

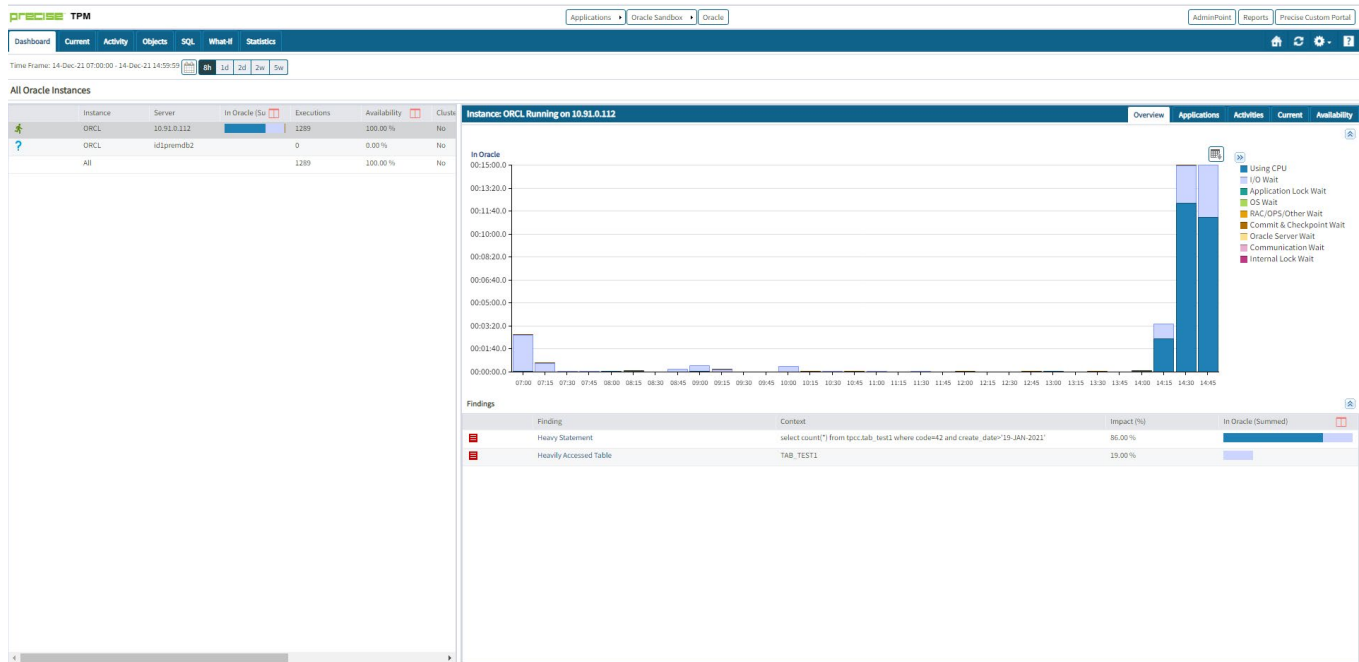
IDENTIFY AND TUNE SQL QUERIES IN A FEW CLICKS WITH PRECISE

IDENTIFY AND TUNE SQL QUERIES

With Precise, you can identify and tune your problem SQL queries in a few clicks.

Precise tells you what are your heaviest SQL queries and identifies them as Findings.

