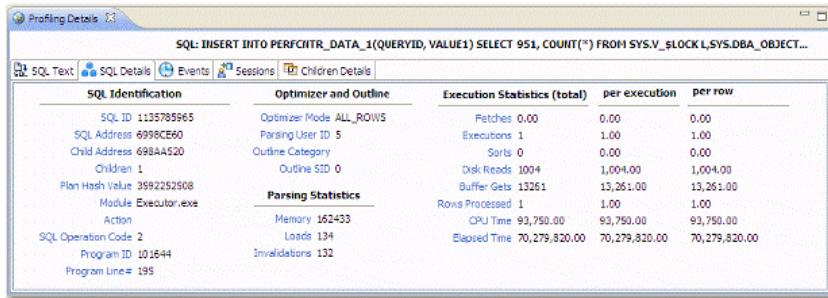


# Analyze profiling details

The Profiling Details view displays detailed information on any item selected in the Top Section View, such as an SQL statement, an Event, a Session or a Procedure.



Depending on the data source platform you have specified, the tabs that appear in the view will be different, in order to accommodate the parameter specifics of the statement you have selected.

Depending on the top activity selected and the profiled platform types, some tabs may not be available.

## Statement selected

When a **Statement** is selected, the following Profile Detail tabs are available.

Tab Name	Description
SQL Text	Displays the full code of the selected SQL statement.
SQL Details	Provides details on statement, like execution statistics.
Events	Provides database activity details about events the statement is associated with.
Sessions	Shows which sessions executed this statement.
Blockers	Shows which sessions held blocking locks against the session associated with this statement. Double-clicking an entry on this tab opens that session in the Top Blockers tab, letting you find more information on the blocking session. For details, see <a href="#">Top Blockers tab</a> .
Children Details	Lists all copies of the cursor or SQL query, if Oracle has cached multiple copies of the same statement.
Object I/O	If the SQL query has done physical I/O, then these are the objects, such as tables, and indexes that were read to satisfy the query. Temporary objects with not have values in Object and Type columns.
Bind Variable Details	Shows bind variable information for SQL captured during the Profiling session.

## Event selected

When an **Event** is selected, the following Profile Detail tabs are available.

Tab Name	Description
SQL	Shows which SQL statements waited on this event.
Sessions	Provides information about the sessions associated with the event.
Blockers	Shows which sessions held blocking locks against the session associated with this event. Double-clicking an entry on this tab opens that session in the Top Blockers tab, letting you find more information on the blocking session. For details, see <a href="#">Top Blockers tab</a> .

Raw Data	Raw data that was sampled from the database, specifically the following: <ul style="list-style-type: none"> <li>• Sample time</li> <li>• SID</li> <li>• Serial #</li> <li>• User name</li> <li>• Program</li> <li>• Sql ID</li> <li>• P1</li> <li>• P2</li> <li>• P3</li> </ul>
Analysis	Displays for "buffer busy waits" and "cache buffer chains latch" waits. The analysis shows data and documentation to assist in solving these bottlenecks.

## Session selected

When a **Session** is selected, the following Profile Detail tabs are available.

Tab Name	Description
Sessions	Provides parameters regarding the session. For example, database server connection information, and data regarding the client tool and application.
Blockers	Shows which sessions held blocking locks while this session was active.  Double-clicking an entry on this tab opens that session in the Top Blockers tab, letting you find more information on the blocking session. For details, see <a href="#">Top Blockers tab</a> .
SQL	Shows which SQL statements this session ran.
Events	Shows which events this session waited on.

 When right-clicking on a SQL statement in the Top Activity Section in Profiling, if the SQL statement is run by a different user than the user who is running DBO, than the User Mismatch dialog appears, with an example of the following message: "This query was executed by [SOE] and you are currently connected as [system]. We recommend you reconnect as [SOE] to tune the SQL. Would you like to continue anyway?" This message indicates that the statement is being tuned by a user other than the user who originally ran the query, and tables may be missing based on the different schemas. Click **OK** to run the query, or click **Cancel** and run tuning under the original user.

## Blocking Session selected

When a **Blocking Session** is selected, the following Profiling Detail tabs are available.

Tab Name	Description
Blocked Sessions	Provides identifier and V\$SESSION session information on the sessions being locked by the blocking session.
Session Details	Provides parameters regarding the session. For example, database server connection information, and data regarding the client tool and application.
SQL	Shows the SQL statements associated with the lock.
Events	Shows which events the blocking session waited on.

