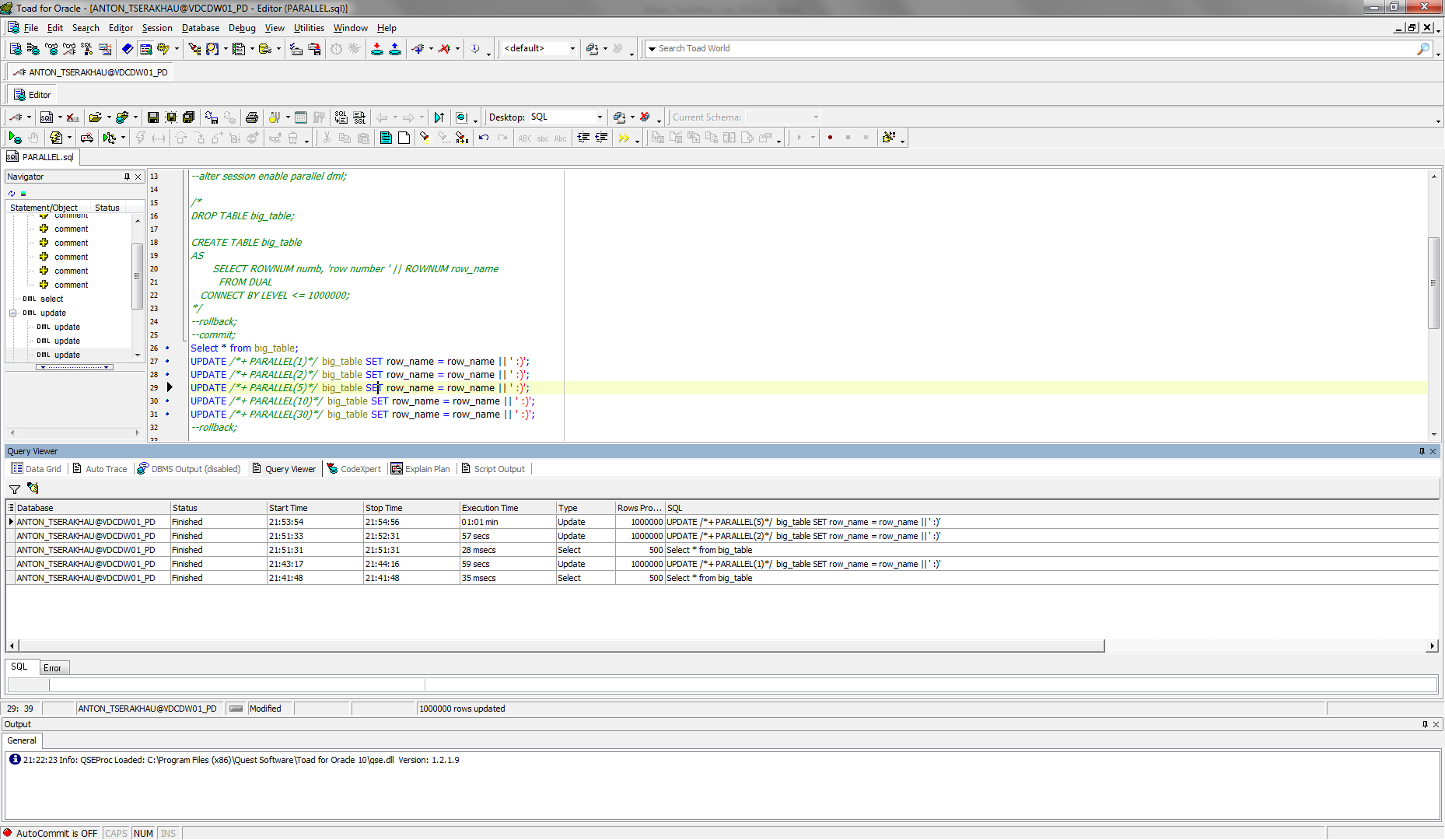




Amount of parallel: 5.

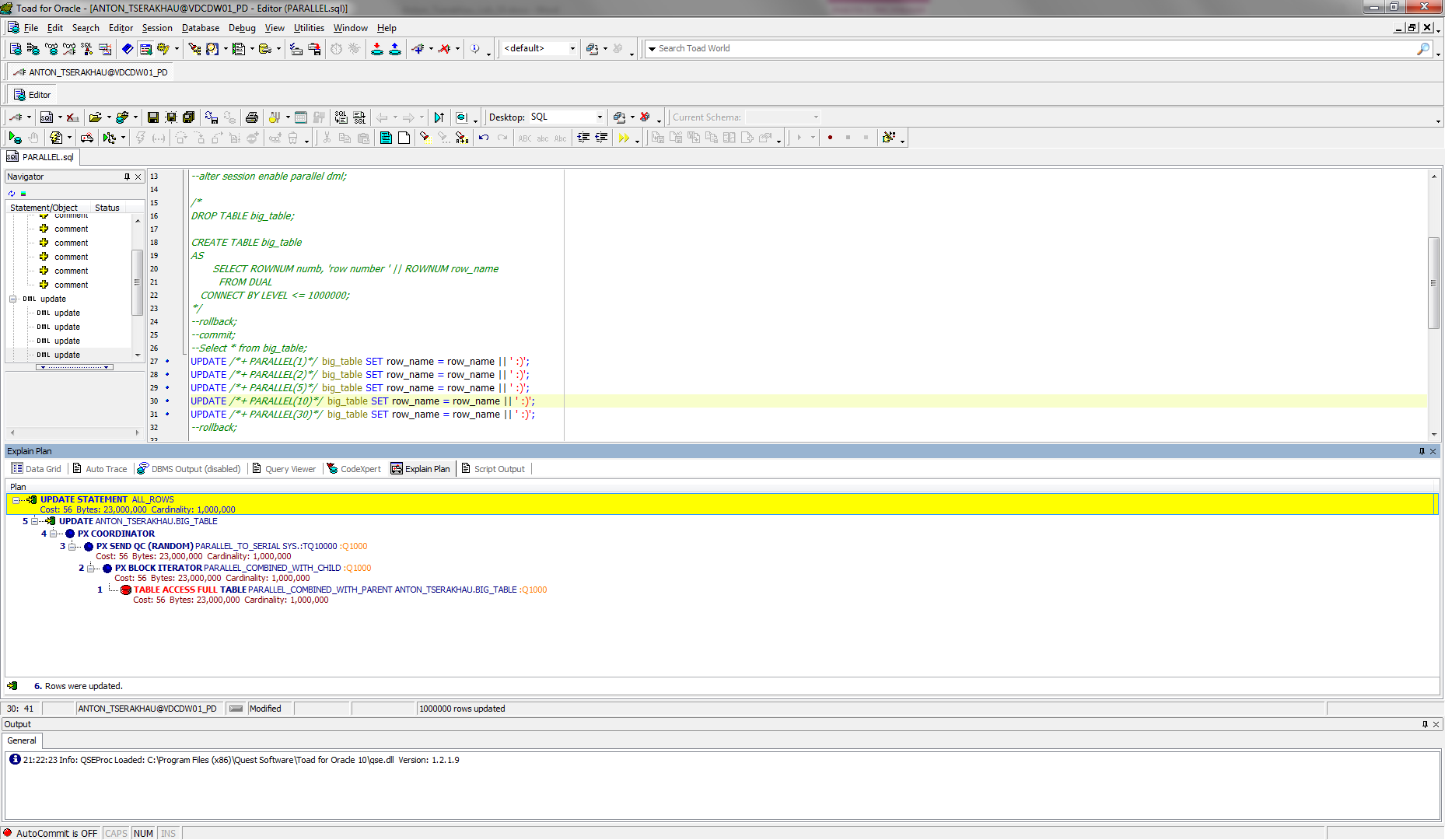
UPDATE /\*+ PARALLEL(5)\*/ big\_table SET row\_name = row\_name || ' :)';

