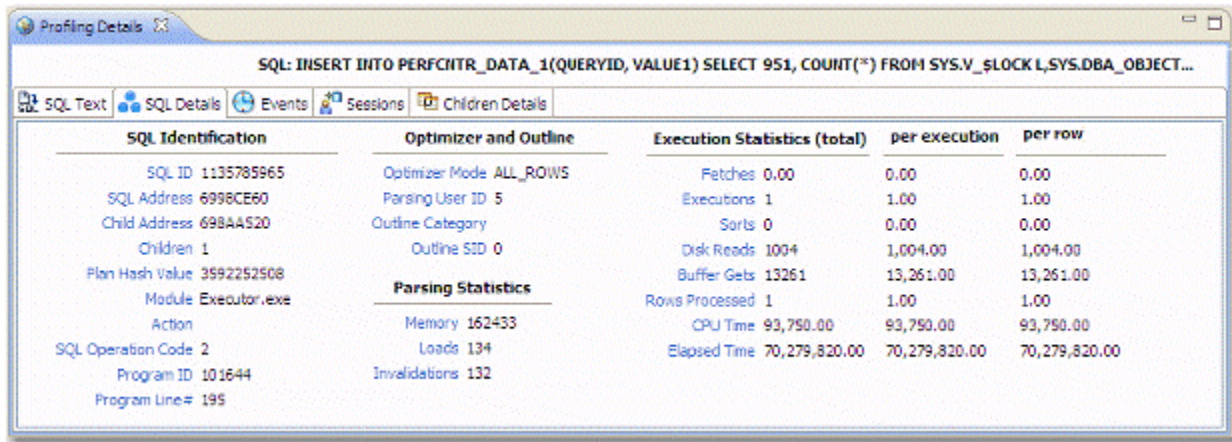


# Analyze profiling details

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	Supported Platform			
		Oracle	Sybase	DB2	SQL Server
SQL Text	Displays the full code of the selected SQL statement.	Yes	Yes	Yes	Yes
SQL Details	Provides details on statement, like execution statistics.	Yes	No	Yes	No
Events	Provides database activity details about events the statement is associated with.	Yes	Yes	Yes	Yes
Sessions	Shows which sessions executed this statement.	Yes	Yes	Yes	Yes
Blockers	Shows which sessions held blocking locks against the session associated with this statement.	Yes	No	No	No
Children Details	Lists all copies of the cursor or SQL query, if Oracle has cached multiple copies of the same statement.	Yes	No	No	No
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.	Yes	No	No	No
Procedures	Shows which procedures contain the selected statement.	No	Yes	No	Yes
Bind Variable Details	Shows bind variable information for SQL captured during the Profiling session.	Yes	No	No	No

## Event selected

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

Tab Name	Description	Supported Platform			
		Oracle	Sybase	DB2	SQL Server
SQL	Shows which SQL statements waited on this event.	Yes	Yes	Yes	Yes
Sessions	Provides information about the sessions associated with the event.	Yes	Yes	Yes	Yes
Blockers	Shows which sessions held blocking locks against the session associated with this event.	Yes	No	No	No

Procedures	Shows which procedures contain the selected event.	No	Yes	No	Yes
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>	Yes	No	No	No
Analysis	Displays for "buffer busy waits" and "cache buffer chains latch" waits. The analysis shows data and documentation to assist in solving these bottlenecks.	Yes	No	No	No

## Session selected

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

Tab Name	Description	Supported Platforms			
		Oracle	Sybase	DB2	SQL Server
Sessions	Provides parameters regarding the session. For example, database server connection information, and data regarding the client tool and application.	Yes	Yes	No	Yes
Blockers	Shows which sessions held blocking locks while this session was active.	Yes	No	No	No
SQL	Shows which SQL statements this session ran.	Yes	Yes	Yes	Yes
Events	Shows which events this session waited on.	Yes	Yes	Yes	Yes
Procedures	Shows which procedures ran the selected session.	No	Yes	No	Yes



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, then 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	Supported Platform			
		Oracle	Sybase	DB2	SQL Server
Blocked Sessions	Provides identifier and V\$SESSION session information on the sessions being locked by the blocking session.	Yes	No	No	No
Session Details	Provides parameters regarding the session. For example, database server connection information, and data regarding the client tool and application.	Yes	No	No	No
SQL	Shows the SQL statements associated with the lock.	Yes	No	No	No
Events	Shows which events the blocking session waited on.	Yes	No	No	No

## Procedure selected

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

Tab Name	Description	Supported Platform			
		Oracle	Sybase	DB2	SQL Server
SQL Text	Shows the SQL text of the selected procedure.	No	Yes	No	Yes

SQL	Shows which SQL statements this procedure ran.	No	Yes	No	Yes
Events	Shows which events the selected procedure waited on.	No	Yes	No	Yes
Sessions	Provides parameters regarding the session. For example, database server connection information, and data regarding the client tool and application.	No	Yes	No	Yes

This section also addresses the following topics:

- [Viewing Details on the SQL Tab](#)
- [Viewing Details on the Sessions Tab](#)
- [Viewing Details on the Events Tab](#)
- [Viewing Details on the Procedures Tab](#)

## 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. This tab is only displayed for Oracle data sources. 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. This tab is displayed only for Oracle data sources. For more information, see [Sessions](#).
- **Procedures tab:** Displays information about the procedures that contain the selected statement. This tab is displayed only for SQL Server and Sybase data sources. For more information, see [Procedures](#).

