



# Performance Explorer-i for Oracle

## Version 4.01

### What's New Notes

February 2007

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## 1. Welcome to Performance Explorer for Oracle

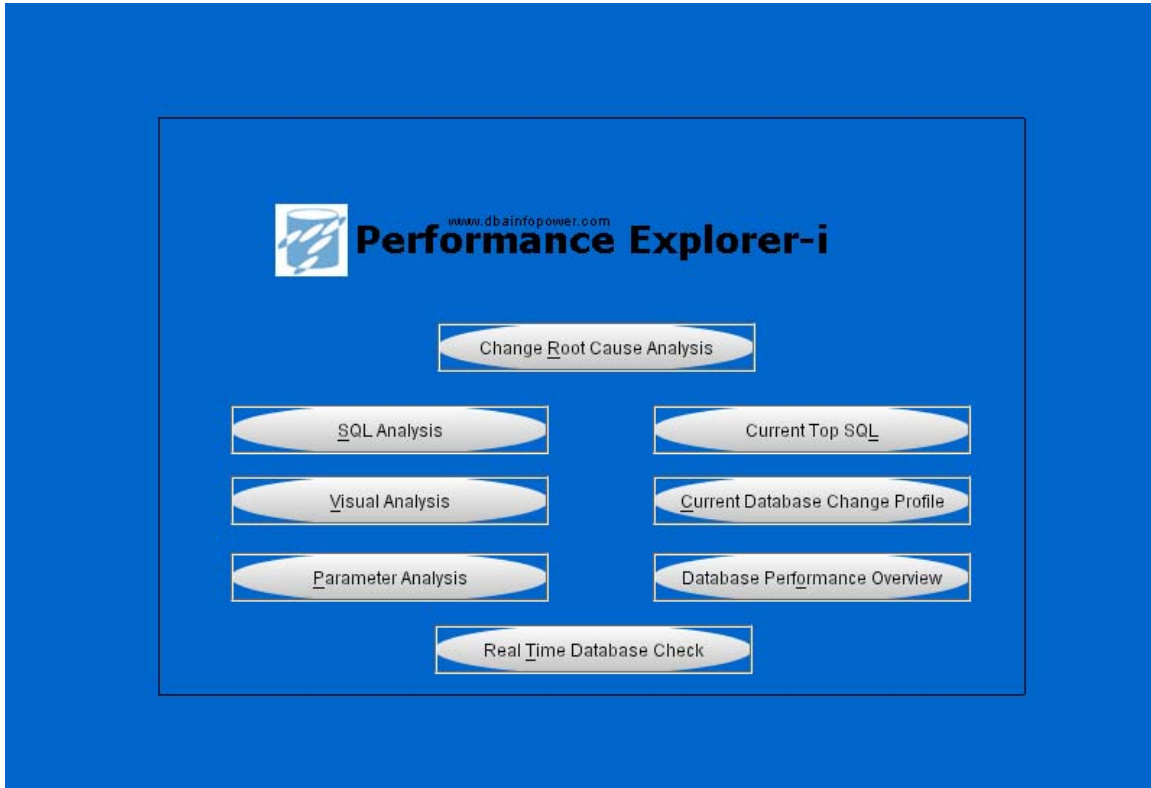
Performance Explorer is a powerful root cause analysis tool for Oracle databases. Its unique analytical capabilities and interface provides you with a clear visualization and root cause of activity on your database. Snapshots Compare identifies changes that caused changes in performance on a single or multiple databases, while visual analysis system identifies spikes and capacity changes in key statistics and metrics.

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## 2. List of New Functionality

### Extended Quick Task panel

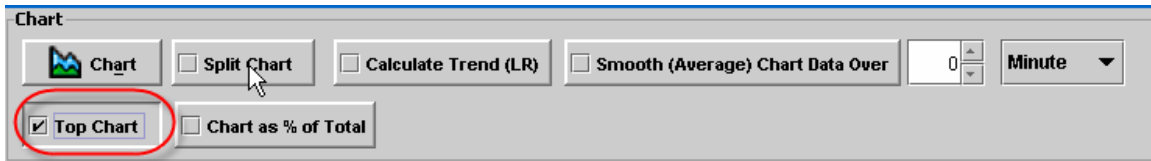
Quick task panel enable user quickly investigate performance of database both historically and in real-time.