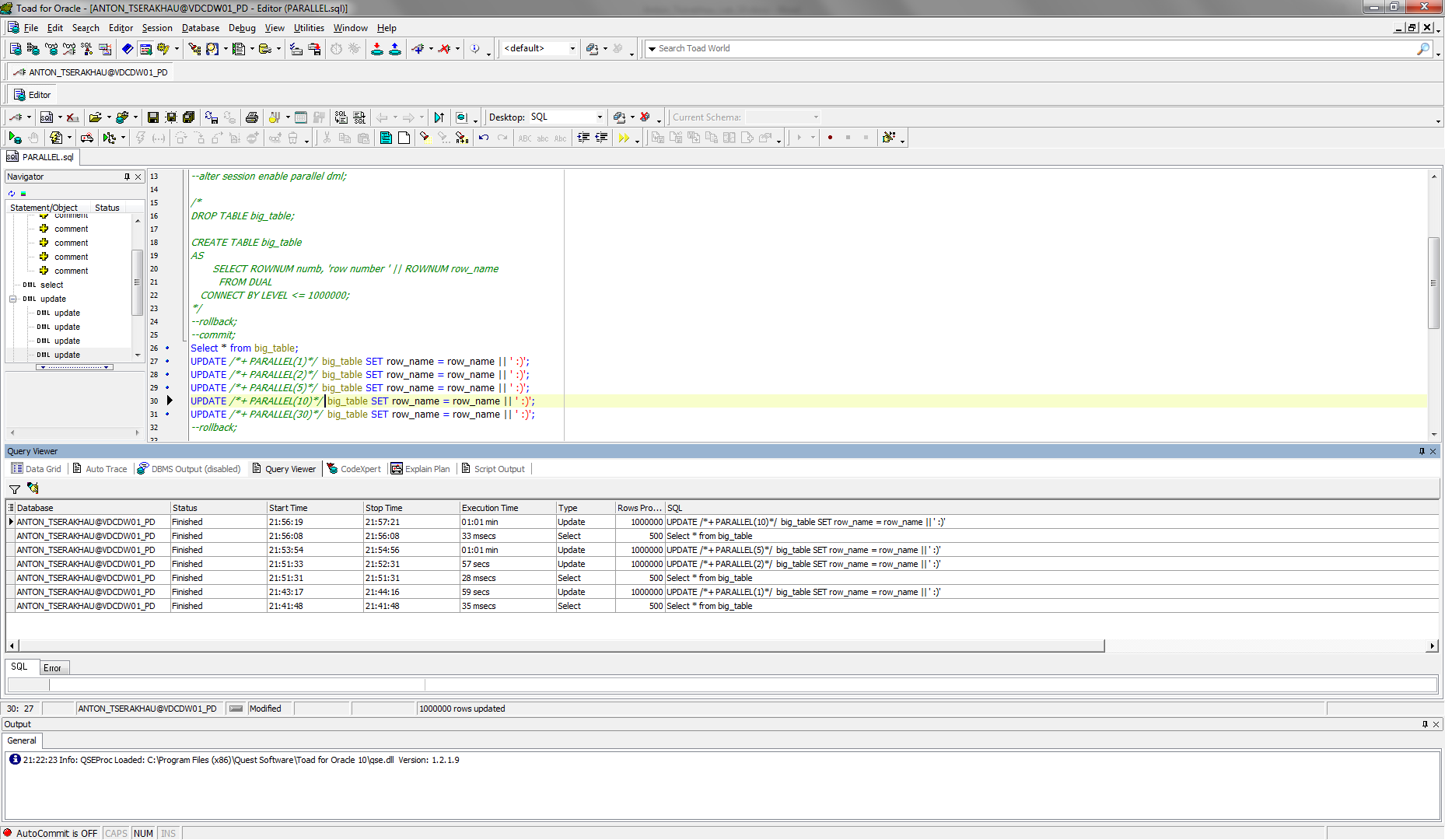




Amount of parallel: 10.

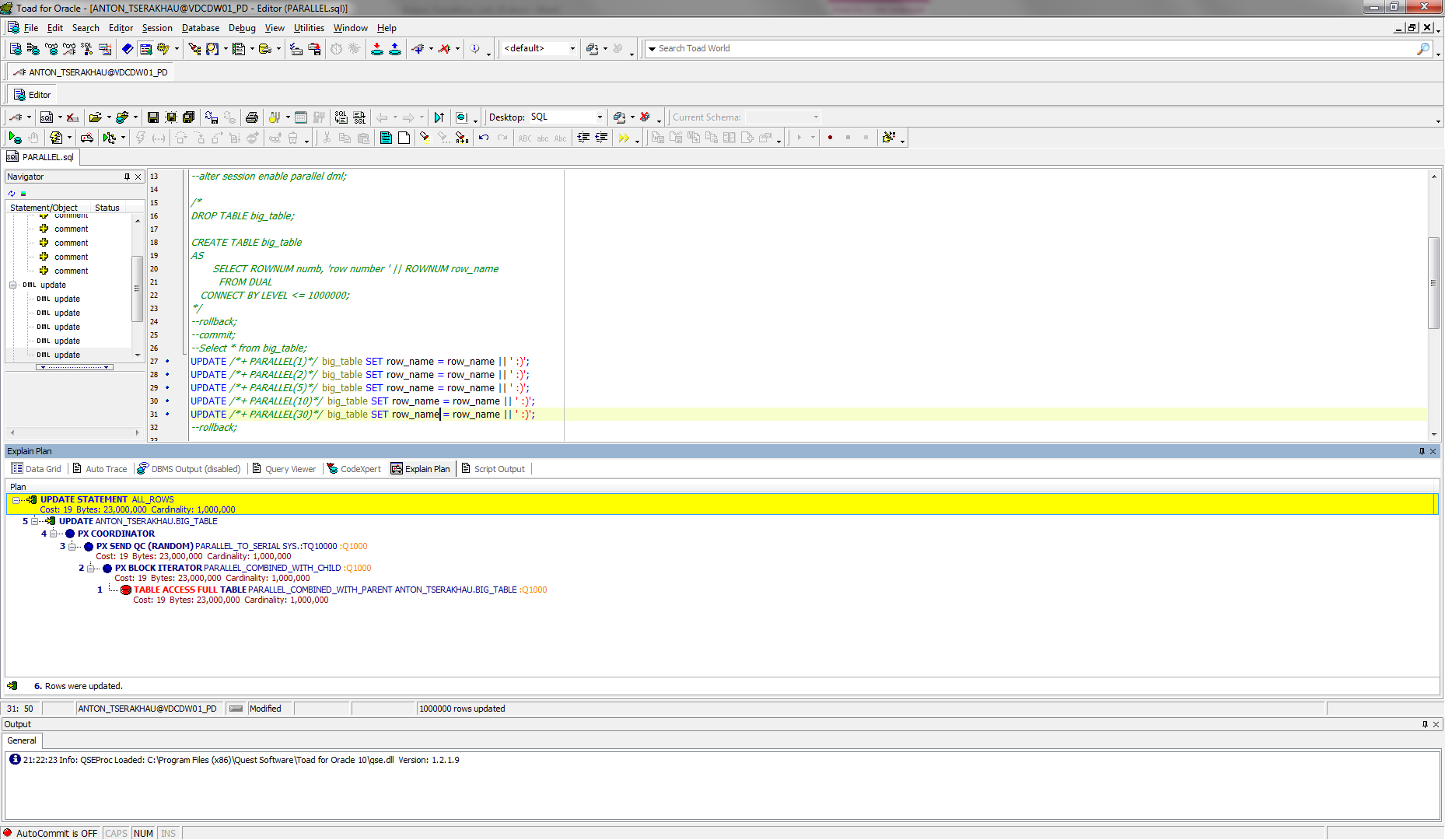
UPDATE /\*+ PARALLEL(10)\*/ big\_table SET row\_name = row\_name || ' :)';