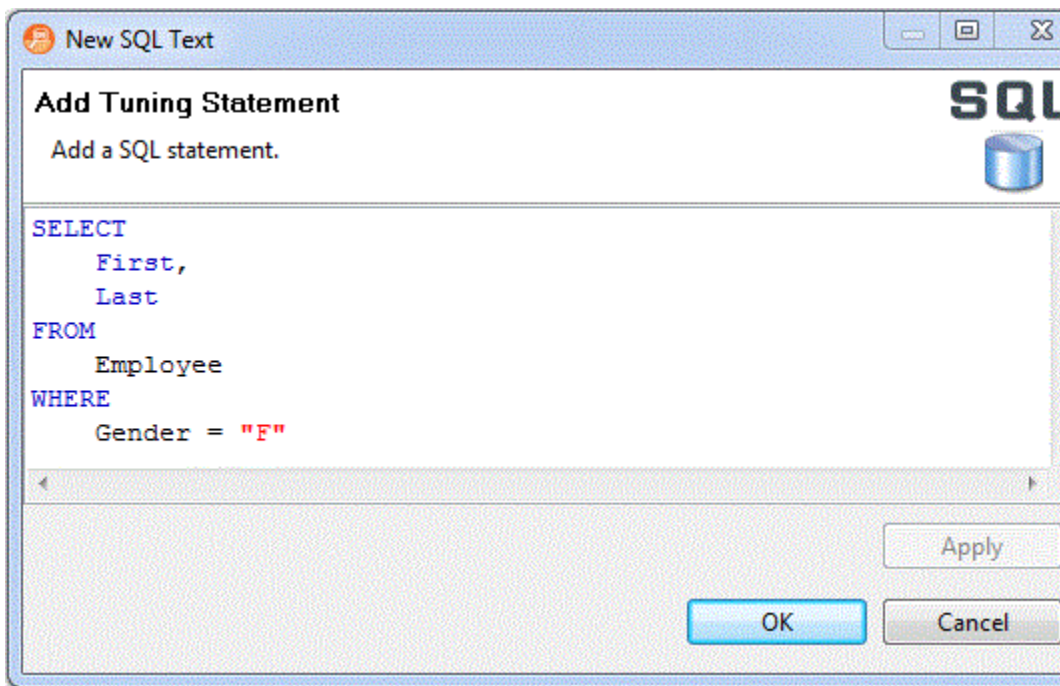
### To select a SQL tab statement entry

- 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.

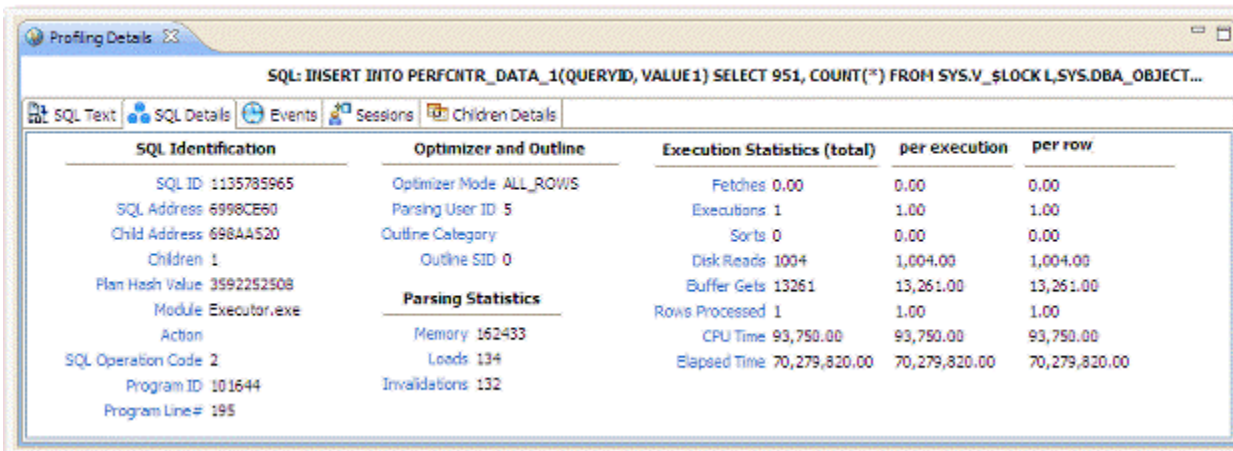
## SQL Text

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. It is only applicable to Oracle data sources:

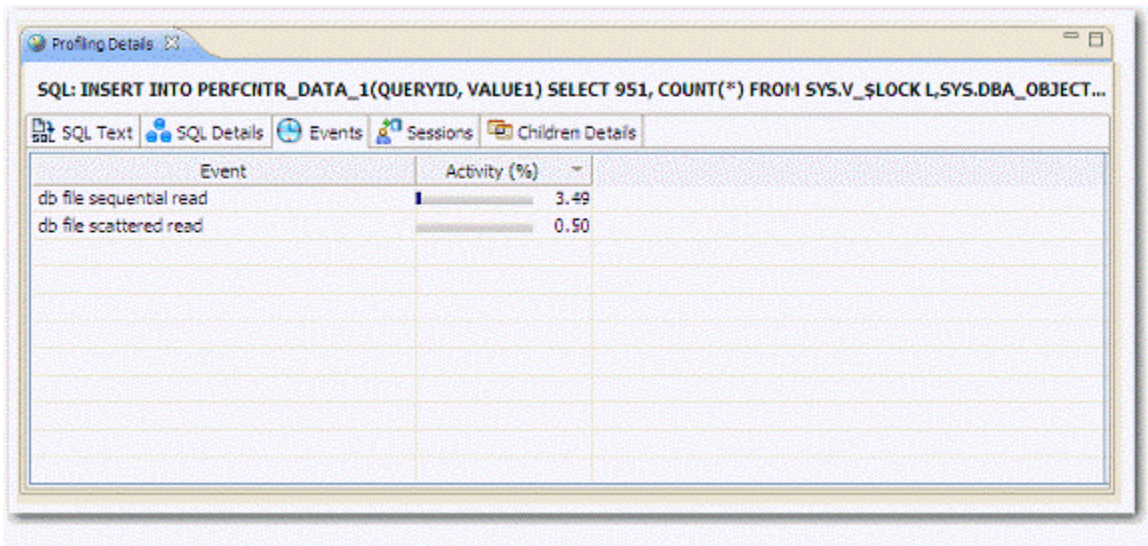


SQL Details include:

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.

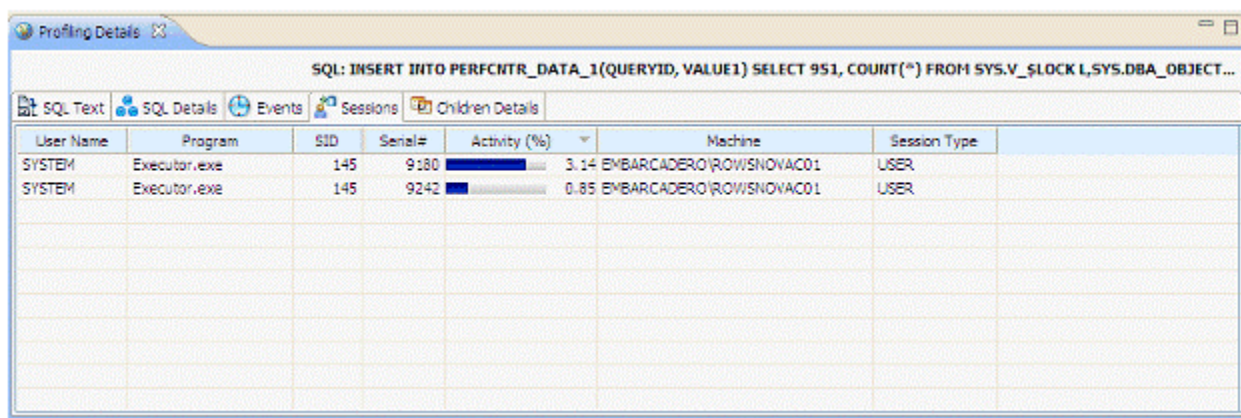
## Events

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



## Sessions

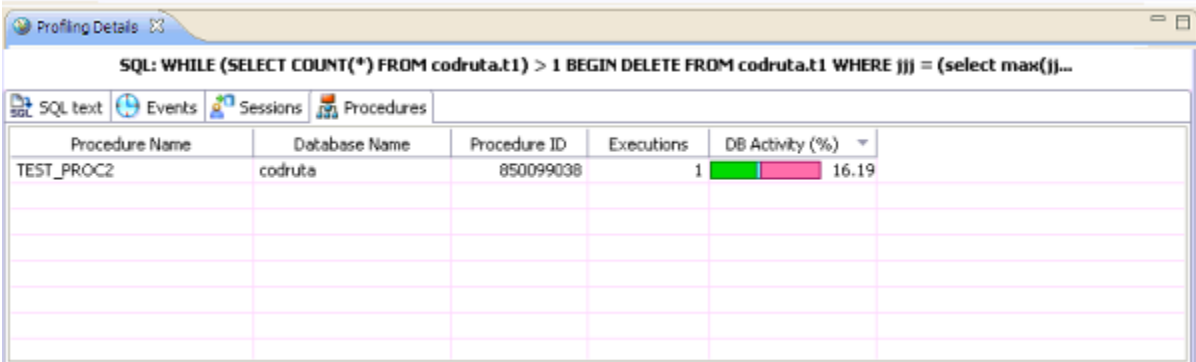
The Sessions tab provides information about any sessions the statement is associated with:



Session details include information on different parameters, depending on the platform. For example, on Oracle platforms, the following parameters are displayed: User Name, Program, SID, Serial #, Activity (%), Network Machine Name, and Session Type.