## Viewing details on the SQL tab

In the **Top Activity Session**, selecting a statement entry on the **SQL** tab displays information in the **Profiling Details** view. The graph portion and details on the event category tabs on the new editor pertain only to the selected statement. Additionally, new tabs become available:

- **SQL Text tab:** Shows the full code of the SQL statement. For more information, see [SQL Text](#).
- **SQL Details tab:** Displays execution details. For more information, see [SQL Details](#).
- **Events tab:** Displays information about the events the selected statement is associated with.

For more information, see [Events](#).

- **Sessions tab:** Displays information about the sessions that the selected statement is associated with. For more information, see [Sessions](#).

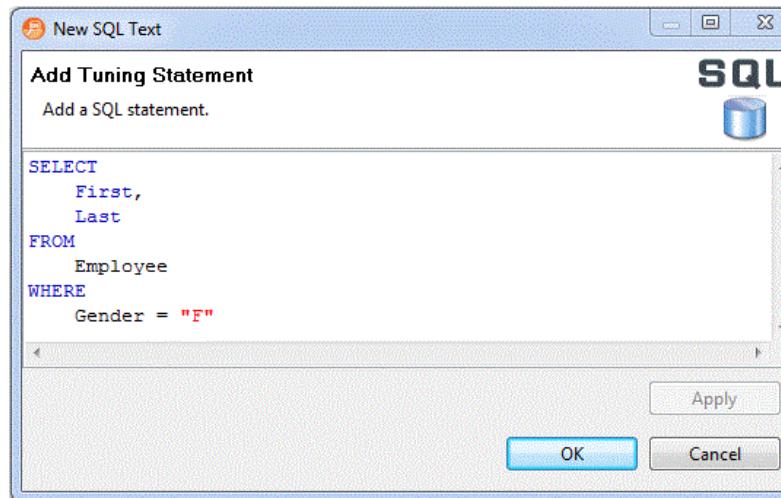
## To select a SQL tab statement entry

- On the **SQL** tab, click on a statement with no child nodes or on a leaf node in the statement structure.

The new profiling editor page opens, as reflected by the bread crumb trail at the top left of the editor. You can continue to drill down into the statement, as needed.

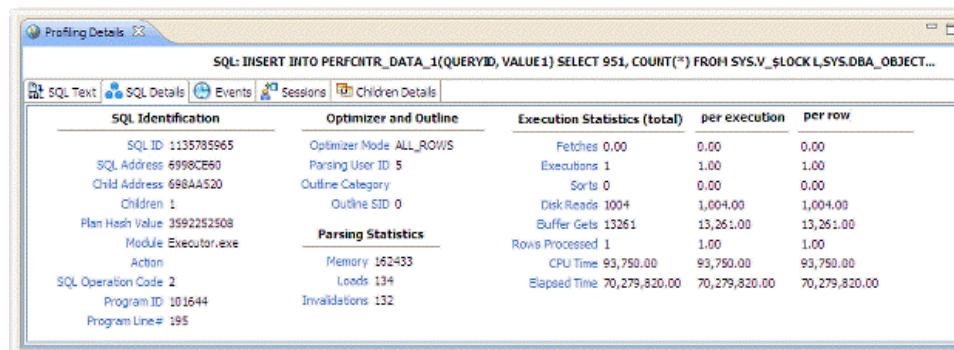
## SQL text

The SQL Text tab displays the full code of the SQL statement.



## SQL details

The SQL Details tab provides information and the execution of the statement and other information related to how it is running.