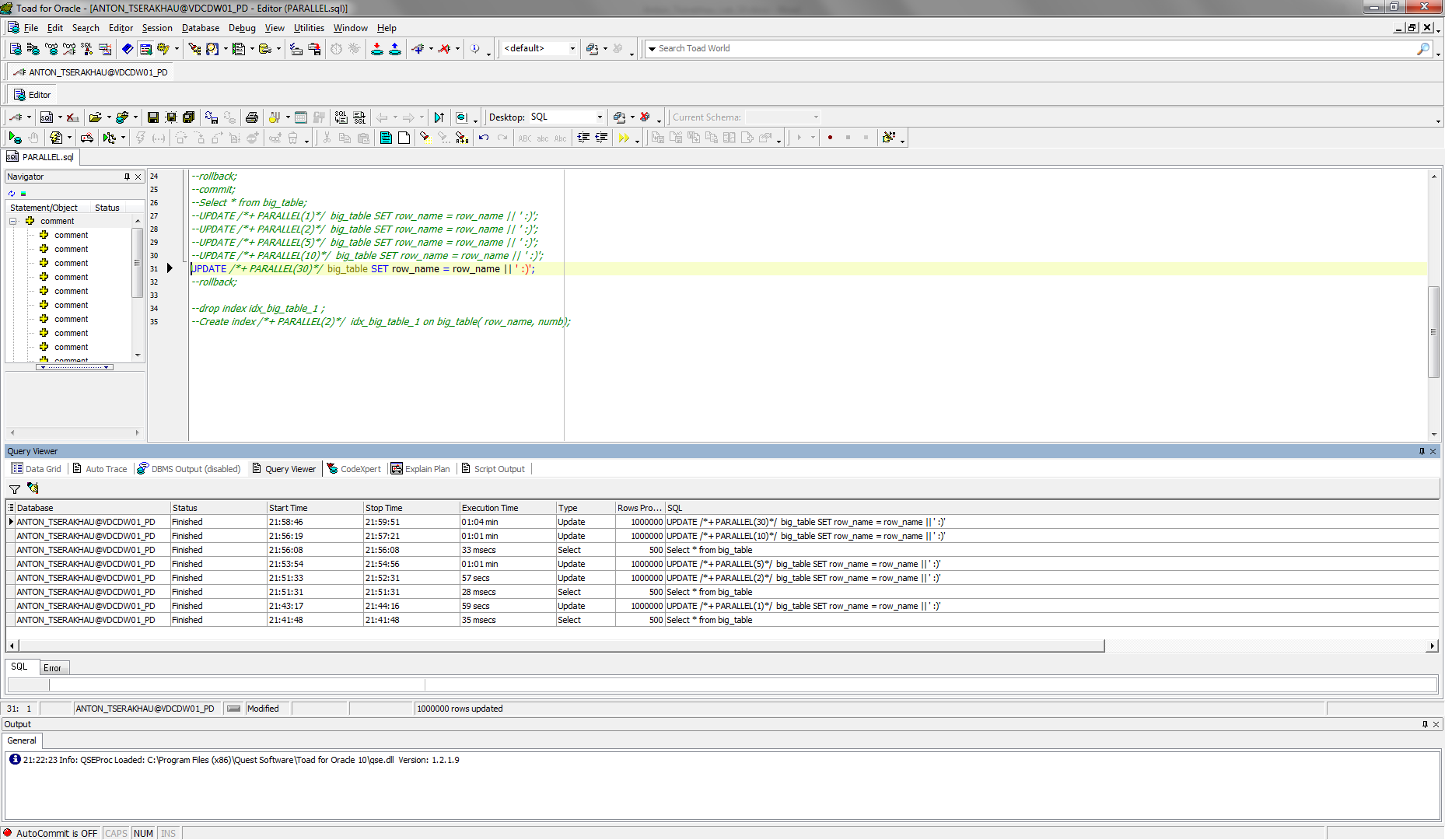




Amount of parallel: 30.

UPDATE /\*+ PARALLEL(30)\*/ big\_table SET row\_name = row\_name || ' :)';