## Procedures

The Procedures tab provides information about any procedures containing the selected statement.



The following parameters are displayed on the Procedures tab:

Value	Description
Procedure Name	The name of the procedure that contains the selected statement.
Database Name	The name of the database where the procedure resides.
Procedure ID	The unique ID value of the file where the specified procedure resides.
Executions	The number of times the procedure was executed.
DB Activity (%)	Use the color chart on the right-hand side of the Procedures tab to view the procedures load on the data source during the profiling session.

## 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. This tab only appears on Oracle platforms. For more information, see [SQL](#).
- Events tab:** Displays the time and parameter information about the selected session. For more information, see [Events](#).
- Procedures tab:** Displays the details of any procedures run in the selected session. For SQL Server and Sybase data sources only. For more information, see [Procedures](#).

## Session Details



The Session tab provides further information about the selected session. The following are examples of the session details provided for different platforms.

 The fields that display vary depending on the database platform.

Oracle profiling details

Profiling Details

Session: 145, 9180

Session Details

SQL

Events

Database Server Connection

Client Tool

Application

SID 145  
Serial# 9180  
User Name SYSTEM  
Process OS PID 142532  
Logged On Time 2008-12-19 17:25:05.0  
Logged On For 00:01:27.0  
Connection Type DEDICATED  
Session Type USER  
Resource Consumer Group

Program Executor.exe  
OS User NT AUTHORITY\ANONYMOUS LOGON  
OS Process ID 78727676  
Host EMBARCADERO\ROWSNOVAC01  
Terminal ROWSNOVAC01  
Client ID  
Client Info

SQL ID 1545848752  
SQL Operation Code 3  
Last Call Elapsed Time 86  
Module Executor.exe  
Action  
SQL Trace DISABLED

Microsoft SQL Server

Profiling Details

Session: 55\_2009-09-30 09:40:34.940 (sa / Executor Module)

Session Details

SQL

Events

Database Server Connection

Client Application

SPID 55  
KPID 4,048  
Database ID 109  
User ID 0  
Login time 2009-09-30 09:40:34.94

Application name Executor Module  
NT domain  
NT username  
Host process ID 3552  
Hostname TORLABDEMO01  
Net address 000C2959213B  
Net library TCP/IP

SQL

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

Profiling Details

Session: 145, 9180

Session Details

SQL

Events

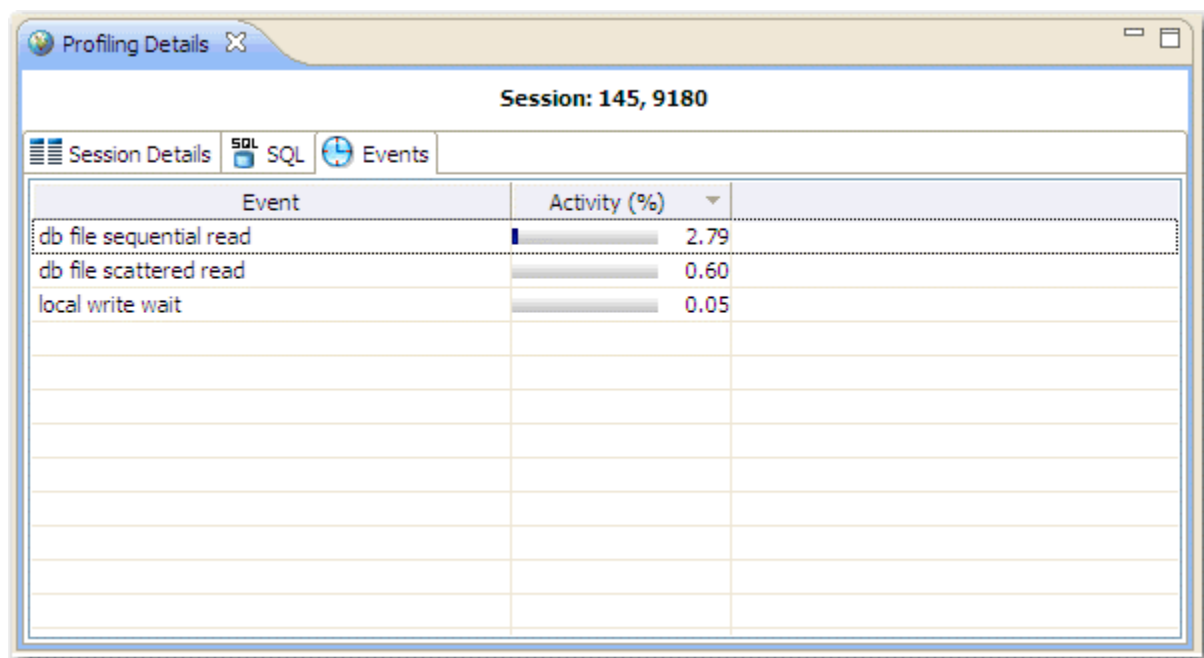
Statement	Executions	Activity (%)	SQL ID	Child Number	Parsing User ID	Plan Hash Value
INSERT INTO PERFCNTR_D... AND L_ID1=0,OBJECT_ID	1	3.14	1135789965	0	5	3592252508
INSERT INTO PERFCNTR_D... USER# FROM SYS.USER\$	1	0.20	530002544	0	5	4007535571
SELECT COUNT(*) FROM SY...HERE STATUS = 'ONLINE'	1	0.05	1545848752	0	5	3510734404
UNKNOWN	1	0.05	3440472121	0	0	0