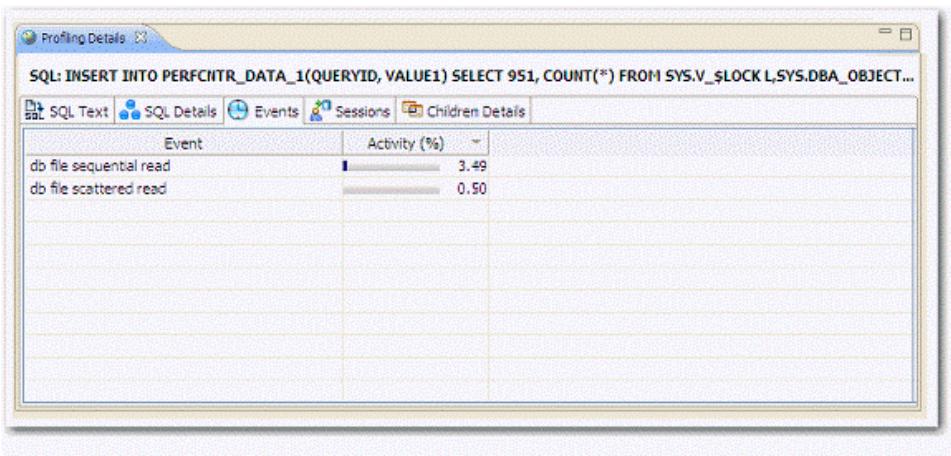


SQL Details include:

Parameters	Description
SQL Identification Values	The SQL ID value of the statement.
Optimizer and Outline Values	Optimizer-specific values pertaining to the parsing user ID value and outline SID.
Parsing Statistics	Information regarding memory, loads, and invalidation values.
Execution Statistics	The execution statistics of the statement. This category includes disk reads, buffer gets, rows, and values that represent CPU and elapsed time.

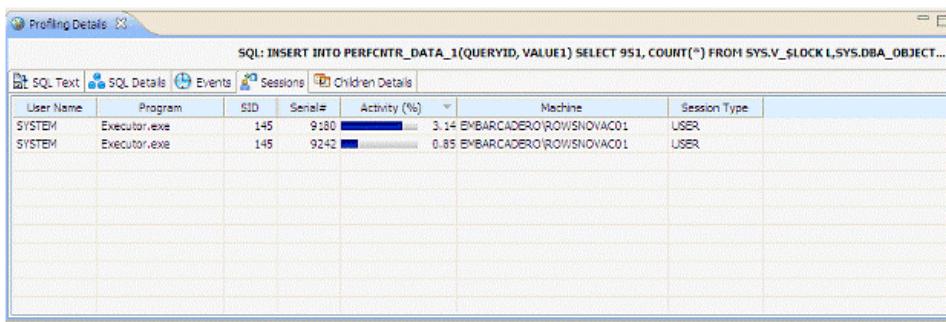
## Events

The Events tab provides details about the events that the statement is associated with.



## Sessions

The Sessions tab provides information about any sessions the statement is associated with:



Session details include information on different parameters, such as User Name, Program, SID, Serial #, Activity (%), Network Machine Name, and Session Type.

## Viewing details on the Sessions tab

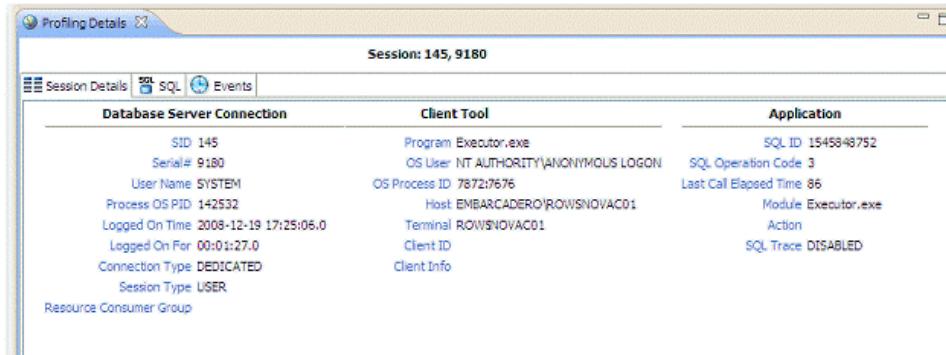
In the **Top Activities Section**, selecting a statement entry on the **Sessions** tab displays information in the **Profiling Details** view. The graph portion and details on the event category tabs on the new editor pertain only to the selected statement. Additionally, new tabs become available.

Selecting an event type entry on an event category tab opens a new profiling editor page. The graph portion and details on the **Sessions** tab and event category tabs on the new editor page pertain only to the selected wait event and to SQL statements that waited in that event.

- **Session Details tab:** Shows system details about the selected session. For more information, see [Session Details](#).
- **SQL tab:** Displays information about the SQL files that the selected session is associated with. For more information, see [SQL](#).
- **Events tab:** Displays the time and parameter information about the selected session. For more information, see [Events](#).