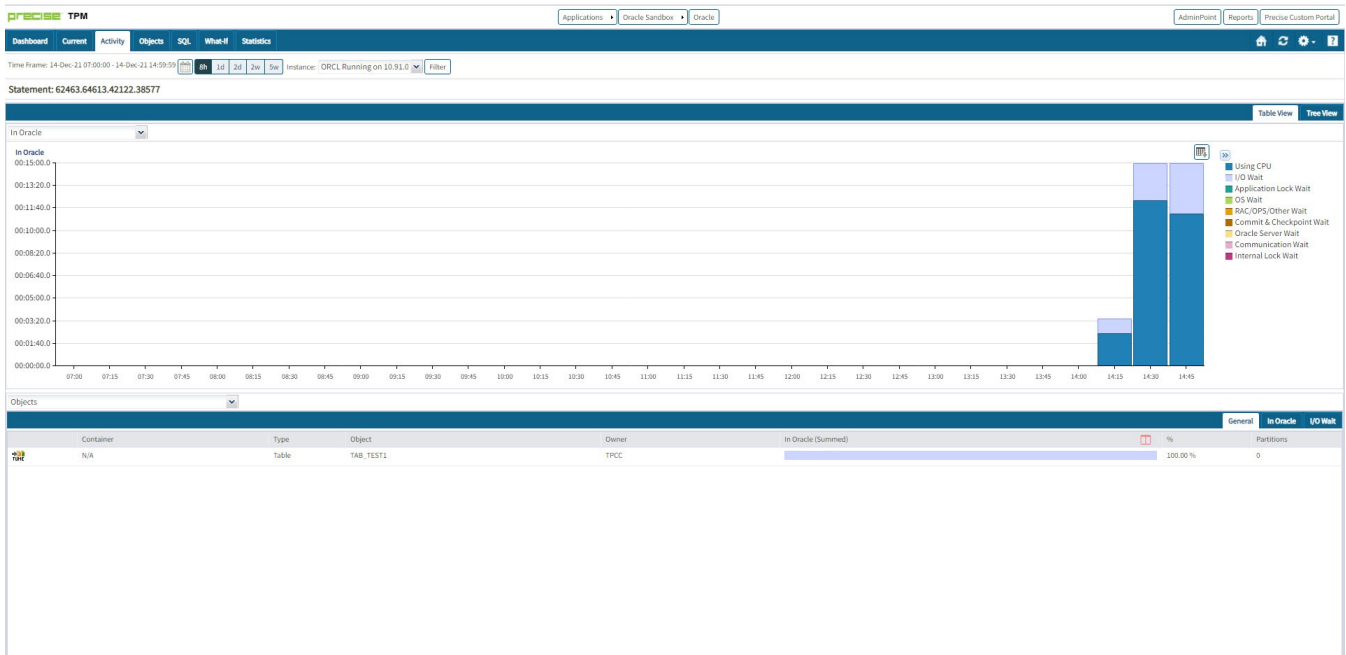
The Findings tab shows the heaviest SQL query. You can see in the example below that this query is consuming 86% of the time in Oracle.



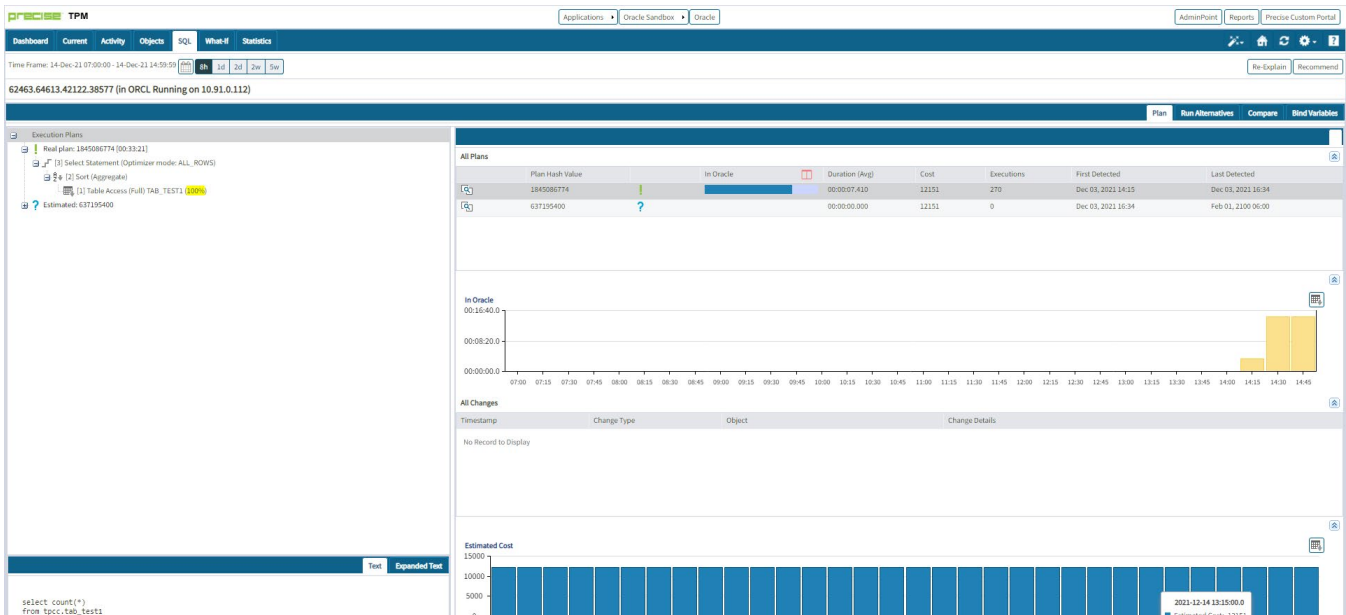
By clicking on the Heavy Statement link, you can view details about the query.



