ELLAROSE

User Manual

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Section 1. Installation and Configuration

1.1 Pre-requisites.

ELLAROSE connects to an Oracle database using SQLNET client services which are installed with Oracle sqlplus. After the installation of sqlplus the tnsnames.ora must be configured as per normal database connection requirements.

1.2 Installation

- Copy all ELLAROSE files into a directory on a local hard drive. For example all files should be placed in c:\ellarose
- Edit the db.ini file and ensure the ***"METADATA"*** parameter equals the full pathname of where the ELLAROSE files have been placed.

  Example:

  [Main]
  ELLAROSEDB=ORACLE
  METADATA=c:\Ellarose

  [ORACLE]
  Provider=OraOLEDB.Oracle.1;
  Persist Security Info=True;
  [ORACLE_END]
- Populate the sidlist.txt file with the list of TNS entries that ELLAROSE needs to connect to(one per line)

Section 2. Configuration

2.1 Settings

In order to connect to a database the connection details must be specified on the Configuration/Settings tab. All three connection parameters need to be populated to ensure a successful connection to a database.

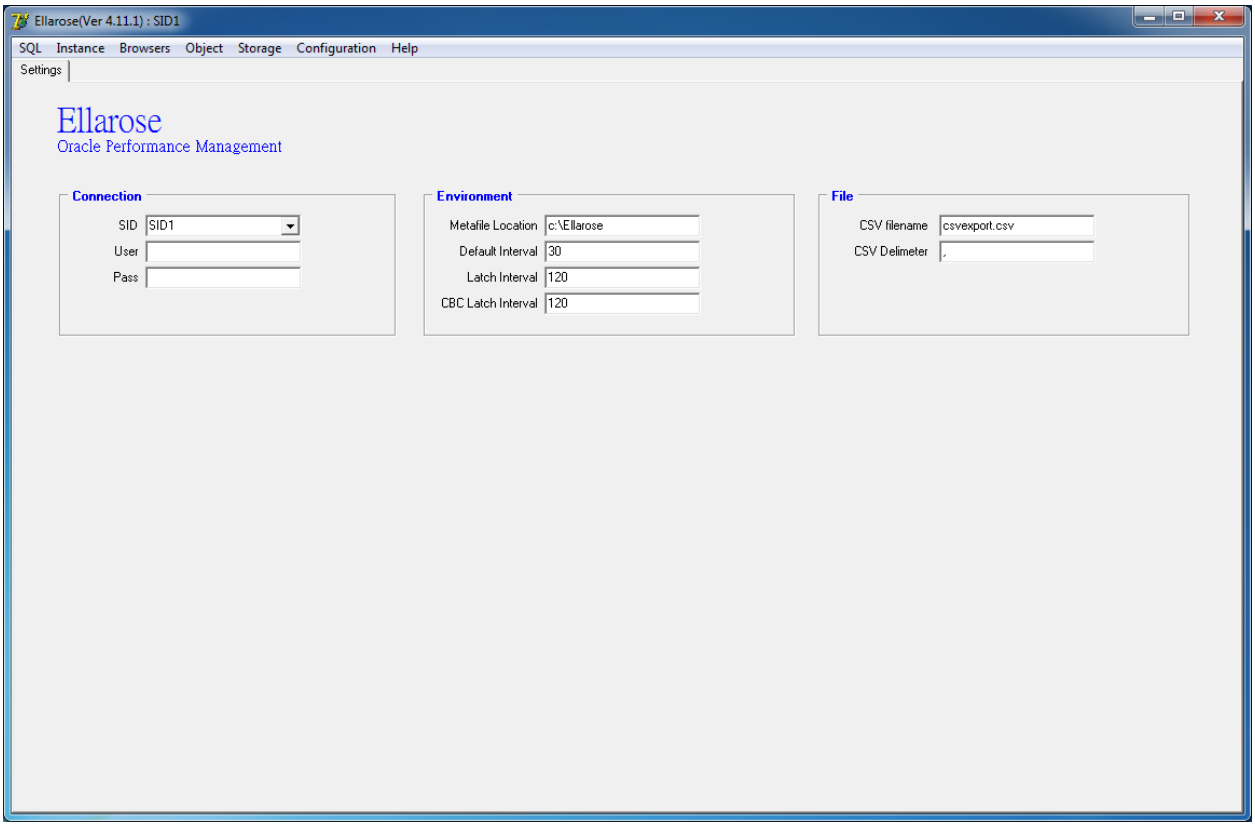


Illustration 2.1: Settings

Connection Parameters

Parameter	Description
SID	This is the TNS alias to be used for the database connection. TNS aliases are defined within the oracle tnsnames.ora file.
User	Oracle username used to connect to database
Password:	Password of Oracle username

Note: The Oracle user must have access to the data dictionary. To ensure access to the data dictionary the SELECT_CATALOG_ROLE should be granted to whichever user is specified.

Environment Parameters

Parameter	Description
Metafile Location	Location of installation directory. The following files needs to be exist in this directory: Ellarose.exe, db.ini, Default_SQL_List.txt, sidlist.txt, Ellarose_Help.pdf
Default Interval	Refresh rate of real-time monitoring.
Latch Interval	Refresh rate of real-time monitoring(Instance Latching)
CBC Latch Interval	Refresh rate of real-time monitoring (CBD Latching)

File Parameters

Parameter	Description
CSV Filename	Destination path of where CSV files will be written.
CSV Delimiter	Delimiter character to use during CSV file generation.

Section 3. SQL

3.1 Historical Performance(SQLStat)

Execution statistics for a single or multiple SQL can be analysed based on a pre-determined SQL query. Values entered into the retrieval form determine the scope of the SQL retrieved.