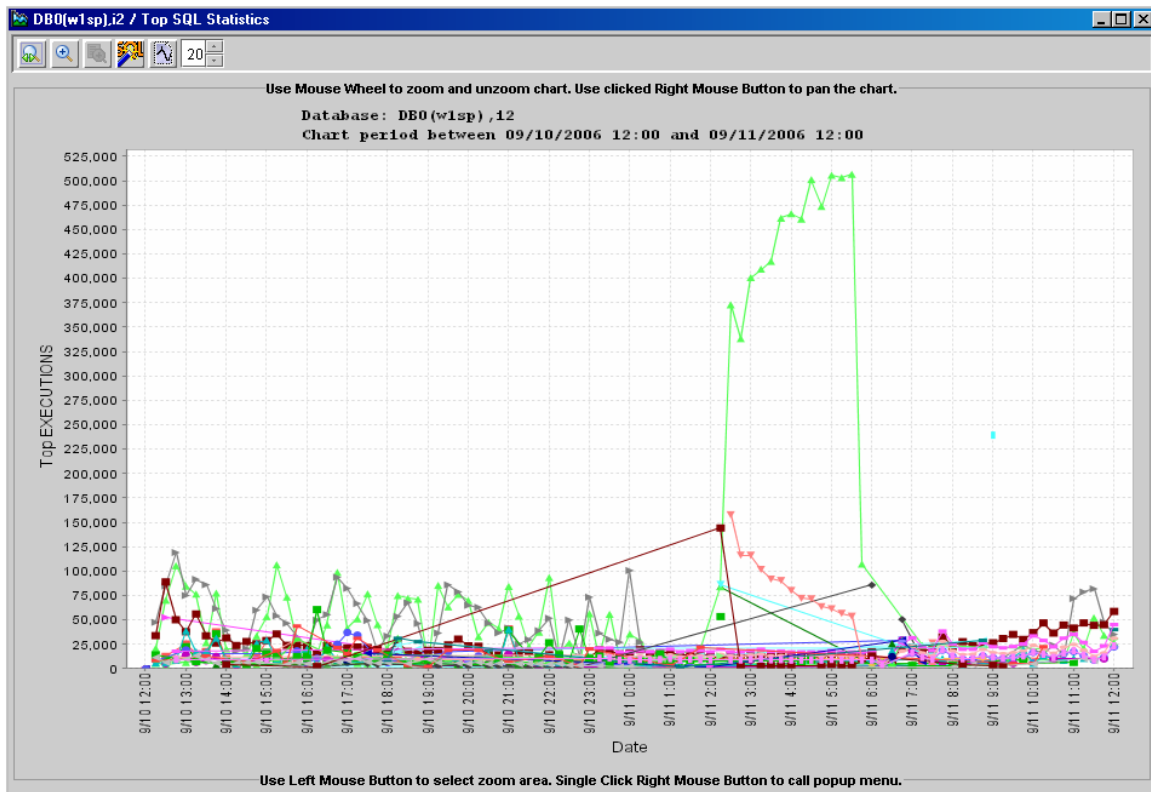
## Top Spike Analysis and Report

Top Spike Analysis enables user to instantly identify spiking SQL and database performance metrics and generate detailed HTML report on area selected for investigation.

To obtain equivalent information created by “Top Spike Analysis” report without Performance Explorer-i, user would have to create hundreds (if not more) AWR/Statspack reports and to perform manual “eye-ball” top analysis on them.



## Top Spike Analysis Chart



# Top Spike Analysis Report

**Top SQL Spike Report**

**20 Top EXECUTIONS Report**  
Time period between  
09/10/2006 11:31:22 and 09/11/2006 12:29:04

3022824254	09/11/2006 05:30:16	506,693
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```
SELECT TERM_TEXT FROM TRANSLATION WHERE TERM_TYPE = 'MSG' AND TERM_CODE = NVL(SUBSTR(:b1,1,INSTR(:b1,':',1,1) - 1 ),:b1) AND LANGUAGE_CODE = NVL(:b4,NVL(PMS_P.USER_LANGUAGE,'E')) UNION ALL SELECT TERM_TEXT FROM TRANSLATION WHERE TERM_TYPE = 'MSG' AND TERM_CODE = NVL(SUBSTR(:b1,1,INSTR(:b1,':',1,1) - 1 ),:b1) AND LANGUAGE_CODE = 'E'
```

SQL Plan N/A

748479874	09/11/2006 09:00:29	239,409
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```
SELECT NOTES FROM TASKS WHERE RESORT = :B2 AND TASK_CODE = :B1
```