By clicking on the Statement Activity link, you can discover how frequently one executed the query.



You can click on the Tune the Statement link, which will then take you to the SQL tab and show details of the query, including the execution plan.



You can see in this example that there is a table access full scan

By clicking the Recommend tab Precise will identify any recommendations for this query.

The screenshot shows the Oracle Performance Tuning Advisor (PTM) interface. The top navigation bar includes 'Applications', 'Oracle Sandbox', and 'Oracle'. The main content area is titled 'Tuning Recommendations and Impact of Index Changes'. It displays a table with the following columns: Evaluate, Remove from List, Edit, Action, Container, Owner, Table, Object, Columns, DDL/Comment, Type, Unique, Leaf Blocks, Distinct Keys, Clustering Factor, and Partitioned. The table contains one row with the following data: Evaluate (checked), Remove from List (X), Edit (pencil icon), Action (Index Creation), Container (TPCC), Owner (TAB_TEST1), Object (IDX\$5_19CEA0001), Columns (CODE,CREATE_DATE), DDL/Comment (create index IDX\$5_19CEA0001 on TPCC.TAB_TEST1(CODE...), Type (Normal), Unique (checked), Leaf Blocks (0), Distinct Keys (10000 K), Clustering Factor (4151 K), and Partitioned (checked). Below the table are 'Evaluate' and 'Add to List' buttons.

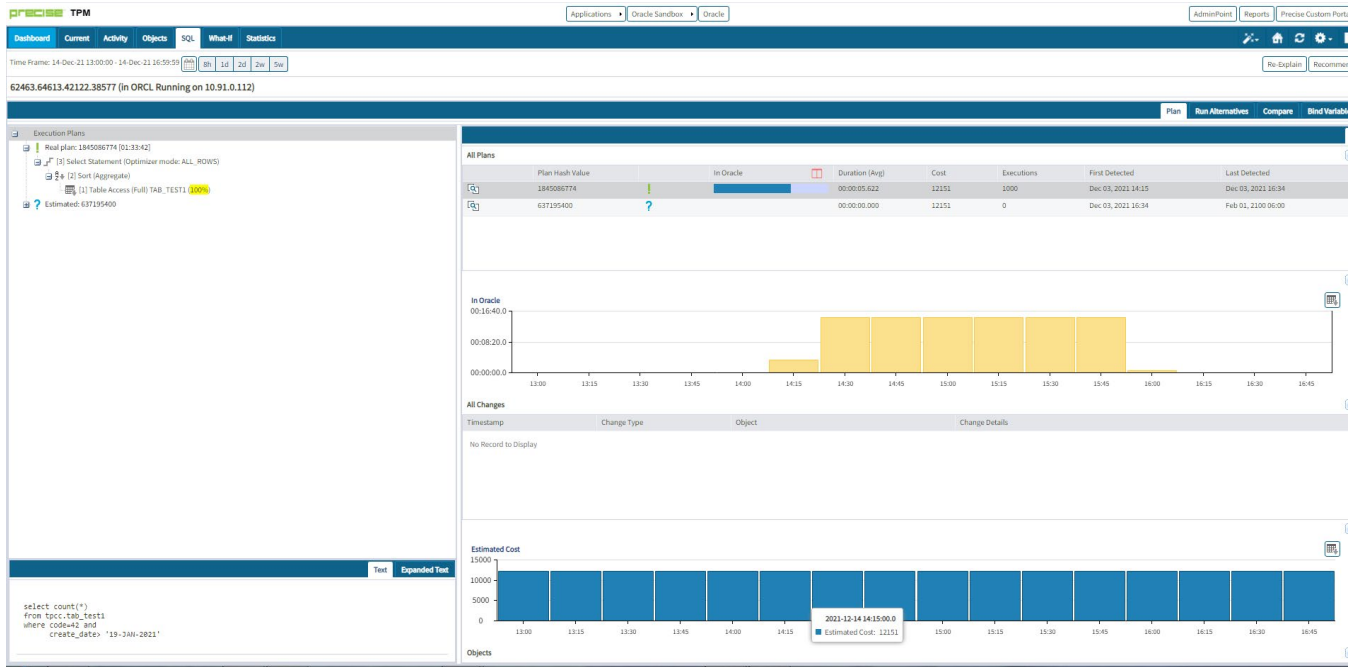
It has identified an index for the table.