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.

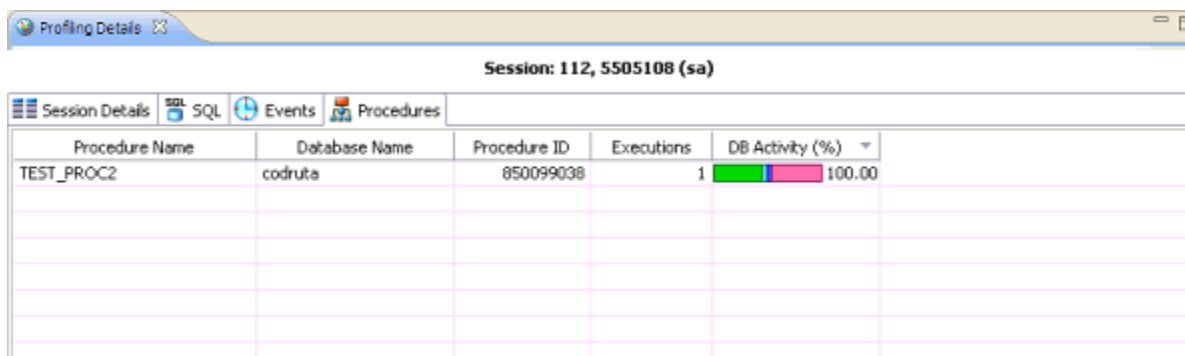


Events are listed by the following values:

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.

## Procedures

For SQL Server and Sybase data sources only, the Procedures tab provides details about the procedures that the session is associated with

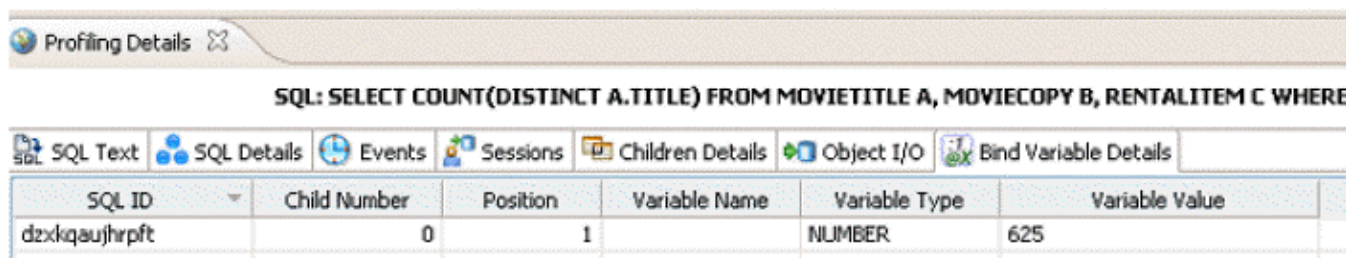


The following parameters are displayed on the Procedures tab:

Value	Description
Procedure Name	The name of the procedure that ran during the selected session.
Database Name	The name of the database where the procedure resides.
Procedure ID	The unique ID value of the file where the specified procedure resides.
Executions	The number of times the procedure was executed during the session.
DB Activity (%)	Use the color chart on the right-hand side of the Procedures tab to view the procedures load on the data source during the profiling session.

## Bind Variable details

For Oracle data sources, 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.



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 (Oracle)



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.

Profiling Details

Session: 124, 26549 (SYSTEM/JDBC Thin Client)

Blocked Sessions

Session Details

SQL

Events

User Name	SID	ROW_WAIT_OBJ#	ROW_WAIT_FILE#	ROW_WAIT_BLOCK#	NUMBER	ROW_WAIT_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.