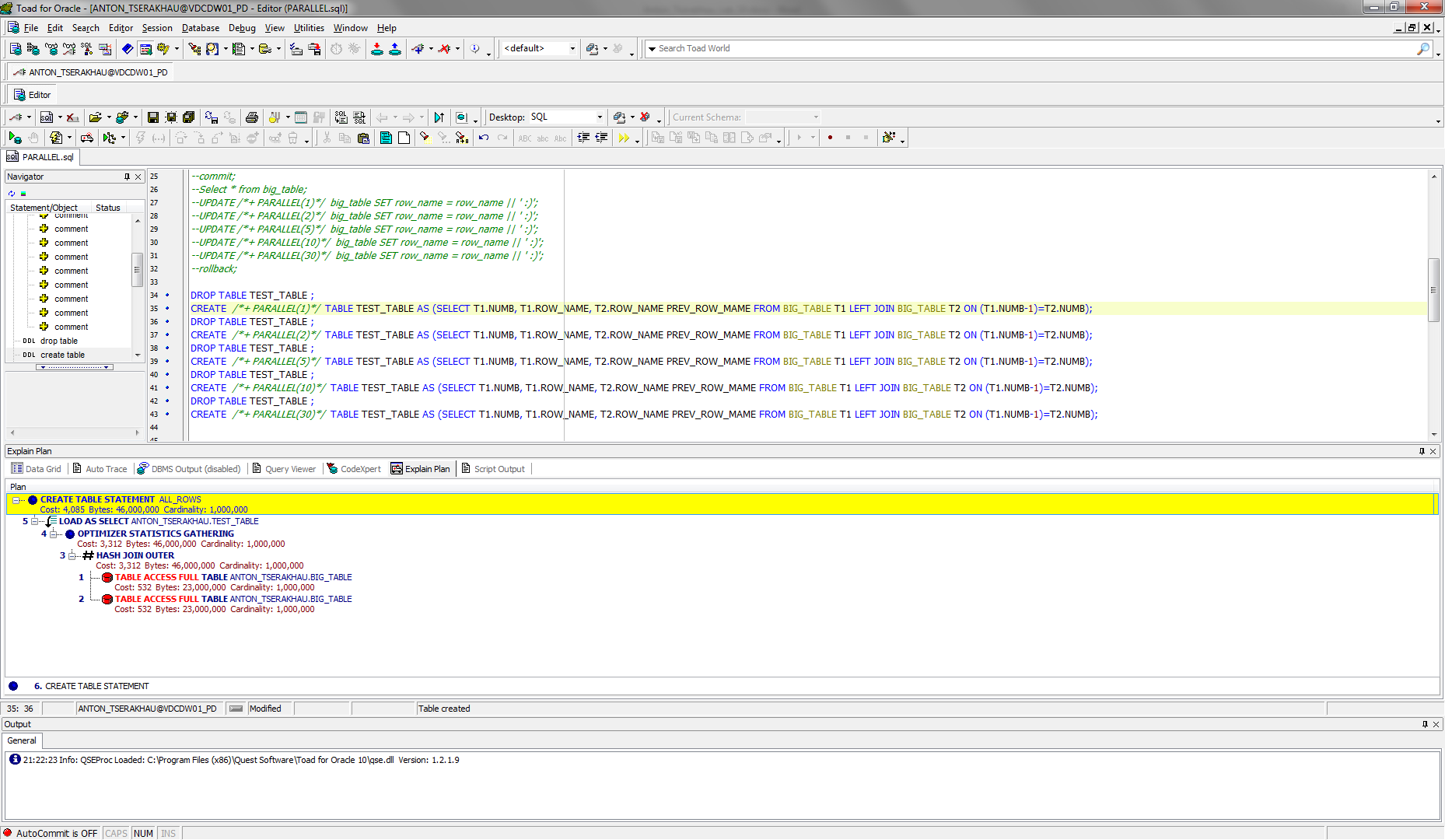
Summarize table

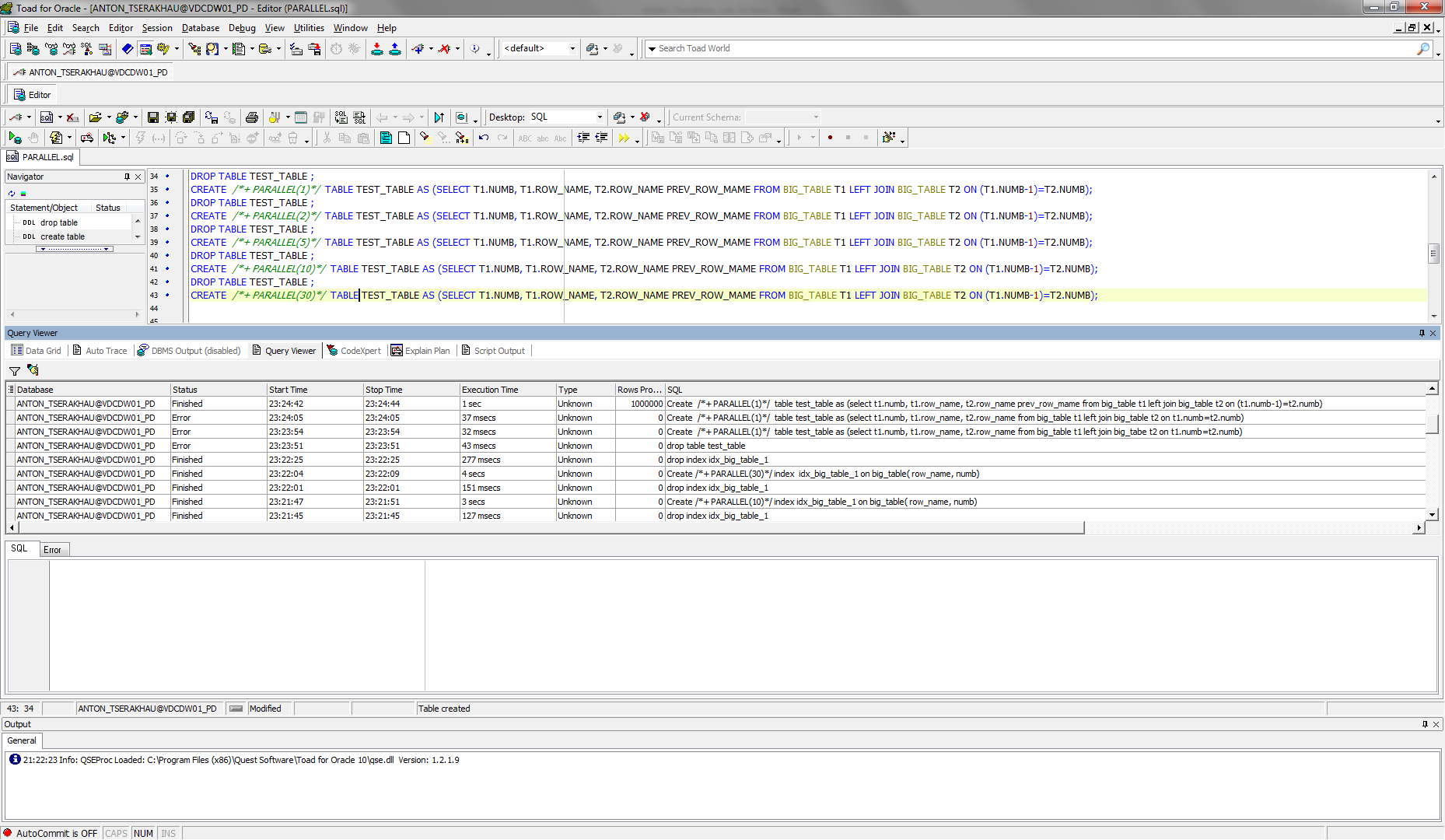
|  |  |  |
| --- | --- | --- |
| **Amount of parallel process** | **Cost** | **Time** |
| 1 | 504 | 59 secs |
| 2 | 280 | 57 secs |
| 5 | 112 | 61 secs |
| 10 | 56 | 61 secs |
| 30 | 19 | 64 secs |

## Task 03: CREATE Example of Parallel DDL

Amount of parallel: 1.

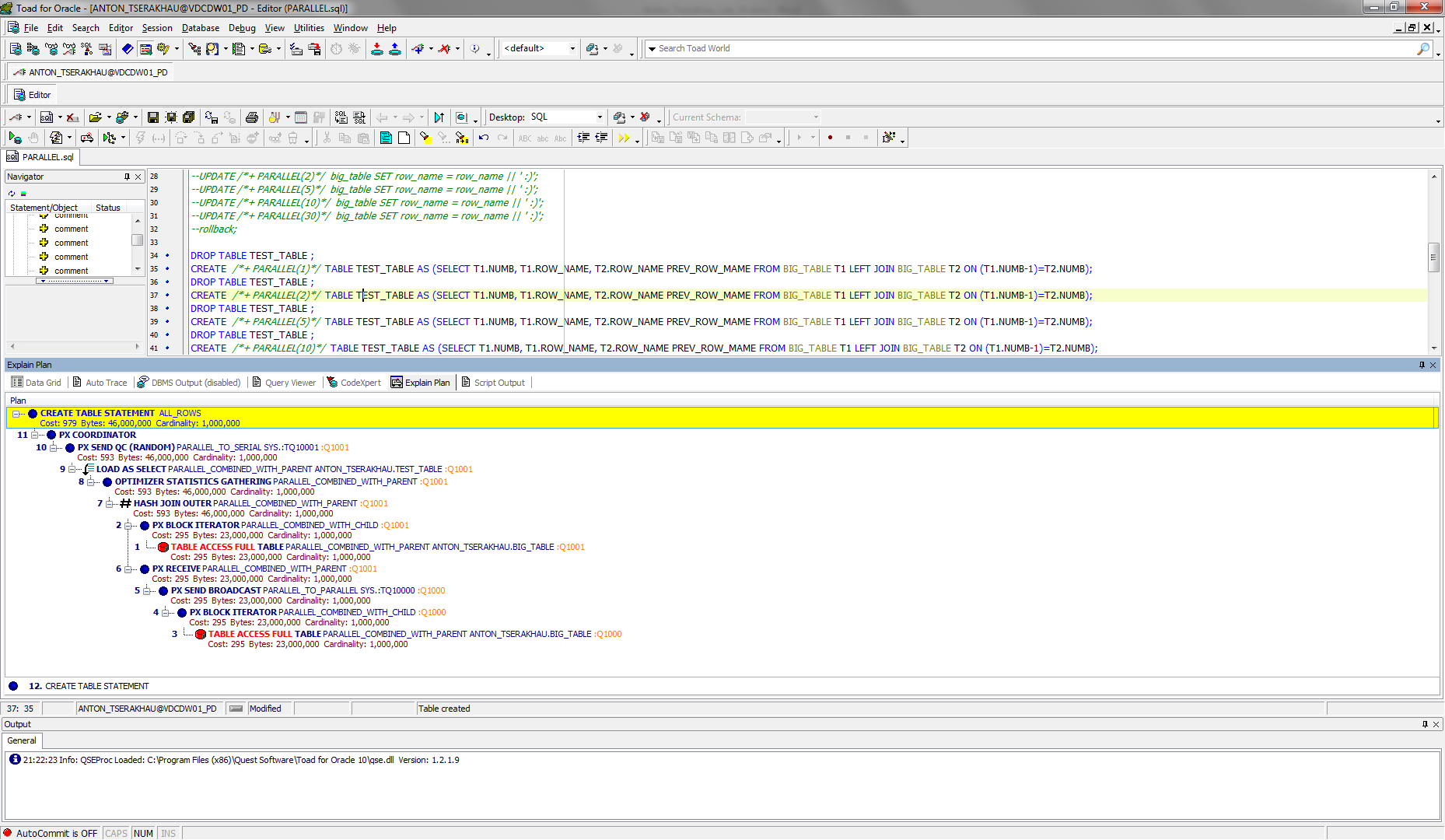
CREATE /\*+ PARALLEL(1)\*/ TABLE TEST\_TABLE AS (SELECT T1.NUMB, T1.ROW\_NAME, T2.ROW\_NAME PREV\_ROW\_MAME FROM BIG\_TABLE T1 LEFT JOIN BIG\_TABLE T2 ON (T1.NUMB-1)=T2.NUMB);