SQL Plan N/A

339374066	09/11/2006 02:30:07	157,765
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```
SELECT F_MESSAGE('ROOM','Room') || ' ' || ROOM || ' - ' || F_MESSAGE('NANAME','Name') || ' ' || GUEST_NAME FROM RESERVATION_GENERAL_VIEW WHERE RESV_NAME_ID = :b1
```

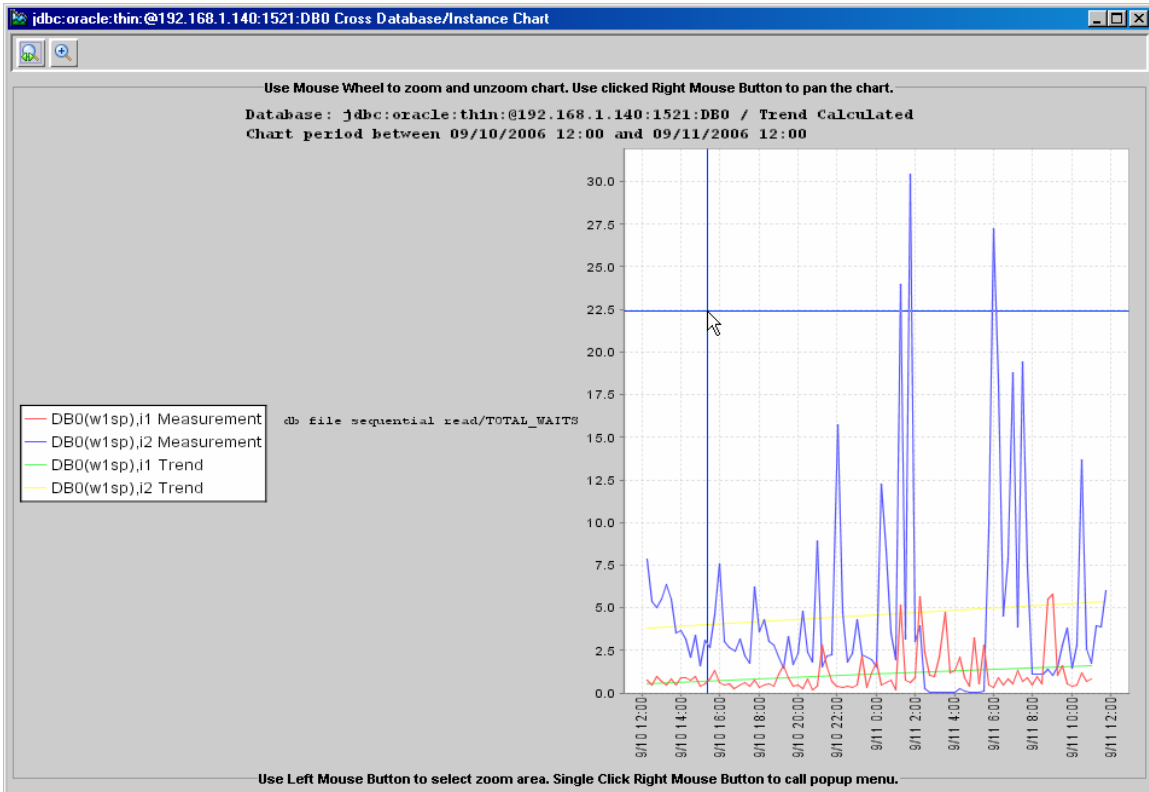
SQL Plan N/A

654547061	09/11/2006 02:15:12	144,173
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Spike report includes Spike SQL and SQL Execution Plan details

## Cross-Instance / Cross Database performance analysis

Cross-Instance / Cross Database performance analysis enables user to visualize performance metrics across multiple databases or multiple nodes of the RAC cluster



Set Time Periods for Visual Analysis

Single Time Range    Cross-Time Range

Time Amount     Snapshot Range     Time Range

Use    Hour of Data    Start Snapshot     Start Time (MM/DD/YYYY HH:MI)

Starting    Minute Ago    End Snapshot     End Time

Superimpose Historical Data

Database / Select with 2-Click  
DB0(w1sp)  
DB0(w1sp),i2  
DB0(pss9)  
DB210G(system)

## SQL Execution Plan/Cost change analysis

Enables user to scan time range to identify changes in SQL statement execution plan or execution cost (Requires AWR or Statspack level 6).

Generate SQL Plan/Cost Change Report

Select Time Period for Instance SQL Plan/Cost Change Analysis

Time Amount       Snapshot Range       Time Range

Use   of Data      Start Snapshot       Start Time (MM/DD/YYYY HH:MI)

Starting   Ago      End Snapshot       End Time

Database / Select with 2-Click

DB0(ps9)

DB0(w1sp),i1

DB0(w1sp),i2

jdbc:oracle:thin:@192.168.1.140:1521:DB210G / Parameter Compare Report

Comparing SQL Plans/Costs From 32174 to 32318 ( 03/01/2007 04:00 to 03/02/2007 04:00 )