3.1.1 Retrieval

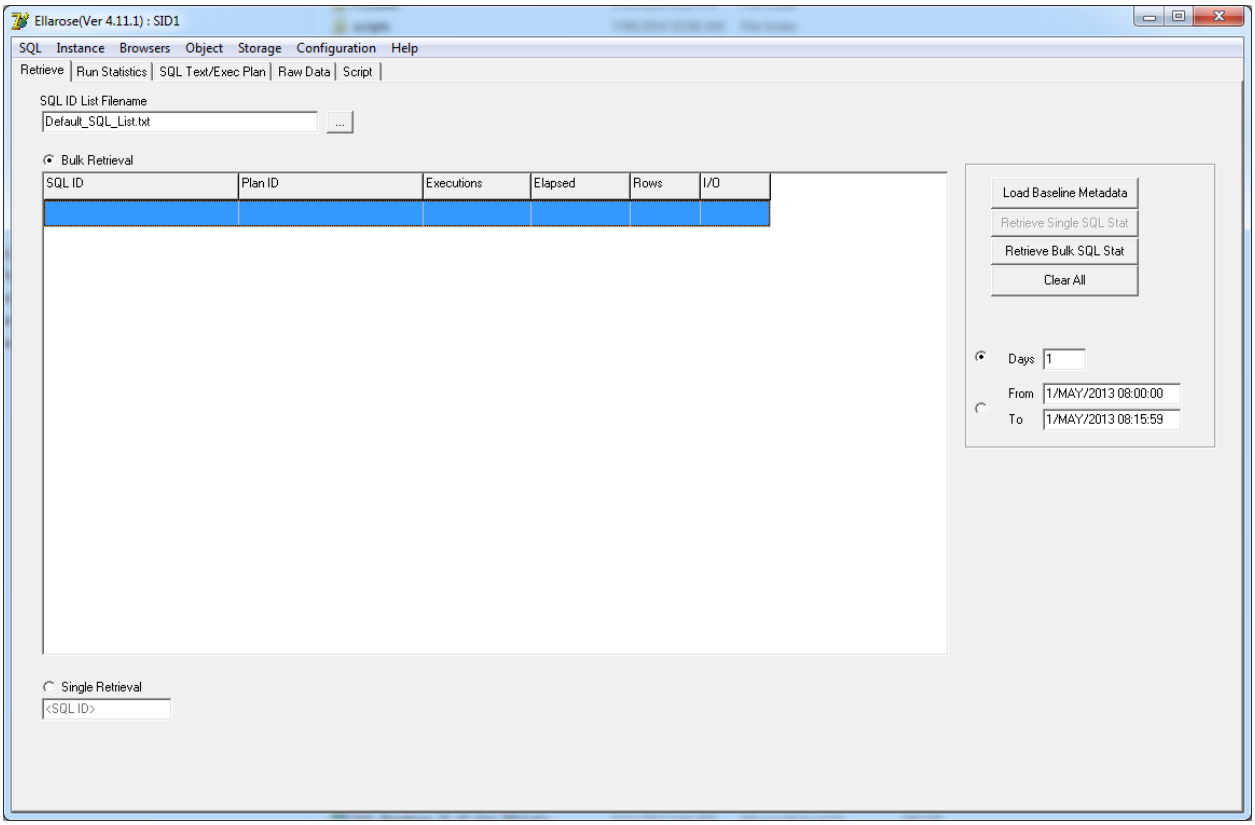


Illustration 3.1.11: Historical Performance Retrieval

Context:

Component ID	Component Type	Description
SQL ID List Filename	Field	Filename that contains a list of known SQL ID's. Useful for reviewing the execution details of multiple SQL statements.
SQL ID	Field	Restrict criteria based on SQL ID.
Load Baseline Metadata	Button	Loads a series of SQL ID's into the baseline area from the filename provided in "SQL ID List Filename". This file can also contain expected execution baselines such as plan ID and execution counts.
Retrieve Single SQL Stat	Button	Retrieve statistics on a single SQL ID. The SQL statistics retrieved depend on whether the bulk or single radio button is chosen.
Retrieve Bulk SQL Stat	Button	Retrieve SQL execution statistics for SQL ID's shown in the baseline grid.
Days	Field	Number of days of SQL statistics to retrieve.
From/To	Field	Date range of SQL statistics to retrieve.

Usage, Single SQL ID :

Use this retrieval method to analyse the statistics of a single SQL ID.

1) Enter the SQL ID into the SQL ID field.
2) Enter the amount of information to retrieve. Either enter the number days of history(from now) or enter a date/time range. Be sure to click the radio button which signifies the appropriate method of date criteria.
3) Click the **<Retrieve Single SQL Stat>** button.

Usage, Bulk SQL ID :

Use this retrieval method to analyse the statistics of a multiple SQL ID's.

1) Load the SQL ID baseline information into the baseline grid by clicking the **<Load Baseline Metadata>** button. The "SQL ID List Filename" field points to the SQL ID baseline text file.
2) Enter the amount of information to retrieve. Either enter the number days of history(from now) or enter a date/time range. Be sure to click the radio button which signifies the appropriate method of date criteria.
3) Click the <Retrieve Bulk SQL Stat> button to retrieve execution stats for all SQL ID's in the baseline grid.