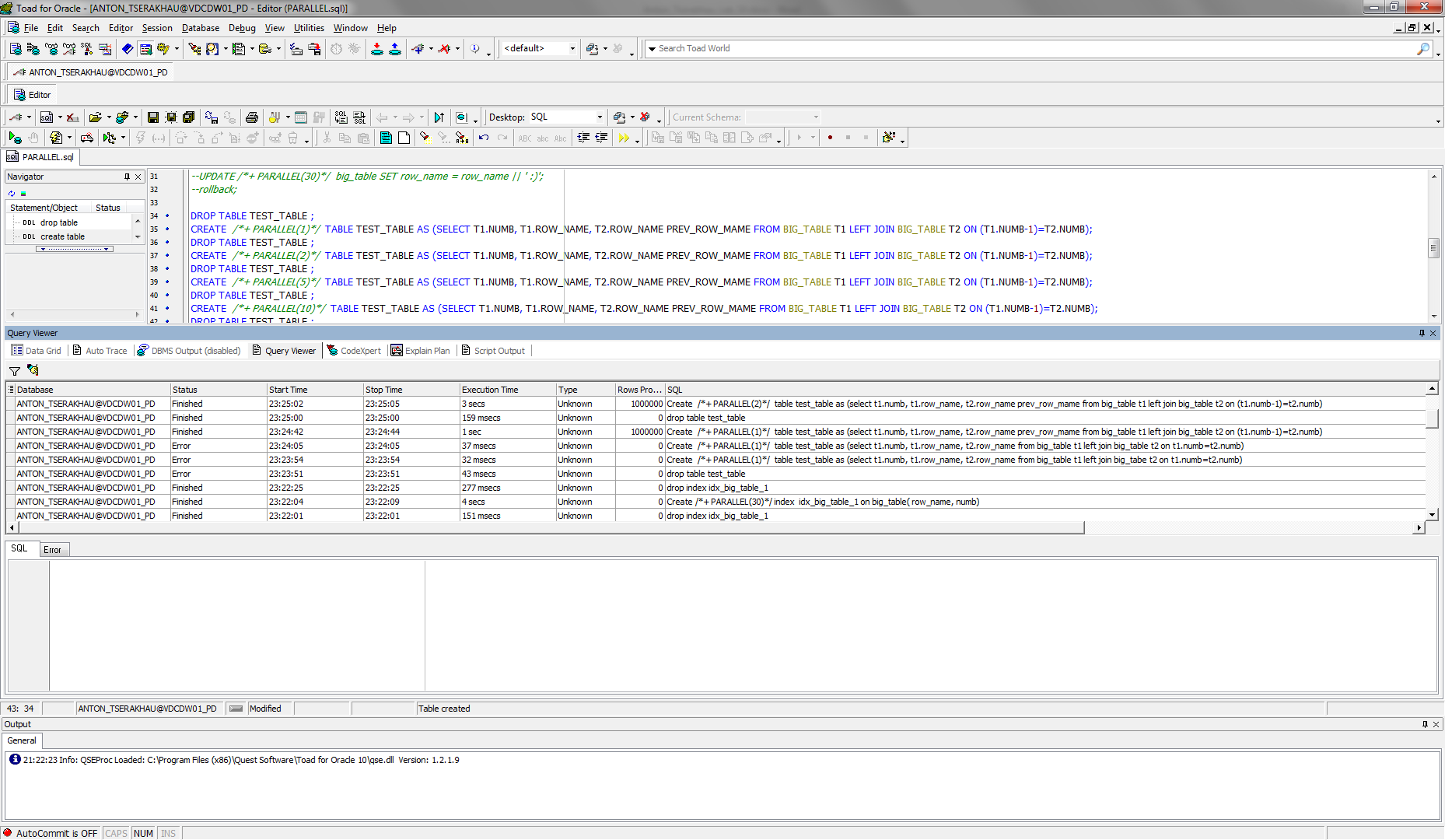




Amount of parallel: 2.

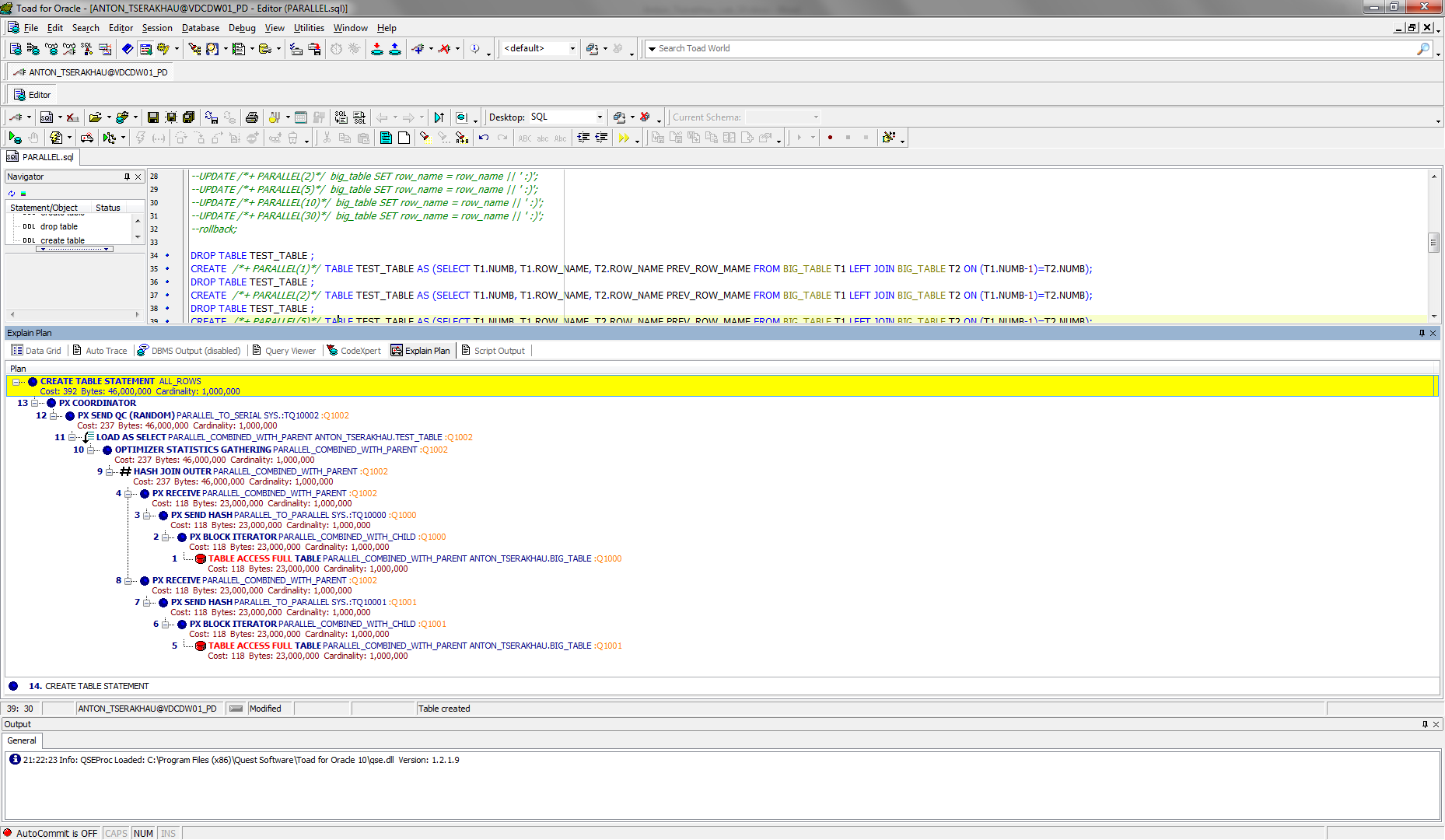
CREATE /\*+ PARALLEL(2)\*/ TABLE TEST\_TABLE AS (SELECT T1.NUMB, T1.ROW\_NAME, T2.ROW\_NAME PREV\_ROW\_MAME FROM BIG\_TABLE T1 LEFT JOIN BIG\_TABLE T2 ON (T1.NUMB-1)=T2.NUMB);