Profiling Details

Session: 124, 26549 (SYSTEM/JDBC Thin Client)

Blocked Sessions

Session Details

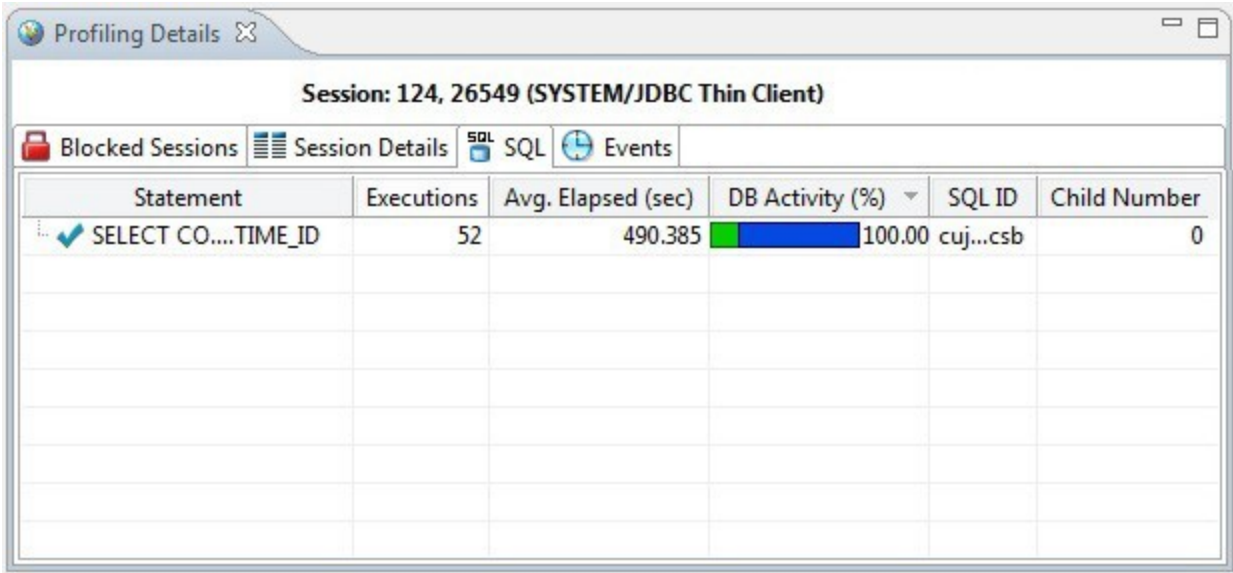
SQL

Events

Database Server Connection	Client Tool	Application
SID 124	Application JDBC Thin Client	SQL ID cujvduuunqcsb
Serial 26549	OS User Catalinb	SQL Operation Code 3
User Name SYSTEM	OS Process ID 1234	Last Call Elapsed Time 00:16:13.0
Process OS PID 5780	Hostname rowcbulgariu02	Module JDBC Thin Client
Logged On Time 2012-10-31 05:54:54	Terminal unknown	Action
Logged On For 00:17:03.359	Client ID	SQL Trace DISABLED
Connection Type DEDICATED	Client Info	
Session Type USER		

**SQL**

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

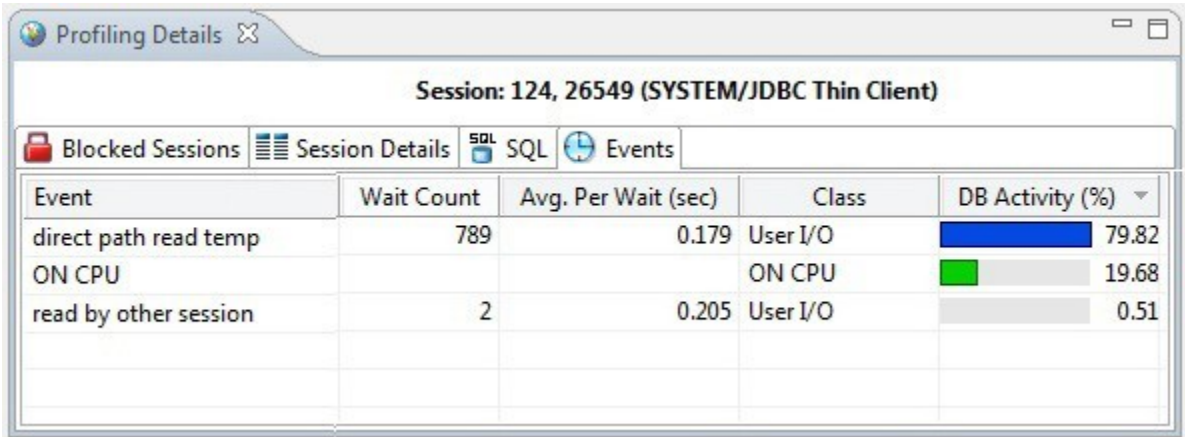


SQL statements are listed by the following parameters:

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.