3.1.2 Run Statistics(Execution Statistics)

SQL execution statistics are displayed according to the criteria entered on the retrieval form. Statistics are categorised and displayed on separate tabsheets as per below:

General Profile Tab

- Average & Total Elapsed Time
- Average & Total CPU Used
- Executions
- Average & Total Rows Processed

I/O Profile Tab

- Average & Total Disk Reads
- Average & Total I/O Wait
- Average & Total Sorts

Communications Tab

- Average & Total Application Time
- Average & Total Concurrent Time
- Average & Total Cluster Time

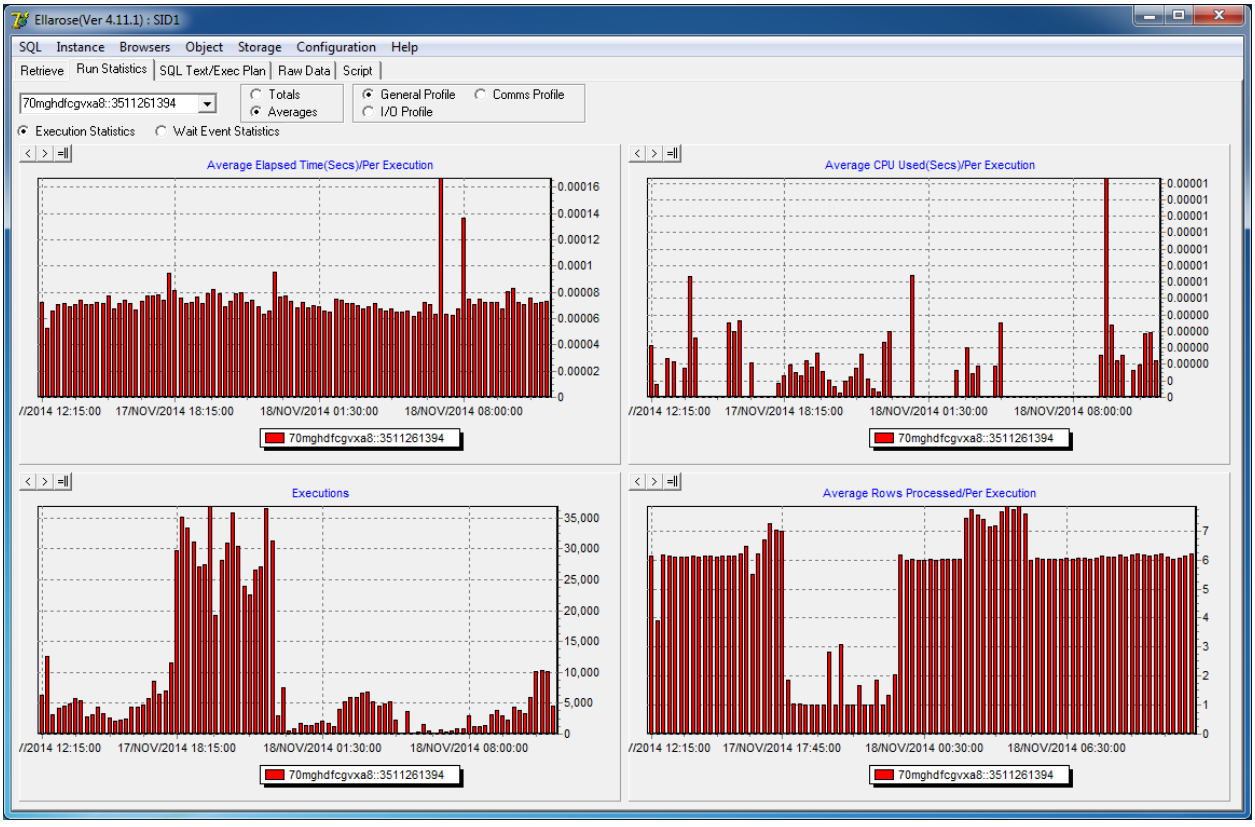


Illustration 3.1.2: Historical Performance Statistics(General)

Context:

Component ID	Component Type	Description
SQL_ID::Plan	Pull Down	Selects the SQLID::Execution Plan to plot in the graphs.
Totals or Averages	Radio Button	Plot averages or total on the graph.
General, I/O or Commus Profile	Radio Button	Display General, I/O or communications profile graphs.
Graph Sizing	Button	Increase/decrease size of plot area on the graph area. Graphs can also be zoomed in by click and dragging the mouse over the plotted area. - Zoom In: Top right to bottom left - Zoom Out: Bottom Left to top right
Graph Text Orientation	Button	Toggle the graphs axis text between vertical and horizontal.
Executions Statistics or Wait Event Statistics	Radio Button	Display Runtime execution statistics(from DBA_HIST_SQLSTAT) or wait event statistics (from DBA_HIST_ACTIVE_SESS_HISTORY)

3.1.3 Run Statistics(Wait Event Statistics)

SQL wait event statistics are displayed according to the criteria established in the retrieval tab.