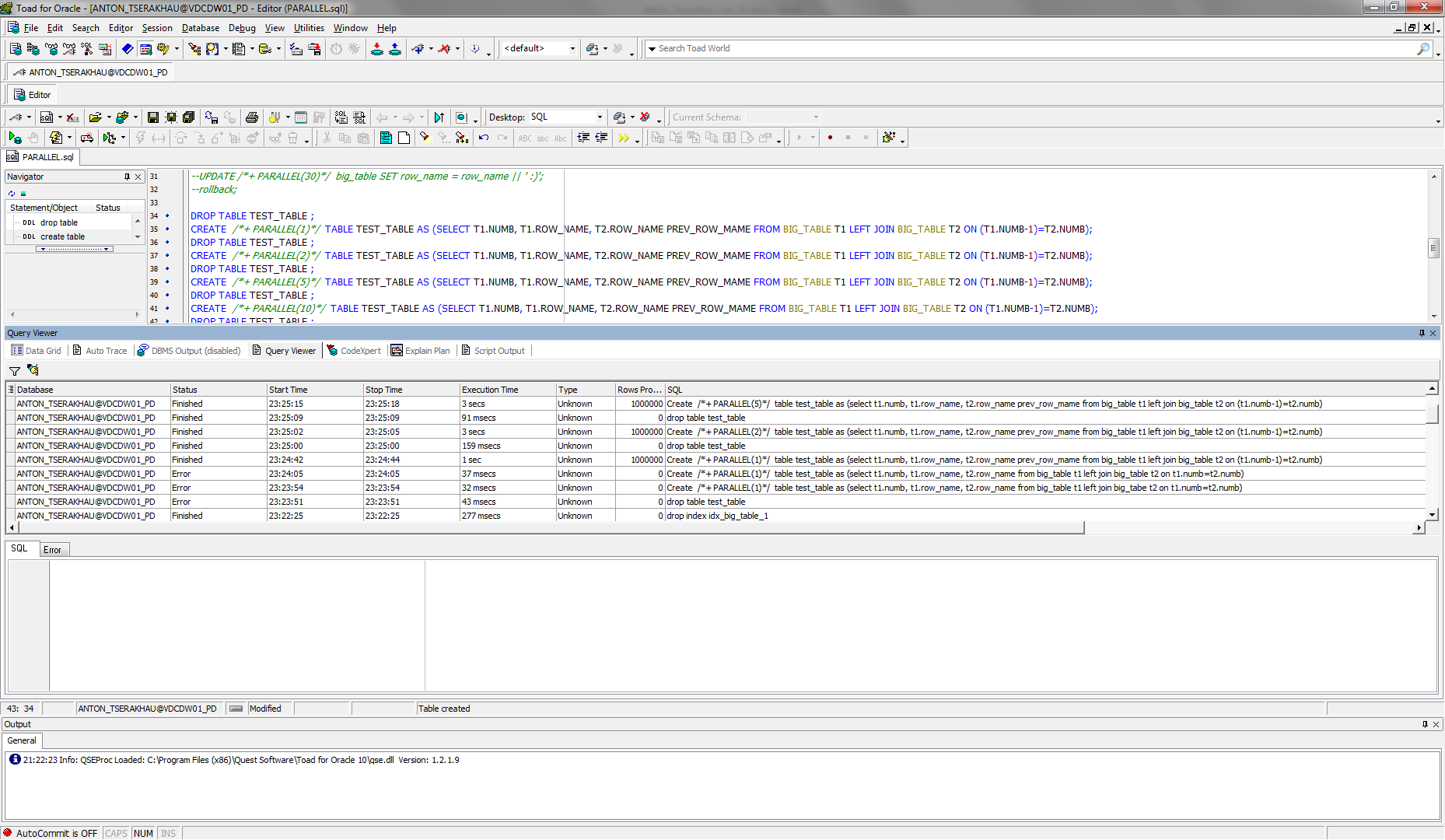




Amount of parallel: 5.