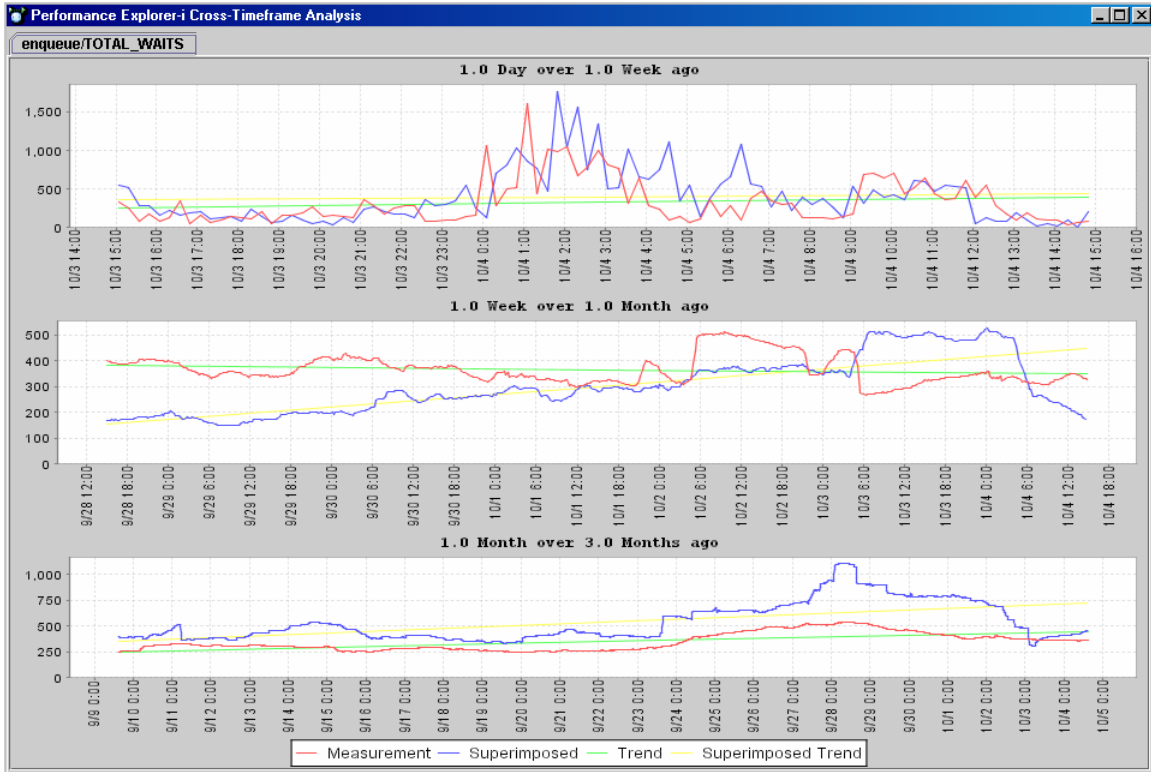
SQL ID	Snapshot Time	Plan Hash Value
8yb3bf20fknmd	03/01/2007 22:50:37	3207614997
8yb3bf20fknmd	03/01/2007 23:50:47	783709846
b07vcvuxryvg9	03/01/2007 22:20:23	3756272070
b07vcvuxryvg9	03/02/2007 00:30:29	2982206256
b07vcvuxryvg9		3756272070
csdn93bqzjz08	03/01/2007 16:50:11	1940624329
csdn93bqzjz08	03/01/2007 23:50:47	2971472673

SQL ID	Snapshot Time	SQL Cost
0juxuyakquzks	03/01/2007 18:50:09	9
0juxuyakquzks	03/01/2007 23:50:47	8
8yb3bf20fknmd	03/01/2007 22:50:37	27
8yb3bf20fknmd	03/01/2007 23:50:47	24
csdn93bqzjz08	03/01/2007 16:50:11	13
csdn93bqzjz08	03/01/2007 23:50:47	12
g2acmpuqbytyj	03/01/2007 21:00:19	18
g2acmpuqbytyj	03/01/2007 22:50:37	20

## Extended Cross-Time Frame Analysis

Cross time analysis enables user to visualize multiple time frames of the database performance statistic. Cross time analysis is especially useful during the investigation of changes in system capacity.



Set Time Periods for Visual Analysis

Single Time Range **Cross-Time Range**

Select CrossTime Profile and Analysis Start Date

Select CrossTime Profile: default

Time Amount  Date

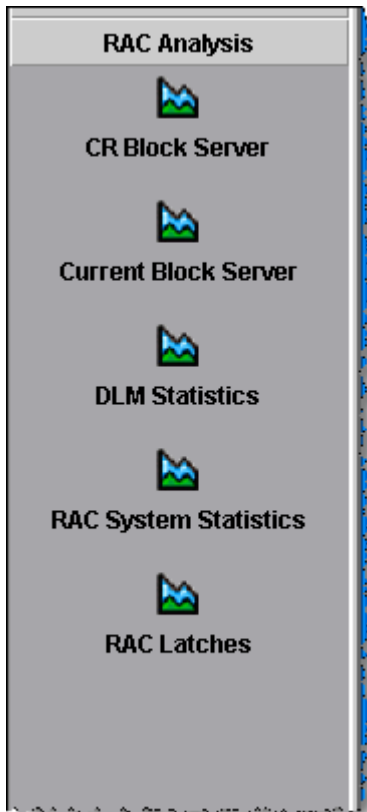
Use Data Starting: 0 Minute Ago

Start Date: 03/02/2007 04:00

Database / Select with 2-Click

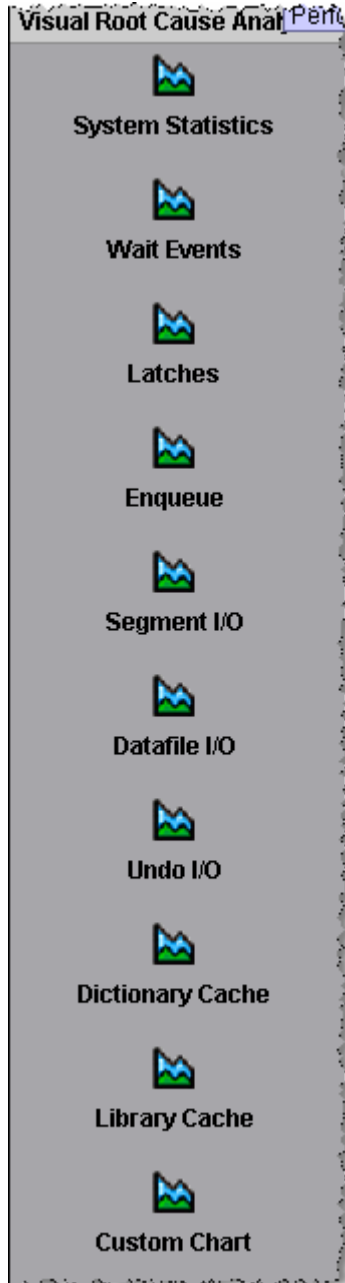
- DB0(w1sp)
- DB0(w1sp),i2
- DB0(ps9)**
- DB210G(system)

## RAC performance root cause analysis support





## Extended Visual Performance Analysis



Added support for;

- **Segment I/O performance**
- **Enqueues performance**
- **Library Cache performance**
- **Dictionary Cache performance**

## SQL search engine – added search execution filter.

For example, it enables user to search for top Disk reads/Per Execution where overall executions are greater than 1,000 using “High Execution Filter”. This is a great way to filter-out SQL that is not executed frequently in production.

