What Did that SQL Query Do?

SQL Server Edition

When investigating database performance issues related to SQL queries, it is often useful to know the execution plan of the statement. However, unless it was executed recently, we only have the execution plan that we can generate via a show plan command. This may or may not be the actual plan that was used when the SQL ran. Using Foglight Performance Investigator for SQL Server, we can easily go back and review *actual* plans that were used when the statement was executed. In addition, we can compare different plans as they change over time due to database object changes, optimizer statistics, etc.



In the screenshot above, a time period was isolated and the top SQL statements sorted by CPU Usage are shown. To review the execution plans, all you need to do is pick a SQL and click "Analyze Plan".



You can also review changes to execution plans by switching to "Change Tracking" from the "History" view. Execution plan changes are overlaid on the timeline and workload baseline graph, and you can simply click into one of the changes in the grid.

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This drilldown shows you Plan Details, Operator Analysis and Object Analysis on separate tabs.

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If there is more than 1 historical execution plan available, the "Compare Plans" button will be active. You can click into that drilldown to compare historical plans. Note that there will only be a historical plan stored for the first time it was detected as being changed.



You can then pick from the date/time pulldowns different historical plans to compare.

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You may also analyze a specific plan by picking from the date/time dropdown shown above. This is great functionality to have because it lets you review plans that may have executed weeks or months ago, and also makes it very easy for you to detect when a plan has changed. If you also manage Oracle databases, I've posted a similar tutorial on the site as well.