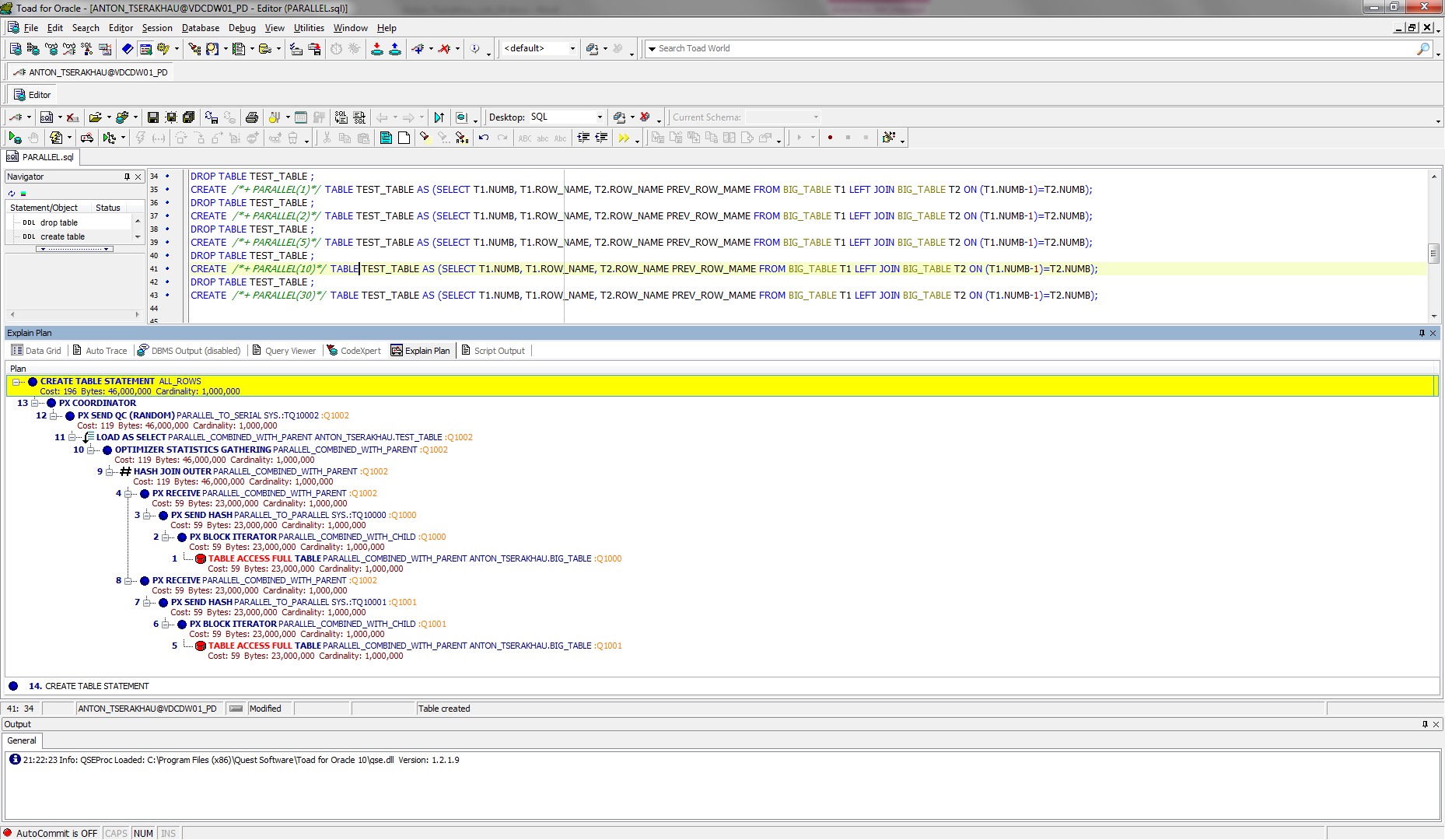
CREATE /\*+ PARALLEL(5)\*/ TABLE TEST\_TABLE AS (SELECT T1.NUMB, T1.ROW\_NAME, T2.ROW\_NAME PREV\_ROW\_MAME FROM BIG\_TABLE T1 LEFT JOIN BIG\_TABLE T2 ON (T1.NUMB-1)=T2.NUMB);

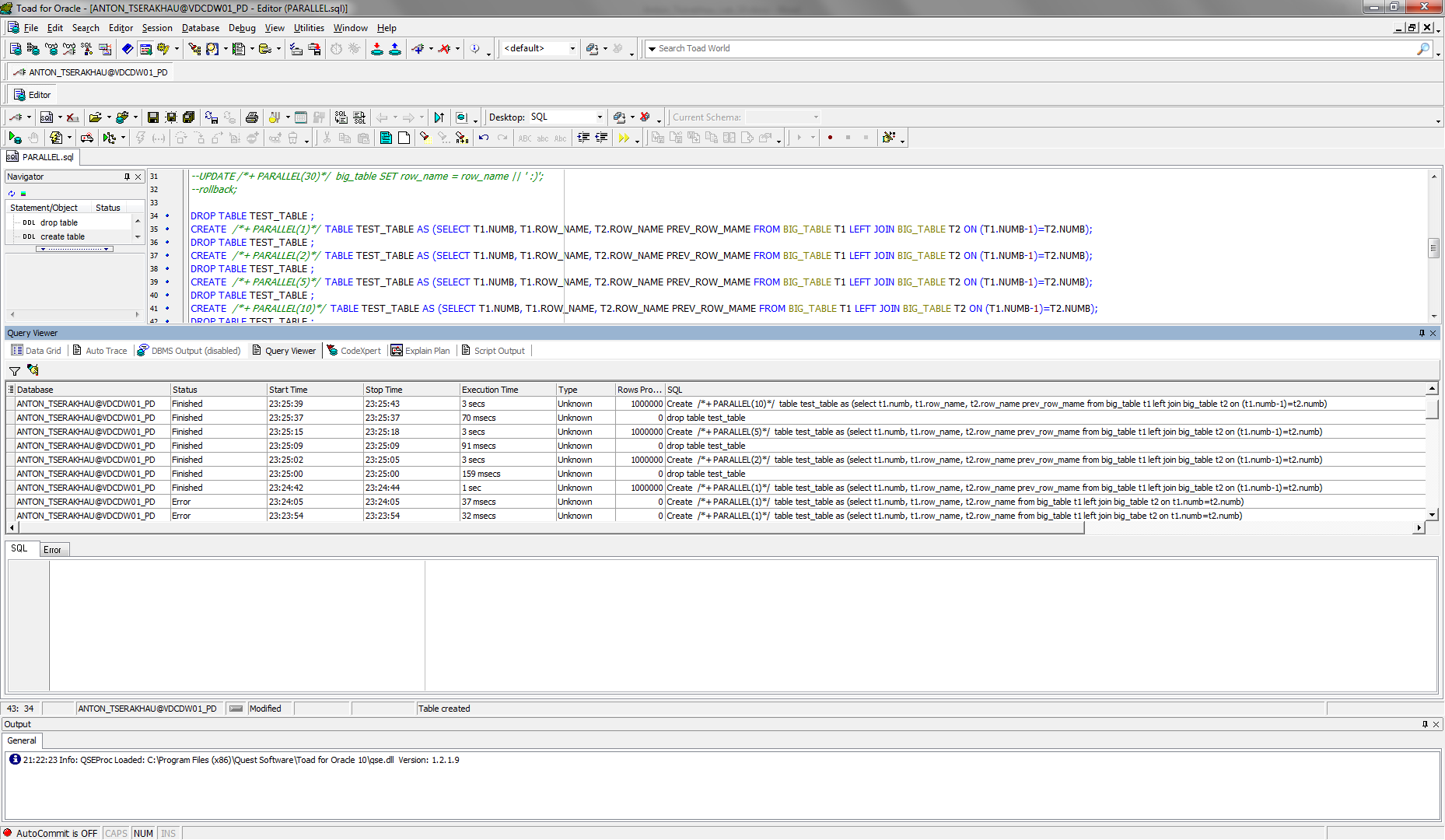




Amount of parallel: 10.