At the same time execution filter can be used to identify heavy resource consuming SQL that was executed only a few times, but caused a big impact on performance. For this user should set “Low Execution Filter” to some low value, like 10.

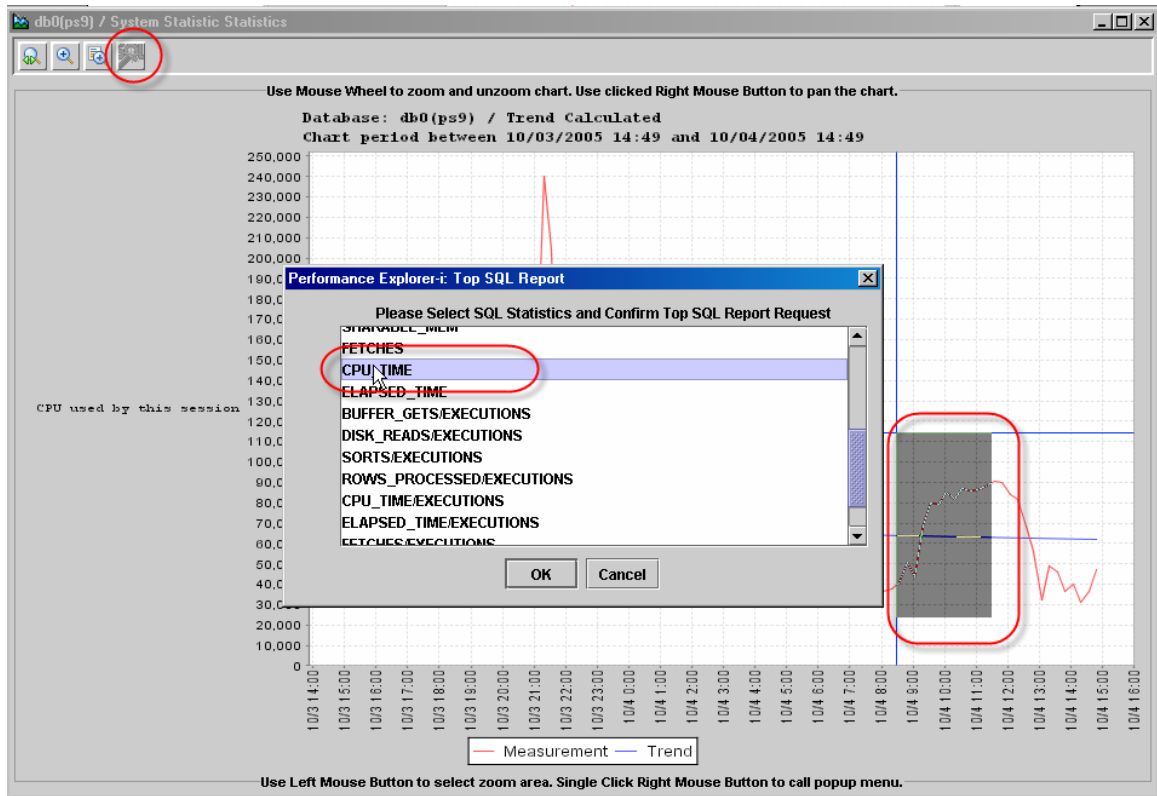
The screenshot displays the SQL search engine interface. At the top left is the "Search Panel" with a text input for "SQL Search Pattern" and buttons for "DML Search Only", "Search Memory", and "Search Statspack". Below this is an "Aggregate Selected SQL Under Name:" field and a "Display SQL Plan" button. The main area contains a table titled "SQL (Ctrl-C to Copy) / Select One or More Statements to Chart or Explain". The table has columns for Hash Value, SQL (Hold Mouse Over), BUFFER\_GETS, Total Executions, Avg. Buffer Get..., and Avg. Disk Read... The table lists several SQL statements with their respective statistics. On the right side, there is a "SQL Statistics" panel with a list of metrics including LOADED\_VERSIONS, LOADS, INVALIDATIONS, VERSION\_COUNT, SHARABLE\_MEM, FETCHES, CPU\_TIME, ELAPSED\_TIME, BUFFER\_GETS/EXECUTIONS, DISK\_READS/EXECUTIONS, SORTS/EXECUTIONS, ROWS\_PROCESSED/EXECUTIONS, CPU\_TIME/EXECUTIONS, and ELAPSED\_TIME/EXECUTIONS. A "Top Search" panel is also visible, featuring a "Top Limit" dropdown set to 10, an "In Window" checkbox, and "High Exe Filter" and "Low Exe Filter" options with input fields. The "High Exe Filter" is checked and set to 1,000. At the bottom, there is a "Set Time Periods for Visual Analysis" section with tabs for "Single Time Range" and "Cross-Time Range", and checkboxes for "Time Amount", "Snapshot Range", and "Time Range".