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

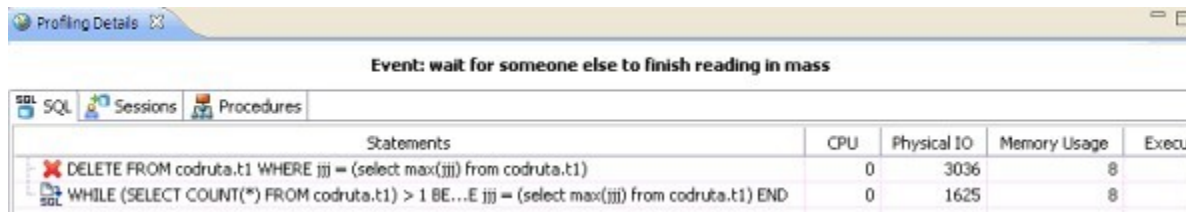
In the **Top Activities Section**, selecting a statement entry on the **Event** tab displays information in the **Profiling Details** view. The graph portion and details on the event category tabs on the new editor pertain only to the selected statement. Additionally, new tabs become available.

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](#).
- **Procedures** tab: Displays information about the procedures that ran during the selected event. For more information, see [Procedures](#).

## SQL

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

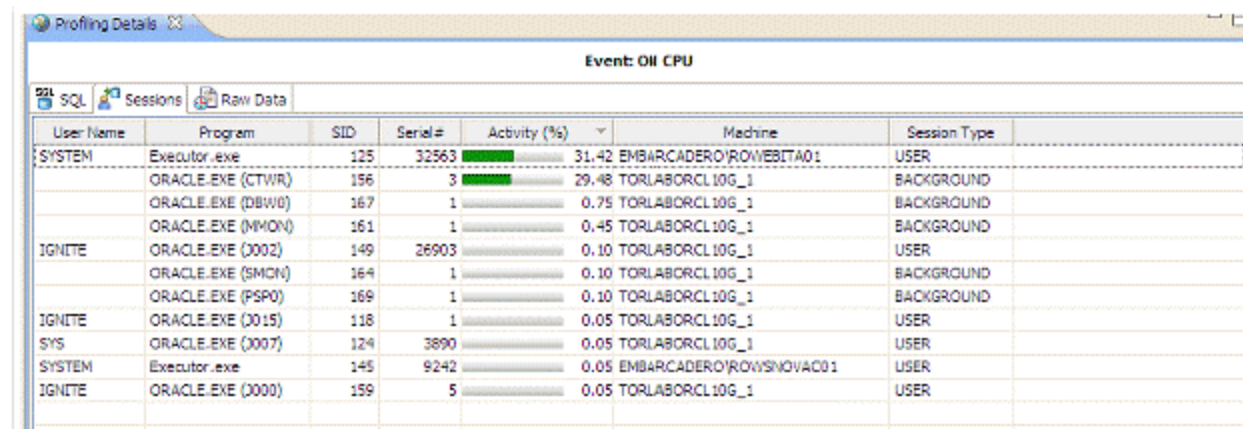


Statements	CPU	Physical IO	Memory Usage	Executions
DELETE FROM codruta.t1 WHERE jjj = (select max(jjj) from codruta.t1)	0	3036	8	
WHILE (SELECT COUNT(*) FROM codruta.t1) > 1 BE...E jjj = (select max(jjj) from codruta.t1) END	0	1625	8	

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.



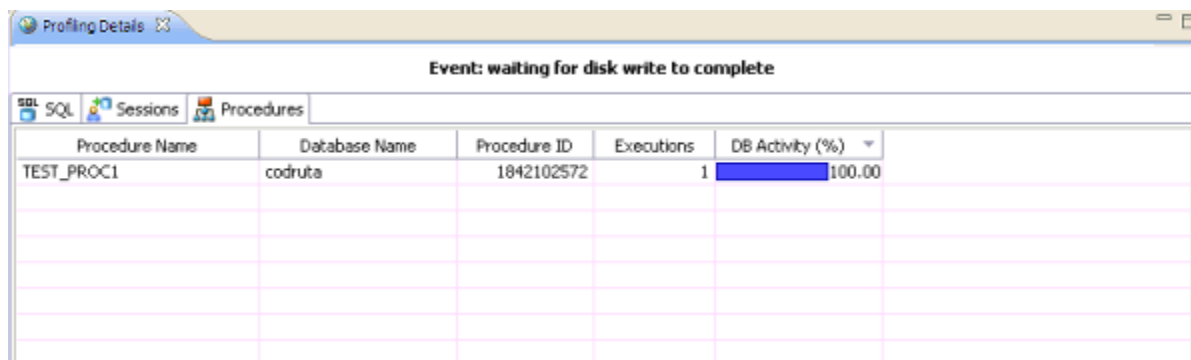
User Name	Program	SID	Serial#	Activity (%)	Machine	Session Type
SYSTEM	Executior.exe	125	32563	31.42	EMBARCADERO\ROWEBITA01	USER
	ORACLE.EXE (CTWR)	156	3	29.48	TORLABORCL10G_1	BACKGROUND
	ORACLE.EXE (DBW0)	167	1	0.75	TORLABORCL10G_1	BACKGROUND
	ORACLE.EXE (MMON)	161	1	0.45	TORLABORCL10G_1	BACKGROUND
IGNITE	ORACLE.EXE (J002)	149	26903	0.10	TORLABORCL10G_1	USER
	ORACLE.EXE (SMON)	164	1	0.10	TORLABORCL10G_1	BACKGROUND
	ORACLE.EXE (PSPO)	169	1	0.10	TORLABORCL10G_1	BACKGROUND
IGNITE	ORACLE.EXE (J015)	118	1	0.05	TORLABORCL10G_1	USER
SYS	ORACLE.EXE (J007)	124	3890	0.05	TORLABORCL10G_1	USER
SYSTEM	Executior.exe	145	9242	0.05	EMBARCADERO\ROWSNOVAC01	USER
IGNITE	ORACLE.EXE (J000)	159	5	0.05	TORLABORCL10G_1	USER