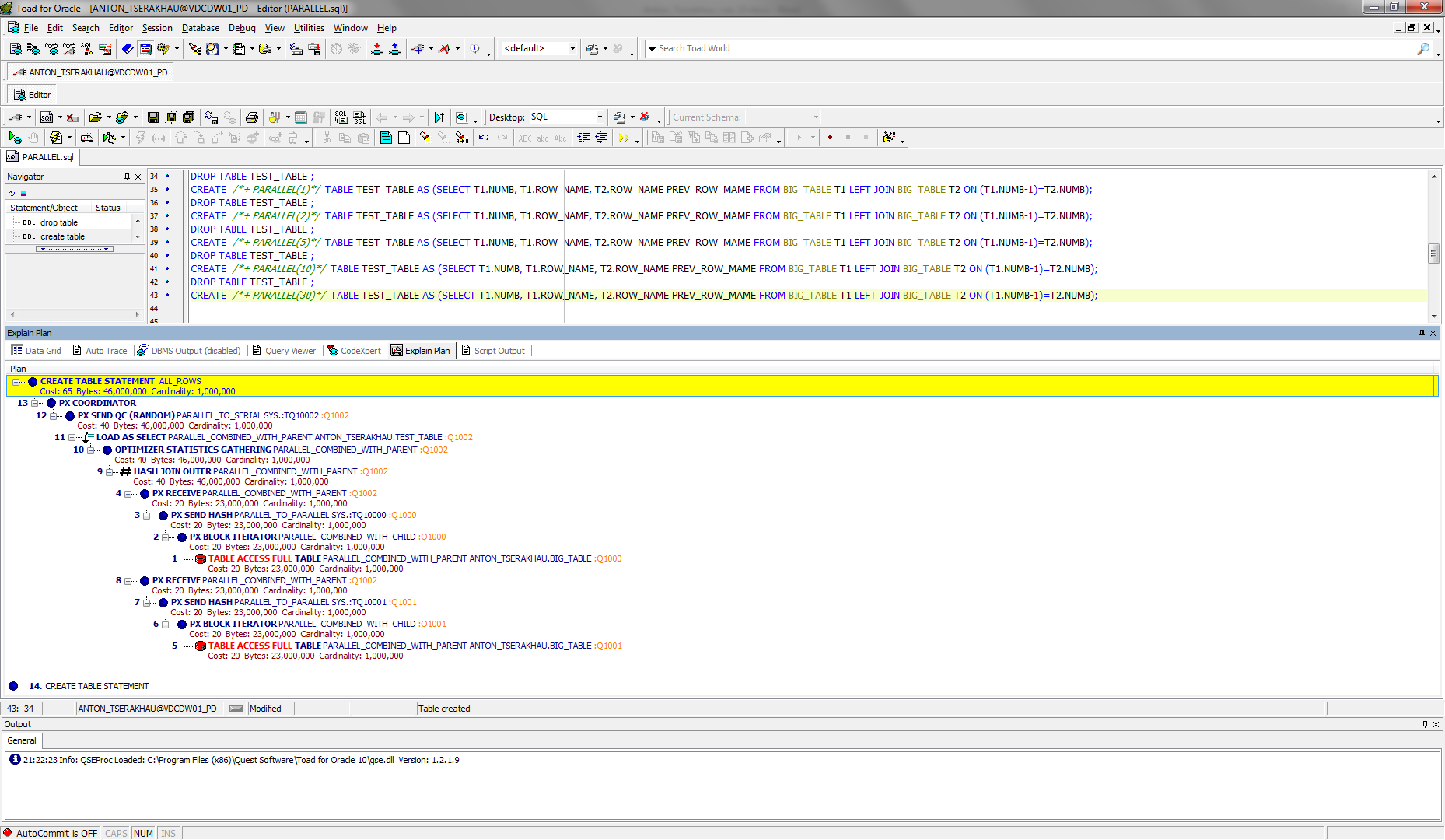
CREATE /\*+ PARALLEL(10)\*/ TABLE TEST\_TABLE AS (SELECT T1.NUMB, T1.ROW\_NAME, T2.ROW\_NAME PREV\_ROW\_MAME FROM BIG\_TABLE T1 LEFT JOIN BIG\_TABLE T2 ON (T1.NUMB-1)=T2.NUMB);

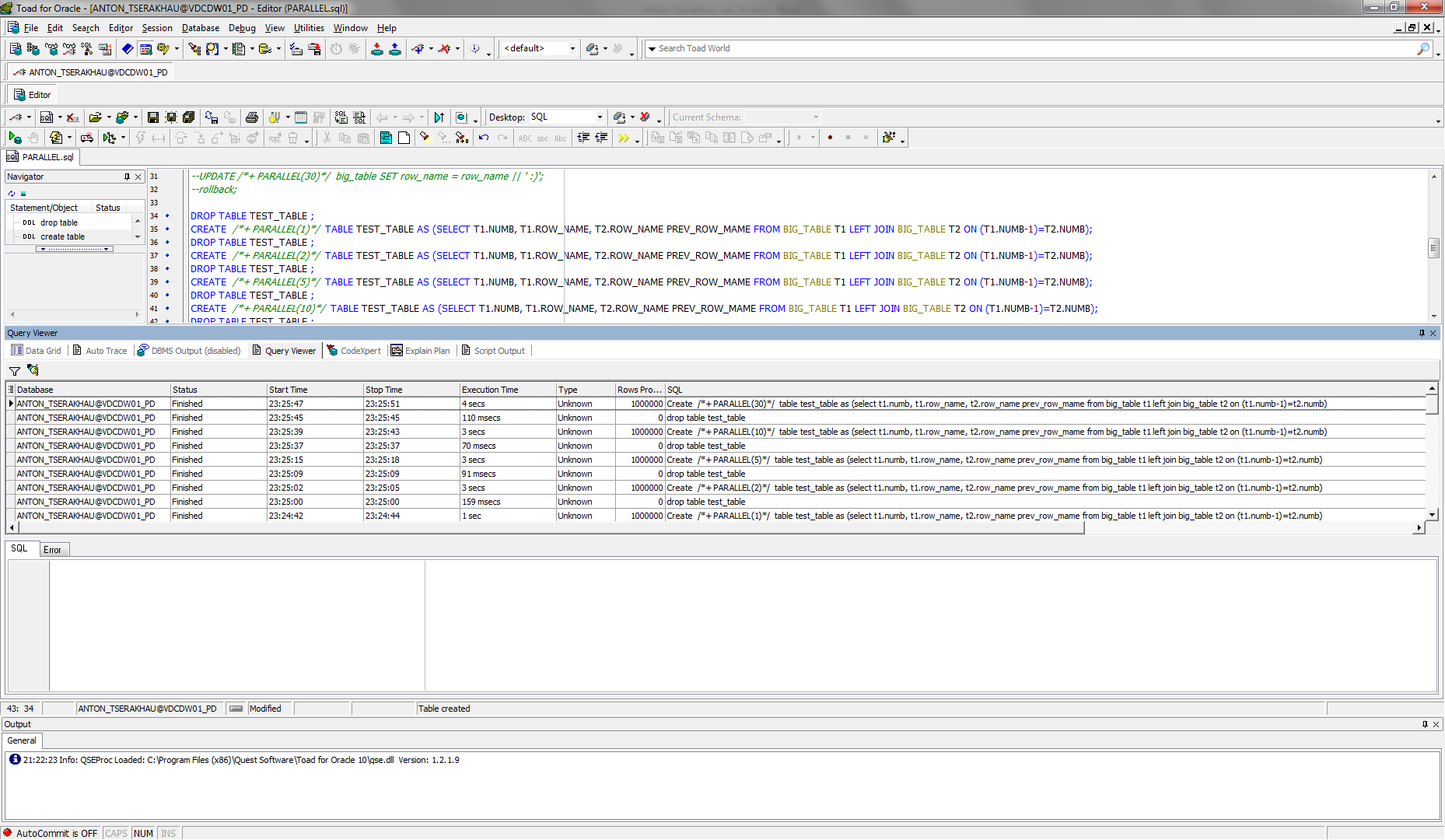




Amount of parallel: 30.

CREATE /\*+ PARALLEL(30)\*/ TABLE TEST\_TABLE AS (SELECT T1.NUMB, T1.ROW\_NAME, T2.ROW\_NAME PREV\_ROW\_MAME FROM BIG\_TABLE T1 LEFT JOIN BIG\_TABLE T2 ON (T1.NUMB-1)=T2.NUMB);





Summarize table

|  |  |  |
| --- | --- | --- |
| **Amount of parallel process** | **Cost** | **Time** |
| 1 | 4085 | 1 secs |
| 2 | 979 | 3 secs |
| 5 | 392 | 3 secs |
| 10 | 196 | 3 secs |
| 30 | 65 | 4 secs |