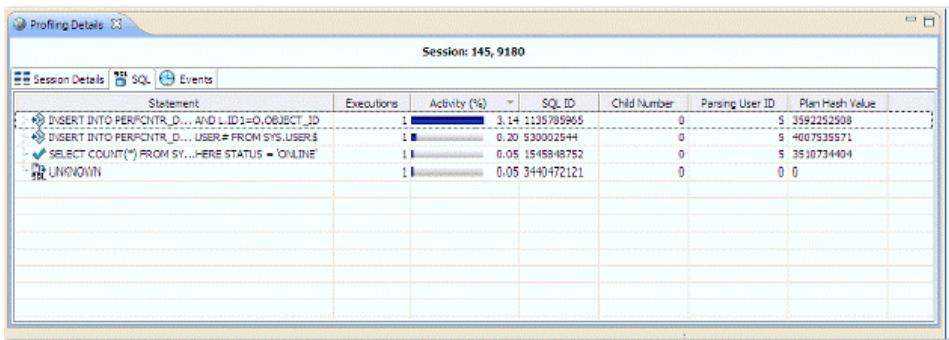
## Session details

The Session tab provides further information about the selected session.



## SQL

The SQL tab displays information about the statements associated with the session.

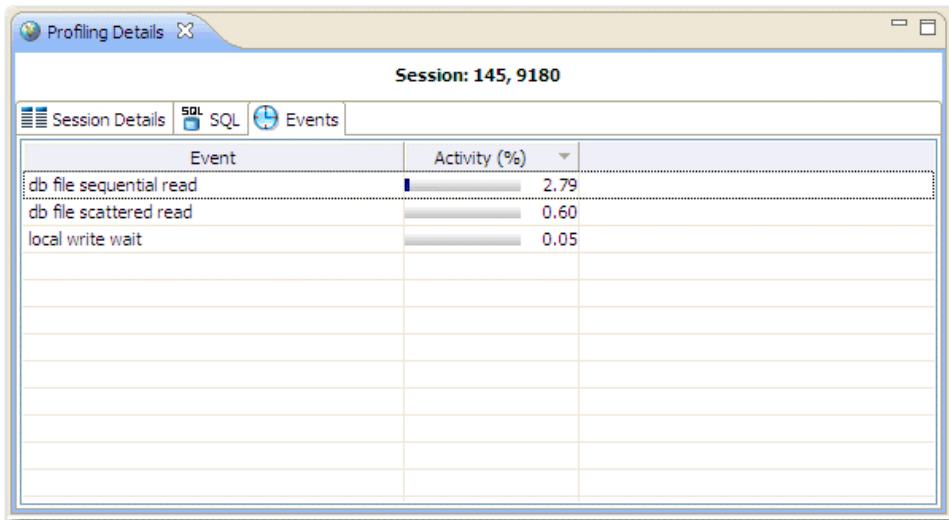


SQL statements are listed by the following parameters:

Value	Notes
Statement	The name of the statement.
Executions	The number of times the statement was executed during the session.
Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.
SQL ID	The SQL ID value of the statement.
Child Number	The child number in the database.
Parsing User ID	The ID of the user who parsed the statement. Plan Hash ValueThe execution value of the statement.
Plan Hash Value	The execution value of the statement.

## Events

The Events tab provides details about the events that the session is associated with.



Events are listed by the following values:

Value	Notes
Event Name	The name of the event.
Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.

## Bind variable details

Profiling captures the bind variables and their attributes. Select an SQL statement in the Profiling Session and the details of the captured bind variables for that statement are displayed here.

SQL ID	Child Number	Position	Variable Name	Variable Type	Variable Value
dzxkqaujhrpt	0	1		NUMBER	625

The following parameters are displayed on the Bind Variable Details tab:

Value	Description
SQL ID	SQL identifier used by the data source.
Child Number	A new child number is generated for the SQL ID of the query whenever the plan changes, for example the value of a bind variable is changed, and the query is executed again.
Position	The position of the variable within the SQL text. For example, given the query, select * from T1 where C1 = :a and C2 = :b and C3 = :c and C4 = :d, the position of a is 1, b is 2, c is 3 and d is 4.
Variable Name	The name of the variable.
Variable Type	The data type of the variable.
Variable Value	The value of the variable.

## Viewing details on the Blockers tab

In the **Top Activities Section**, selecting an entry on the **Blocked Sessions** tab displays information on sessions holding blocking locks in the **Profiling Details** view.