You can evaluate the index recommendation and confirm that it will benefit the query and has no negative impact.

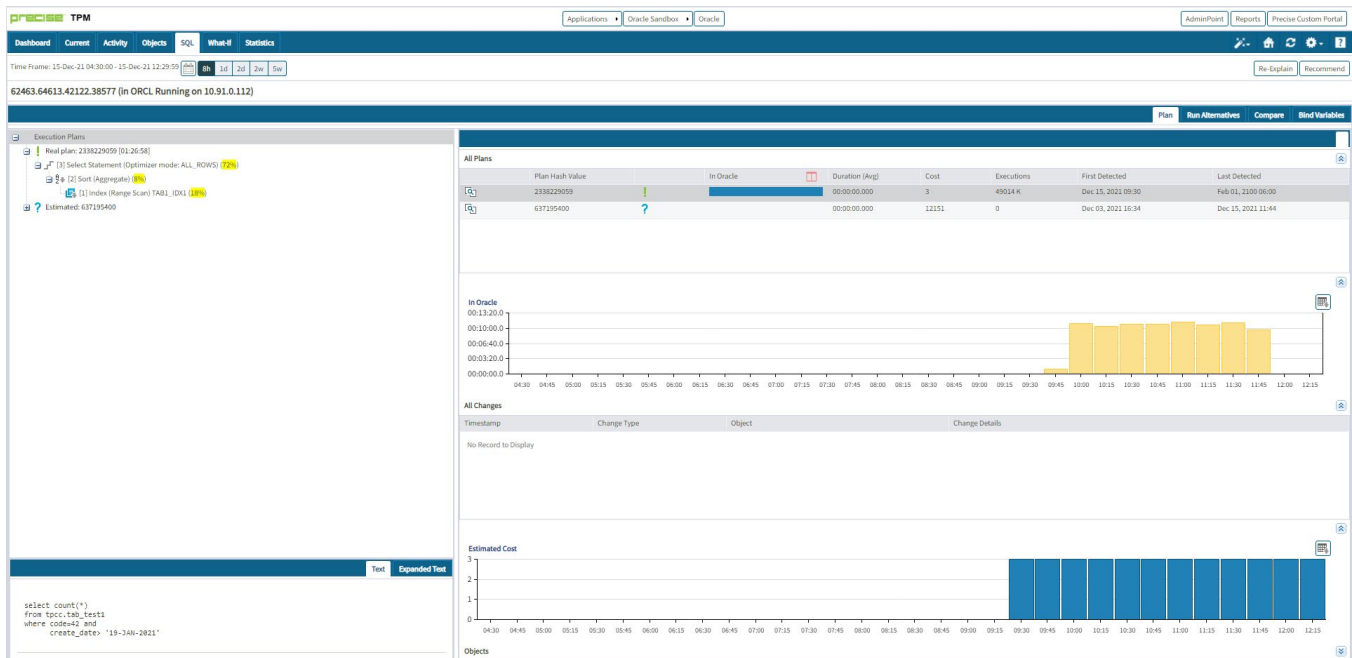
The screenshot shows the Oracle Performance Tuning Advisor (PTM) interface. The top navigation bar includes 'Applications', 'Oracle Sandbox', and 'Oracle'. The main content area is titled 'Tuning Recommendations and Impact of Index Changes'. It displays a table with the following columns: Evaluate, Remove from List, Edit, Action, Container, Owner, Table, Object, Columns, DDL/Comment, Type, Unique, Leaf Blocks, Distinct Keys, Clustering Factor, and Partitioned. The table contains one row with the following data: Evaluate (checked), Remove from List (X), Edit (pencil icon), Action (Index Creation), Container (TPCC), Owner (TAB_TEST1), Object (IDX\$5_19CEA0001), Columns (CODE,CREATE_DATE), DDL/Comment (create index IDX\$5_19CEA0001 on TPCC.TAB_TEST1(CODE...), Type (Normal), Unique (checked), Leaf Blocks (0), Distinct Keys (10000 K), Clustering Factor (4151 K), and Partitioned (checked). Below the table are 'Evaluate' and 'Add to List' buttons. The interface also shows a summary of statements whose performance will improve or deteriorate. The 'Statements' section is expanded, showing a table with the following columns: Text, In Oracle, Predicted in Oracle, Predicted Gain (%), Cost, Predicted Cost, Executions, Affected Transactions, and Comment. The table contains one row with the following data: Text (select count(*) from tpcc.sab_ksa1 where code=42 and create_date='19-JAN-2021'), In Oracle (00:33:20.7), Predicted in Oracle (00:00:00.5), Predicted Gain (%) (99.98%), Cost (12151), Predicted Cost (3), Executions (270), Affected Transactions (0), and Comment (empty).