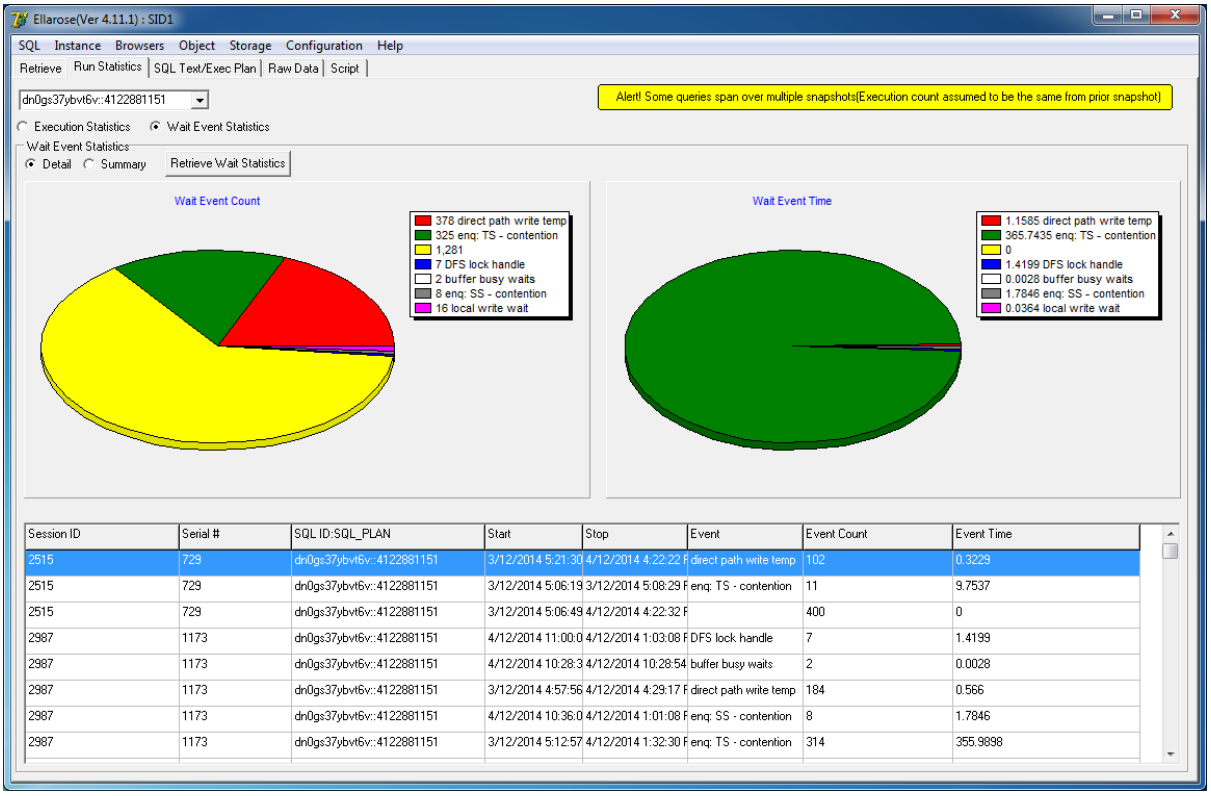


Illustration 3.1.3: Historical Performance Statistics(Wait Events)

Context:

Component ID	Component Type	Description
SQL_ID::Plan	Pull Down	Selects the SQLID::Execution Plan to plot in the graphs.
Retrieve Wait Statistics	Button	Wait event statistics are only retrieved when this button is clicked.
Detail or Summary	Radio Button	Determines what is displayed in the grid. Display detail of active session history (broken down to times and SID) or display summary(total of wait events)

3.1.4 SQL Text/Exec Plan

Displays the SQL text and execution plan details for the chosen SQLID/execution plan combination.