### Blocked sessions

The Blocked Sessions tab provides general information on blocked sessions and the details identifying the specific row locked.

User Name	SID	ROW_WAIT_OBJ#	ROW_WAIT_FILE#	ROW_WAIT_BLOCK#	NUMBER	ROW,...,ROW#
SYSTEM	137	-1	0		0	0
SYSTEM	136	-1	0		0	0
SYSTEM	110	-1	0		0	0
SYSTEM	107	-1	0		0	0
SYSTEM	100	-1	0		0	0
SYSTEM	96	-1	0		0	0

This tab provides the following columns for each blocked session:

Value	Notes
User Name	The user name under which the blocking session was run.
SID	The SID value of the blocking session.
ROW_WAIT_OBJ#	Object ID of the table containing the row specified in ROW_WAIT_ROW#.
ROW_WAIT_FILE#	Identifier of the datafile containing the row specified in ROW_WAIT_ROW#.
ROW_WAIT_BLOCK#	Identifier of the block containing the row specified in ROW_WAIT_ROW#.
ROW_WAIT_ROW#	The current row being locked.

## Session details

The Session Details tab provides information on the server connection, client, and application associated with the blocking session.

This screenshot shows the 'Session Details' tab of the Profiling Details window. The title bar says 'Session: 124, 26549 (SYSTEM/JDBC Thin Client)'. The tab bar includes 'Blocked Sessions', 'Session Details' (which is selected), 'SQL', and 'Events'. The main area is divided into three columns: 'Database Server Connection', 'Client Tool', and 'Application'. The 'Database Server Connection' column contains: SID 124, Serial 26549, User Name SYSTEM, Process OS PID 5780, Logged On Time 2012-10-31 05:54:54, Logged On For 00:17:03.359, Connection Type DEDICATED, and Session Type USER. The 'Client Tool' column contains: Application JDBC Thin Client, OS User Catalinb, OS Process ID 1234, Hostname rowcbulgariu02, Terminal unknown, Client ID, and Client Info. The 'Application' column contains: SQL ID cujvduuunqcsb, SQL Operation Code 3, Last Call Elapsed Time 00:16:13.0, Module JDBC Thin Client, Action, and SQL Trace DISABLED.

## SQL

The SQL tab displays information about the statements associated with the blocking session.

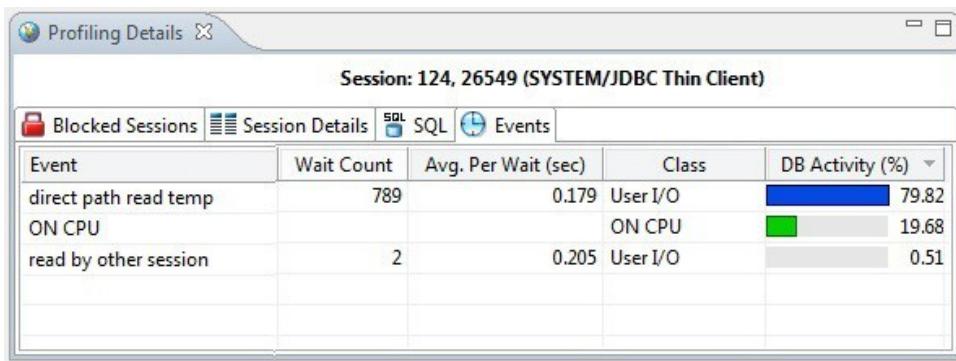
This screenshot shows the 'SQL' tab of the Profiling Details window. The title bar says 'Session: 124, 26549 (SYSTEM/JDBC Thin Client)'. The tab bar includes 'Blocked Sessions', 'Session Details' (selected), 'SQL' (selected), and 'Events'. The main area is a table with columns: Statement, Executions, Avg. Elapsed (sec), DB Activity (%), SQL ID, and Child Number. One row is visible: 'SELECT CO....TIME\_ID' with 52 executions, an average elapsed time of 490.385 seconds, 100.00% DB activity, SQL ID 'cuj...csb', and Child Number 0. A green checkmark icon is next to the statement.

SQL statements are listed by the following parameters:

Value	Notes
Statement	The name of the statement.
Executions	The number of times the statement was executed during the session.
Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.
SQL ID	The SQL ID value of the statement.
Child Number	The child number in the database.