Hash Value	SQL (Hold Mouse Over)	BUFFER_GETS	Total Executions	Avg. Buffer Get...	Avg. Disk Read...
3644625511	SELECT /* PAR...	178,509	1,188	419.595	0
1625169976	BEGIN UPDATE ...	52,476	7,170	57.32	0.85
3482320962	UPDATE EBAY_I...	52,476	7,170	56.945	0.94
933190420	INSERT INTO /* ...	50,477	31,246	50.44	0.2
1451040547	SELECT /* PAR...	43,023	1,198	112.63	0
1301822445	UPDATE /* Sale...	31,077	15,308	31.705	0.38
3702291398	UPDATE /* Sale...	30,481	2,716	31.78	0.21
696142347	insert into E...	29,005	9,203	28.205	0.04
99823584	SELECT/* Produ...	22,828	4,026	12.135	0.38
2924435701	insert into e...	18,782	9,202	18.37	0.04

## Spike to SQL Drilldown.

Spike to SQL Drilldown enables user to pinpoint SQL correlated to the performance spike of any kind.

Below example demonstrates user's SQL drilldown into the area of CPU spike, that clearly shows what statements were most CPU consuming during the spike time.



Hash Value	SQL (Hol...)	CPU_TIME	Total Executions	Avg. Buffer Gets/Exec	Avg. Disk Reads/Exec
4220512887	select indx...	547,430,016	540	0	0
821223846	SELECT *...	335,040,000	1,004	125.885	0
1492246894	update eba...	125,680,000	79,001	13.75	0.52
691646369	SELECT *...	121,140,000	180	4,346.915	17.465
933190420	INSERT IN...	89,490,000	43,180	50.44	0.2
1223874377	select stati...	82,570,000	540	0	0
3325290915	select * Ge...	77,730,000	179	33,346.191	327.02
1857334316	select ksltn...	76,770,000	539	0	0
3055463531	insert into e...	59,990,000	43,172	17.55	0
1625169976	BEGIN UP...	55,160,000	19,522	57.32	0.85

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### 3. For more information . . .

#### **Other document sources**

The online help can be displayed by selecting an option from the **Help** menu, by clicking the Help button, or by pressing **F1**. Comments and suggestions regarding the help are welcome.