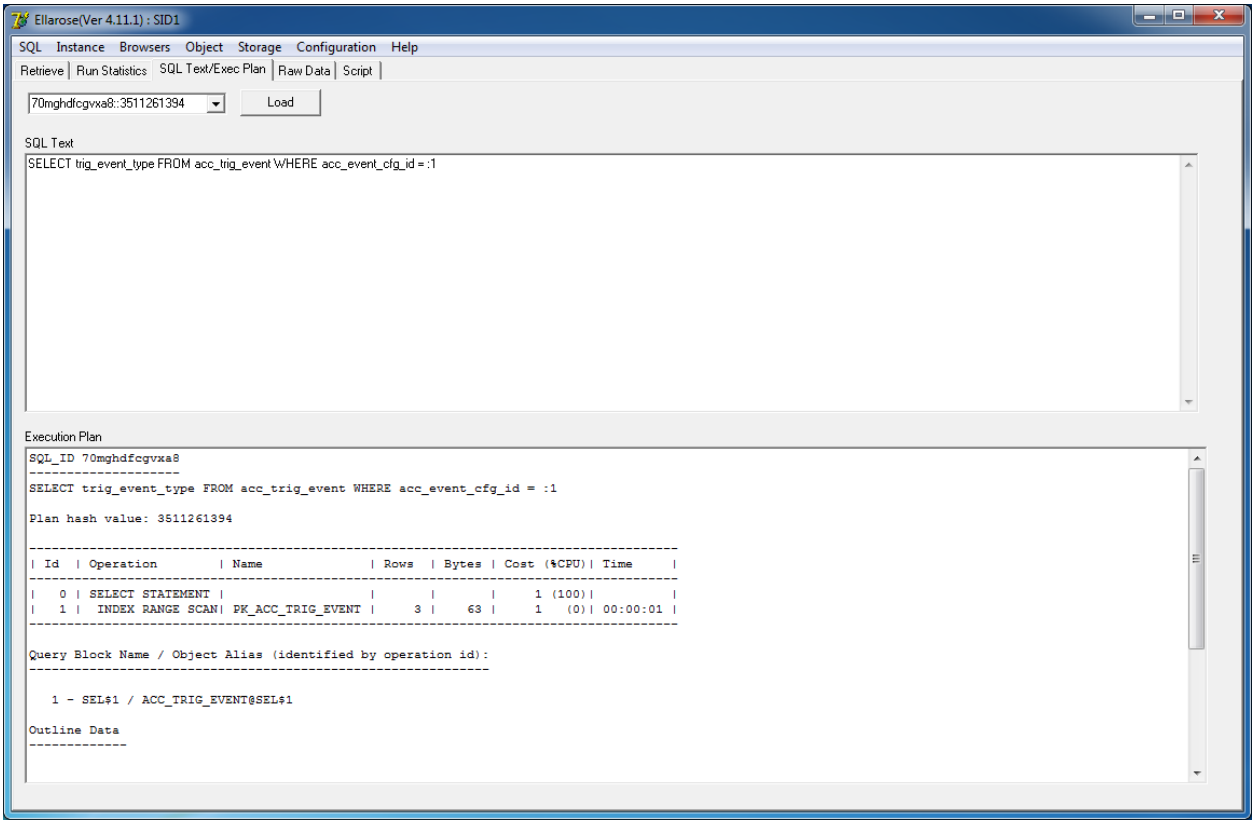


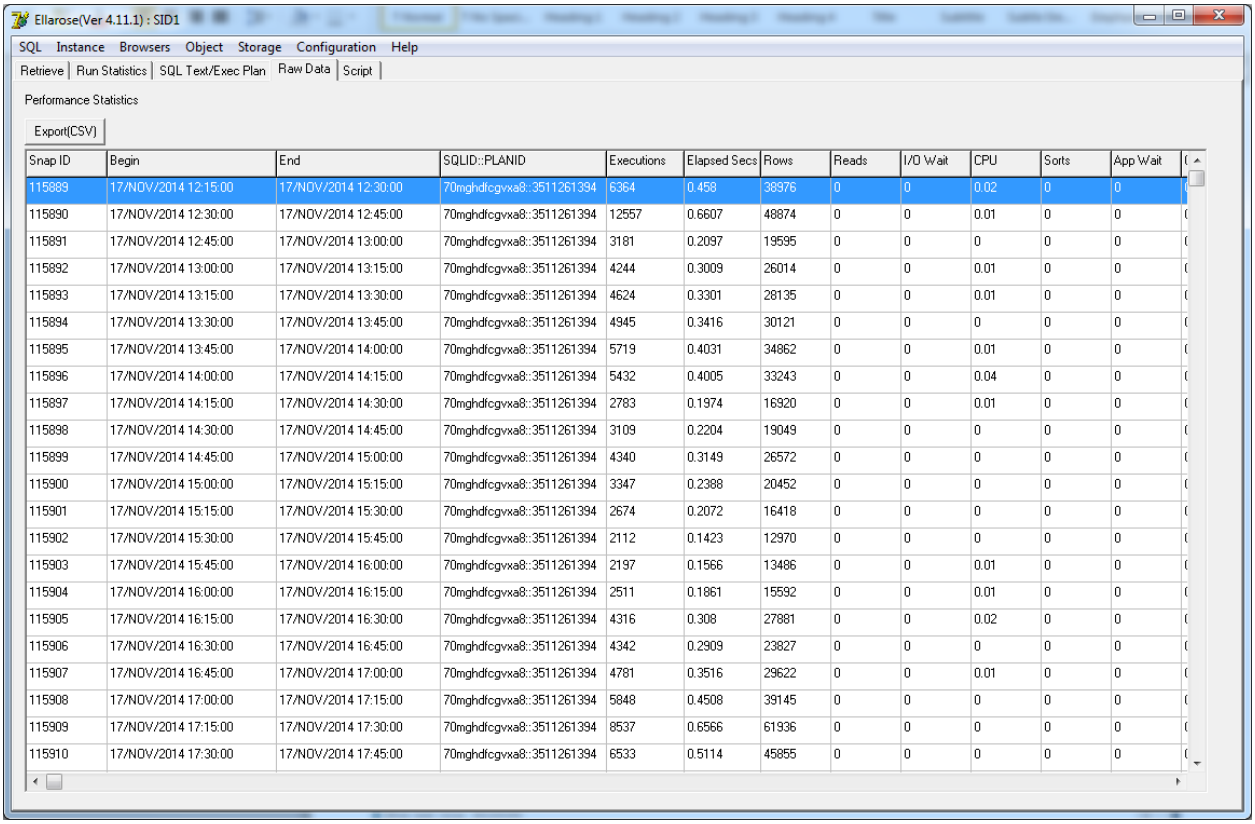
Illustration 3.1.4: SQL Text with Execution Plan

Context:

Component ID	Component Type	Description
SQL_ID::Plan	Pull Down	Selects the SQLID::Execution Plan to load.
Load	Button	Display the SQL text and execution plan for the chosen SQLID::Execution Plan combination .

3.1.5 Raw Data

Display raw data retrieved from the query.