## Events

The Events tab provides details about the events that the blocking session is associated with.



Events are listed by the following values:

Value	Notes
Event	The name of the event.
DB Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.

## Viewing details on the Events tab

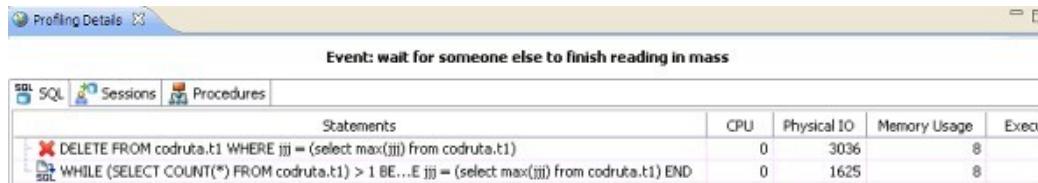
In the **Top Activities Section**, selecting a statement entry on the **Event** tab displays information in the **Profiling Details** view. The graph portion and details on the event category tabs on the new editor pertain only to the selected statement. Additionally, new tabs become available.

Selecting an event type entry on an event category tab opens a new profiling editor page. The graph portion and details on the **Events** tab and event category tabs on the new editor page pertain only to the selected wait event and to SQL statements that waited in that event.

- **SQL tab:** Shows the statements involved in the selected event. For more information, see [SQL](#).
- **Sessions tab:** Displays information about the sessions that the selected event is associated with. For more information, see [Sessions](#).

### SQL

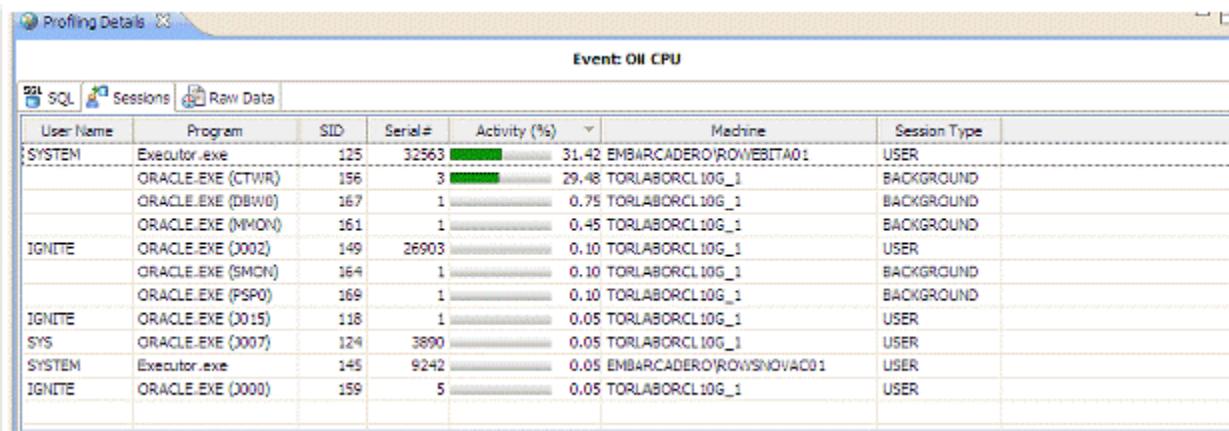
The SQL tab displays information about the SQL statements involved in the selected event.



Value	Notes
Statement	The name of the statement.
SQL ID	The ID value of the SQL statement.
Child Number	The child number in the database.
Parsing User ID	The ID of the user who parsed the statement.
Plan Hash Value	The execution value of the statement.
CPU	Cumulative CPU time for the process. (measured in "ticks", an arbitrary unit of time)
Physical IO	Cumulative disk reads and writes for the process. (total count)
Memory Usage	Number of pages in the procedure cache that are currently allocated to this process. A negative number indicates that the process is freeing memory allocated by another process.
Executions	The number of times the statement was executed.
Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.

## Sessions

The Sessions tab displays the sessions and related information regarding those that were associated with the selected event.



The following parameters are displayed on the Sessions tab:

Value	Notes
User Name	The user name under which the session was run.
Program	The name of the executable under which the session was run.
SID	The SID value of the session.
Serial Number	The serial number of the machine from which the session executed.
Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.
Machine	The machine name and network location of the machine from which the session executed.
Session Type	The type of session.