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.

## Procedures

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



Event: waiting for disk write to complete				
Procedure Name	Database Name	Procedure ID	Executions	DB Activity (%)
TEST_PROC1	codruta	1842102572	1	100.00

The following parameters are displayed on the Procedures tab:

Value	Notes
Procedure Name	The name of the procedure that ran during the event.
Database Name	The name of the database where the procedure resides.
Procedure ID	The unique ID of the procedure.
Executions	The number of times the procedure ran during the event.
DB Activity (%)	A graphical representation of the distribution of execution and wait time for the procedure.

## Viewing details on the Procedures tab

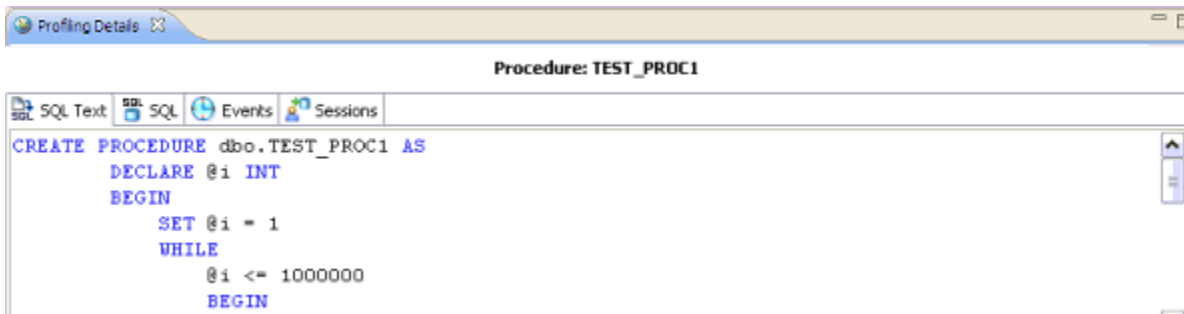
In the **Top Activities Section**, selecting a procedure entry on the **Procedure** tab displays information in the **Profiling Details** view. The graph portion and details on the procedure category tabs on the new editor pertain only to the selected procedure. Additionally, new tabs become available.

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

- The **SQL Text** tab shows the SQL of the procedure. For more information, see [SQL Text](#).
- The **SQL** shows the statements involved in the procedure. For more information, see [SQL](#).
- The **Events** displays the time and parameter information about the selected procedure. For more information, see [Events](#).
- The **Sessions** displays information about the sessions that the selected procedure is associated with. For more information, see [Sessions](#).

## SQL Text

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



## 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 codrut...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.

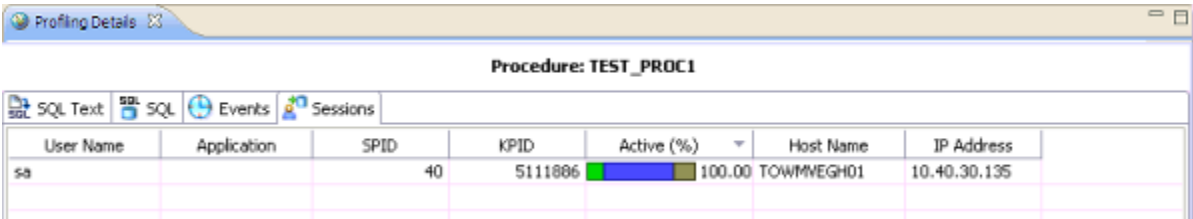
Event	Class	DB Activity (%)
waiting for disk write to complete	I/O	63.90
waiting for network send to complete	NETWORK	19.89
waiting for semaphore	LOCK	0.83
waiting on run queue after sleep	CPU	4.46
waiting on run queue after yield	CPU	10.92

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.