Snap ID	Begin	End	SQLID::PLANID	Executions	Elapsed Secs	Rows	Reads	I/O Wait	CPU	Sorts	App Wait
115889	17/NOV/2014 12:15:00	17/NOV/2014 12:30:00	70mghdfcgvxa8::3511261394	6364	0.458	38976	0	0	0.02	0	0
115890	17/NOV/2014 12:30:00	17/NOV/2014 12:45:00	70mghdfcgvxa8::3511261394	12557	0.6607	48874	0	0	0.01	0	0
115891	17/NOV/2014 12:45:00	17/NOV/2014 13:00:00	70mghdfcgvxa8::3511261394	3181	0.2097	19595	0	0	0	0	0
115892	17/NOV/2014 13:00:00	17/NOV/2014 13:15:00	70mghdfcgvxa8::3511261394	4244	0.3009	26014	0	0	0.01	0	0
115893	17/NOV/2014 13:15:00	17/NOV/2014 13:30:00	70mghdfcgvxa8::3511261394	4624	0.3301	28135	0	0	0.01	0	0
115894	17/NOV/2014 13:30:00	17/NOV/2014 13:45:00	70mghdfcgvxa8::3511261394	4945	0.3416	30121	0	0	0	0	0
115895	17/NOV/2014 13:45:00	17/NOV/2014 14:00:00	70mghdfcgvxa8::3511261394	5719	0.4031	34862	0	0	0.01	0	0
115896	17/NOV/2014 14:00:00	17/NOV/2014 14:15:00	70mghdfcgvxa8::3511261394	5432	0.4005	33243	0	0	0.04	0	0
115897	17/NOV/2014 14:15:00	17/NOV/2014 14:30:00	70mghdfcgvxa8::3511261394	2783	0.1974	16920	0	0	0.01	0	0
115898	17/NOV/2014 14:30:00	17/NOV/2014 14:45:00	70mghdfcgvxa8::3511261394	3109	0.2204	19049	0	0	0	0	0
115899	17/NOV/2014 14:45:00	17/NOV/2014 15:00:00	70mghdfcgvxa8::3511261394	4340	0.3149	26572	0	0	0	0	0
115900	17/NOV/2014 15:00:00	17/NOV/2014 15:15:00	70mghdfcgvxa8::3511261394	3347	0.2388	20452	0	0	0	0	0
115901	17/NOV/2014 15:15:00	17/NOV/2014 15:30:00	70mghdfcgvxa8::3511261394	2674	0.2072	16418	0	0	0	0	0
115902	17/NOV/2014 15:30:00	17/NOV/2014 15:45:00	70mghdfcgvxa8::3511261394	2112	0.1423	12970	0	0	0	0	0
115903	17/NOV/2014 15:45:00	17/NOV/2014 16:00:00	70mghdfcgvxa8::3511261394	2197	0.1566	13486	0	0	0.01	0	0
115904	17/NOV/2014 16:00:00	17/NOV/2014 16:15:00	70mghdfcgvxa8::3511261394	2511	0.1861	15592	0	0	0.01	0	0
115905	17/NOV/2014 16:15:00	17/NOV/2014 16:30:00	70mghdfcgvxa8::3511261394	4316	0.308	27881	0	0	0.02	0	0
115906	17/NOV/2014 16:30:00	17/NOV/2014 16:45:00	70mghdfcgvxa8::3511261394	4342	0.2909	23827	0	0	0	0	0
115907	17/NOV/2014 16:45:00	17/NOV/2014 17:00:00	70mghdfcgvxa8::3511261394	4781	0.3516	29622	0	0	0.01	0	0
115908	17/NOV/2014 17:00:00	17/NOV/2014 17:15:00	70mghdfcgvxa8::3511261394	5848	0.4508	39145	0	0	0	0	0
115909	17/NOV/2014 17:15:00	17/NOV/2014 17:30:00	70mghdfcgvxa8::3511261394	8537	0.6566	61936	0	0	0	0	0
115910	17/NOV/2014 17:30:00	17/NOV/2014 17:45:00	70mghdfcgvxa8::3511261394	6533	0.5114	45855	0	0	0	0	0

Illustration 3.1.5: Performance Statistics(Raw Data)

Context:

Component ID	Component Type	Description
Export(CSV)	Button	Export the grid details into CSV file. The file will be created in the path specified in the “CSV filename” on the configuration/setting tab.

3.1.6 Script

Controls the query which is submitted to the database to retrieve information.