## SQL text

The SQL Text tab displays the full code of the procedure.

```
CREATE PROCEDURE dbo.TEST_PROC1 AS
DECLARE @i INT
BEGIN
    SET @i = 1
    WHILE
        @i <= 1000000
        BEGIN
```

## SQL

The SQL tab displays information about the SQL statements involved in the selected procedure.

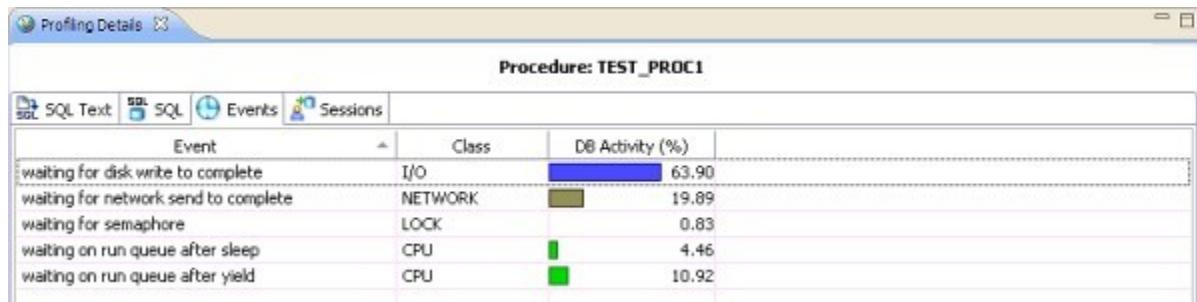
Statements	CPU	Physical IO	Memory Usage	Execu
INSERT INTO codruta.t1( jii, jj, j, u) VALUES ( @i, @i, @i, @i )	2	3	8	
WHILE @i <= 1000000 BEGIN INSERT INTO codruta...LUES ( @i, @i, @i, @i ) SET @i = @i + 1 END	1	0	8	
SET @i = @i + 1	1	0	8	

The SQL tab displays the following parameters about the statement:

Value	Notes
Statement	The name of the statement.
SQL ID	The ID value of the SQL statement.
Child Number	The child number in the database.
Parsing User ID	The ID of the user who parsed the statement.
Plan Hash Value	The execution value of the statement.
CPU	Cumulative CPU time for the process. (measured in "ticks", an arbitrary unit of time)
Physical IO	Cumulative disk reads and writes for the process. (total count)
Memory Usage	Number of pages in the procedure cache that are currently allocated to this process. A negative number indicates that the process is freeing memory allocated by another process.
Executions	The number of times the statement was executed.
Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.

## Events

The Events tab provides details about the events that the session is associated with.

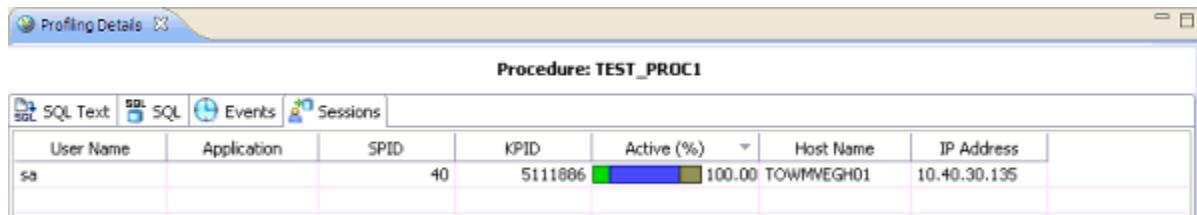


Events are listed by the following values:

Value	Notes
Event Name	The name of the event.
Class	The wait group the event in the selected procedure belongs to.
Activity (%)	A graphical representation of the distribution of execution and wait time for the event.

## Sessions

The Sessions tab displays the sessions and related information regarding those that were associated with the selected procedure.



The following parameters are displayed on the Sessions tab:

Value	Notes

User Name	The user name under which the session was run.
Program	The name of the executable under which the session was run.
SID	The SID value of the session.
Serial Number	The serial number of the machine from which the session executed.
Activity (%)	A graphical representation of the distribution of execution and wait time for the statement or statement component.
Machine	The machine name and network location of the machine from which the session executed.
Session Type	The type of session.

You can kill a session by right-clicking the entry on the Sessions tab and choosing **Kill Session**. You can start a trace on a session by right-clicking the entry on the Sessions tab, and then choosing **Trace**.