Other product manuals can be freely downloaded from the company website at [http://www.dbainfopower.com/dbaip\\_product\\_documentation.php](http://www.dbainfopower.com/dbaip_product_documentation.php)

#### **Contacting DBA InfoPower**

The development team welcomes any comments on the new features of this release, and information on any other problems/limitations found in the product that are not listed in the **Performance Notes** section. Please send email to [support@dbainfopower.com](mailto:support@dbainfopower.com)

You can contact DBA InfoPower for product information and support issues via the following web page or email addresses.

#### **DBA InfoPower product information**

Web page

<http://www.dbainfopower.com>

E-mail to Sales & Marketing:

[sales@dbainfopower.com](mailto:sales@dbainfopower.com)

#### **Contacting customer support**

Web page

[http://www.dbainfopower.com/dbaip\\_support.php](http://www.dbainfopower.com/dbaip_support.php)

E-mail to Support:

[support@dbainfopower.com](mailto:support@dbainfopower.com)

#### **Technical Support**

If you have questions about using Performance Explorer, please contact our technical support staff. Please include the version number, and if your question is about an error message, include the error text as well.

Should you encounter any problems with Performance Explorer, follow these steps:

- Copy content of the Performance Explorer execution console to the diagnostics text file..

- Capture picture of an error to the image file
- Copy content of the Performance Explorer error dialog to the diagnostics text file.
- E-mail these files to [support@dbainfopower](mailto:support@dbainfopower) with your request for assistance.