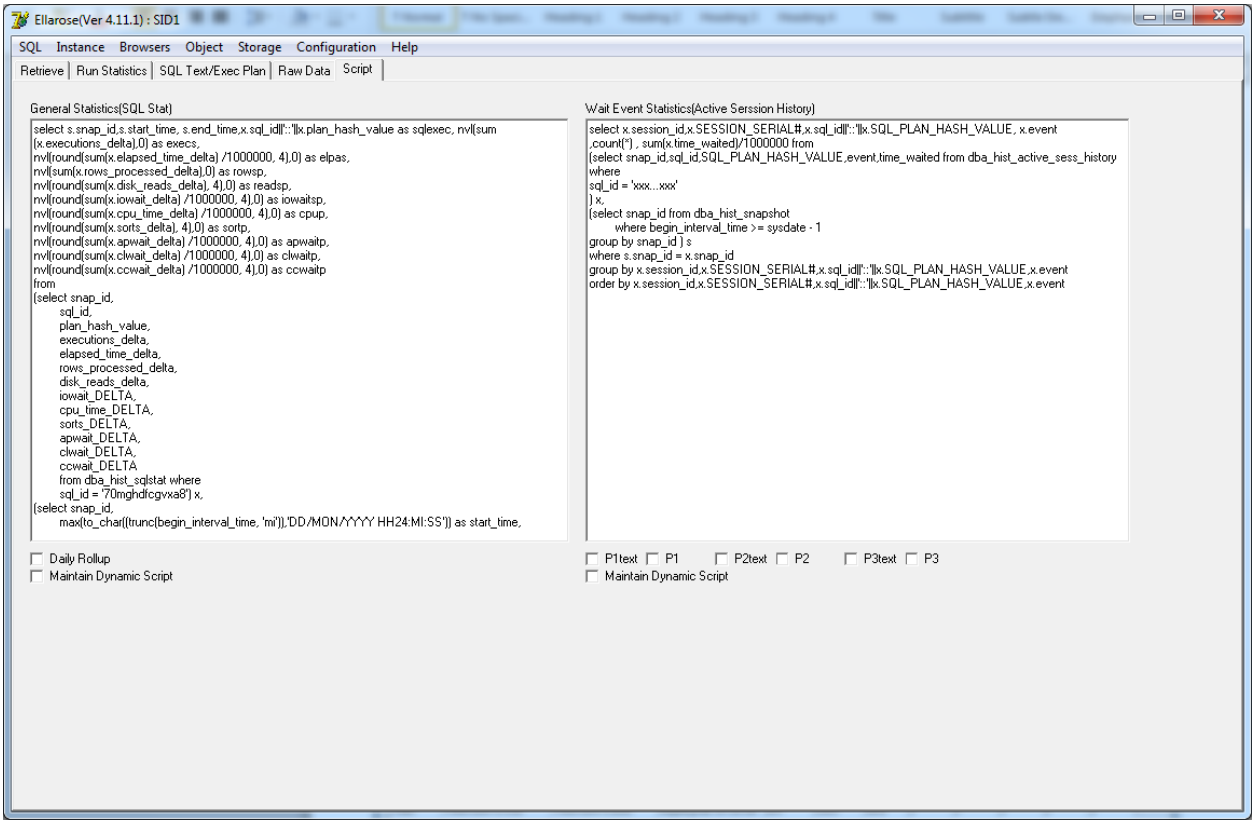


Illustration 3.1.6: Scripts used for performance statistics retrieval

Context:

Component ID	Component Type	Description
General Statistics	Textbox	Controls the query over DBA_HIST_SQLSTAT.
Wait Event Statistics	Textbox	Controls the query over DBA_HIST_ACTIVE_SESS_HISTORY.
Daily Rollup	Checkbox	Normally information about a query is displayed based on the frequency of the AWR snapshot(for example 30 minute intervals). Checking this box displays the average of the snapshots over a 24 hour period.
Maintain Dynamic Script	Checkbox	Normally the query is constructed and executed based on literals populated in various fields. The queries in the text boxes can be manually modified and then executed provided the “Maintain Dynamic Script” box is checked. Check this box so the SQL script is not overwritten when the retrieve button is clicked.
P#, P#TEXT	Checkbox	Include P#,P#TEXT columns in the query result result.

Section 4. Real Time Performance

4.1 Session Details

Real time session statistics for the entire database can be viewed in one of two methods.

4.1.1 Resource Usage View

The first method is a graphical representation which illustrates the session resource usage.

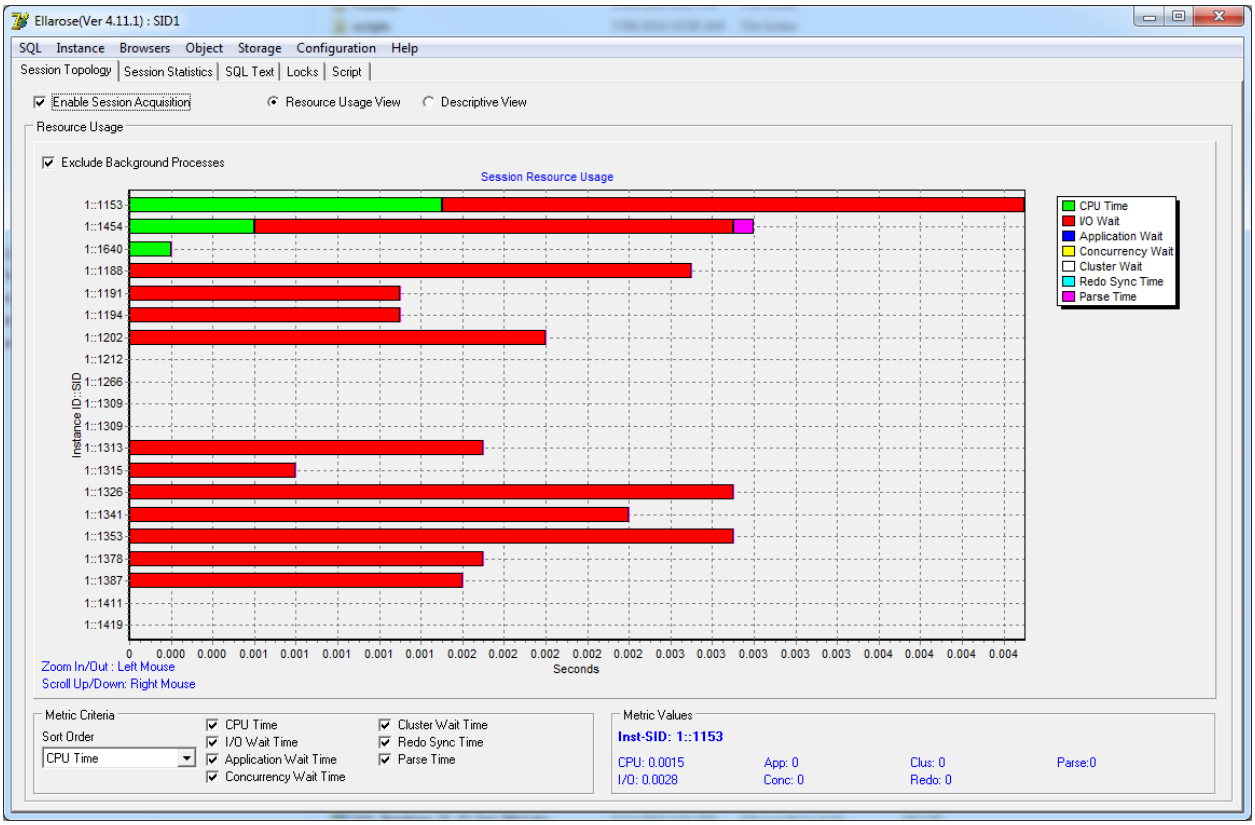


Illustration 4.1.1: Session Resource(Usage View)

Context:

Component ID	Component Type	Description
Enable Session Acquisition	Checkbox	Check to acquire database session information. Session information is retrieved at regular intervals based on the "Default Interval" timer on the configuration/settings tab.
Resource Usage View	Radio Button	Check to put focus on the graphical interpretation of session resource usage.
Descriptive View	Radio Button	Check to put focus on the raw data of session resource usage.
Exclude Background Processes	Checkbox	By default all background processes (E.G:pmon,smon,etc…) are excluded from the graph. Check to include background process resource usage on the graph.
Sort Order	Pull Down	Determines the criteria for sorting the top-down order of session resource usage on the graph.
Resource Scope	Checkbox's	All resource type (CPU,I/Application Wait Time,etc…) can be included on excluded by toggling these checkbox's.