Once you have added the index Precise can then show you the improved performance of the SQL query.

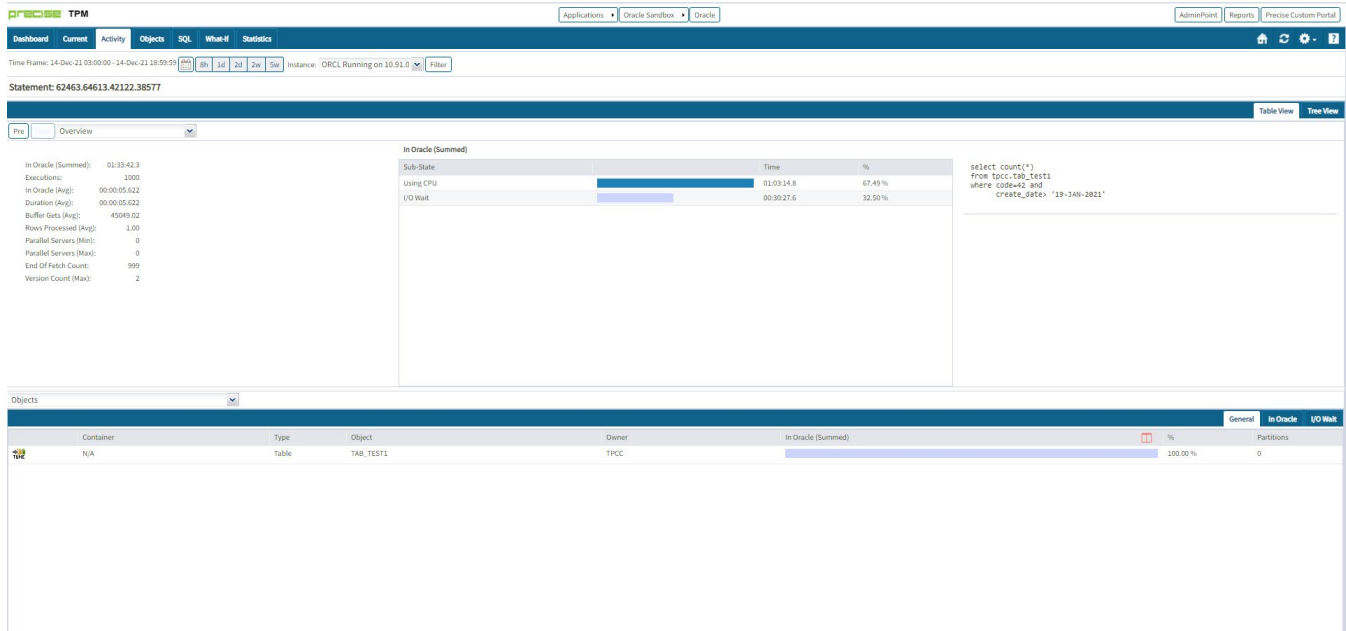
We can compare the execution plans and evaluate the change. The next screenshot shows the initial execution plan with a full table access scan.



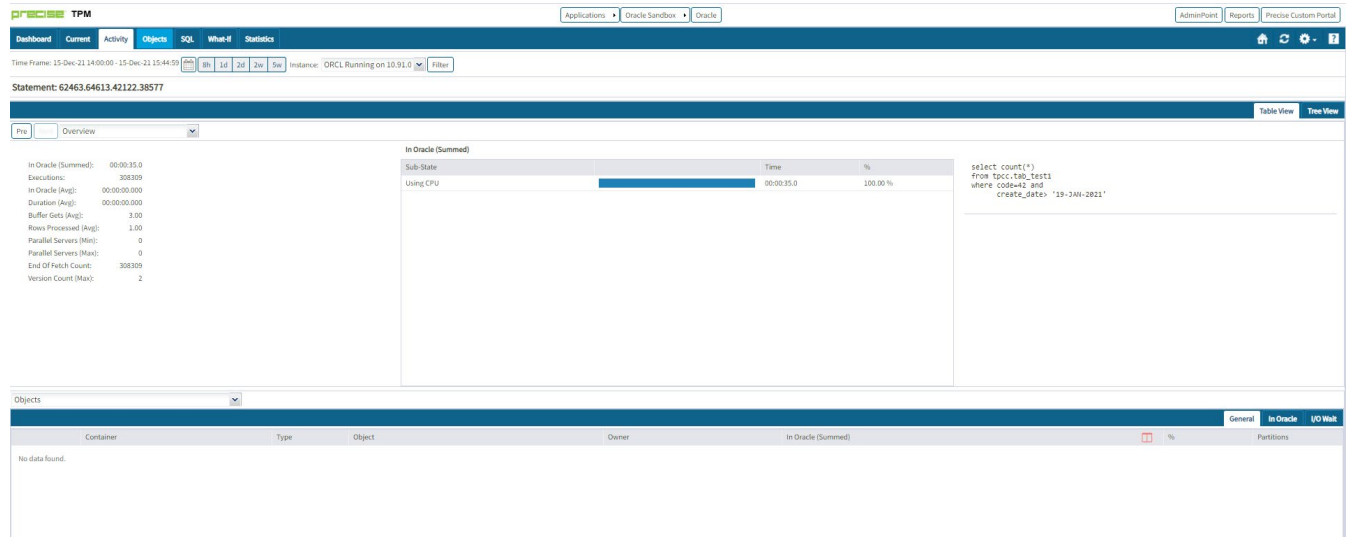
This changes to an index range scan after we have created the index on the table.



There is also a change in the cost of the statement. This screenshot shows you a high average buffer gets (that is, 45049) and also a costly average execution time of 5.6 seconds for the full table access scan.



After we added the index, we can see that the number of buffer gets is a lot lower with only 3 and the average execution time is low too.



In summary, we learned that with Precise you can identify, diagnose and tune your SQL queries within a few clicks.

PRECISE

Precise helps database and IT administrators to find and fix database and application performance problems in physical, virtual, and cloud environments. Unlike its competition, it provides deep database optimization, end-to-end transaction view, isolation of problems and causes, scalable deployment, what-if analysis for changes, and history, trending, and planning.

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