Usage:

1) Check the “Enable Session Acquisition” checkbox.
2) Choose the sort order from the “Sort Order” pull down. This pull down is located within the Metric Criteria Options Panel at the bottom left of the form.
3) Choose which session metrics to display on the graph by checking/unchecking the resource checkboxes. The resource checkboxes are located within the Metric Criteria Options Panel at the bottom left of the form.
4) By default only foreground processes are plotted. It is possible to plot the Oracle background processes on the graph by unchecking the “Exclude Background Processes” located on the top left of the graph.
5) Specific values for each session plotted on the graph can be displayed in the Metric Values Panel by moving the mouse pointer over an individual bar on the graph. The Metric Values Panel is located on the bottom left of the form.

4.1.2 Descriptive View

The second method for viewing session resource usage is the descriptive view. This view displays the raw data of the session resource usage. The top grid displays accumulated session values and the bottom shows the delta values. Delta values are calculated based on the value difference between each acquisition. Acquisition intervals are determined by the default timer value(default 30 seconds) on the configuration form.

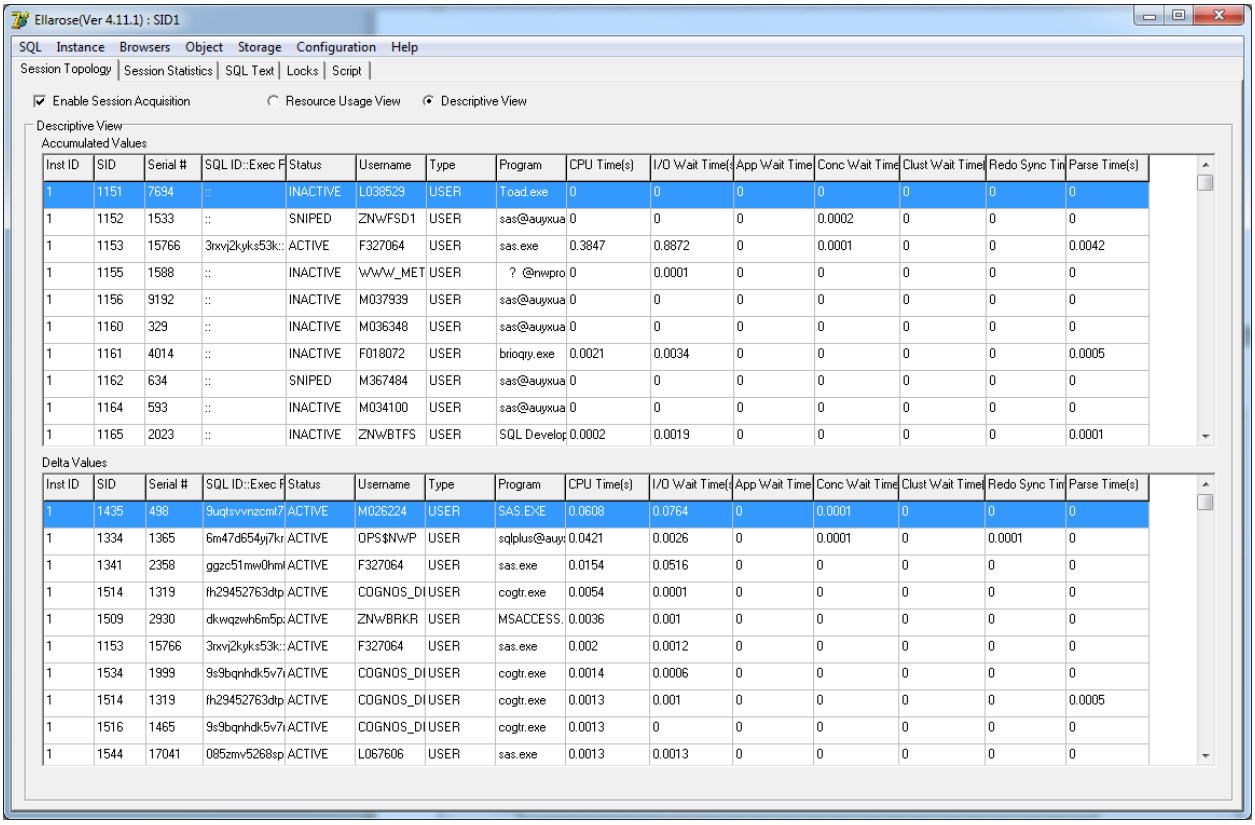


Illustration 4.1.2: Session Resource(Descriptive View)

Usage:

1) Check on the “Enable Session Acquisition” checkbox.
2) Accumulated and Delta values for each session in the database are shown in the grids.

Notes:

1) When one of the rows in the top grid(Accumulated Values) is clicked the “Inst ID, SID and Serial#” are automatically populated into the “Session Statistics” form and the “SQL Text” form.
2) Foreground and background sessions are displayed in the accumulated and delta grids.

4.2 Session Statistics

Displays delta and accumulated wait events for a specific session.

4.2.1 Wait Events View

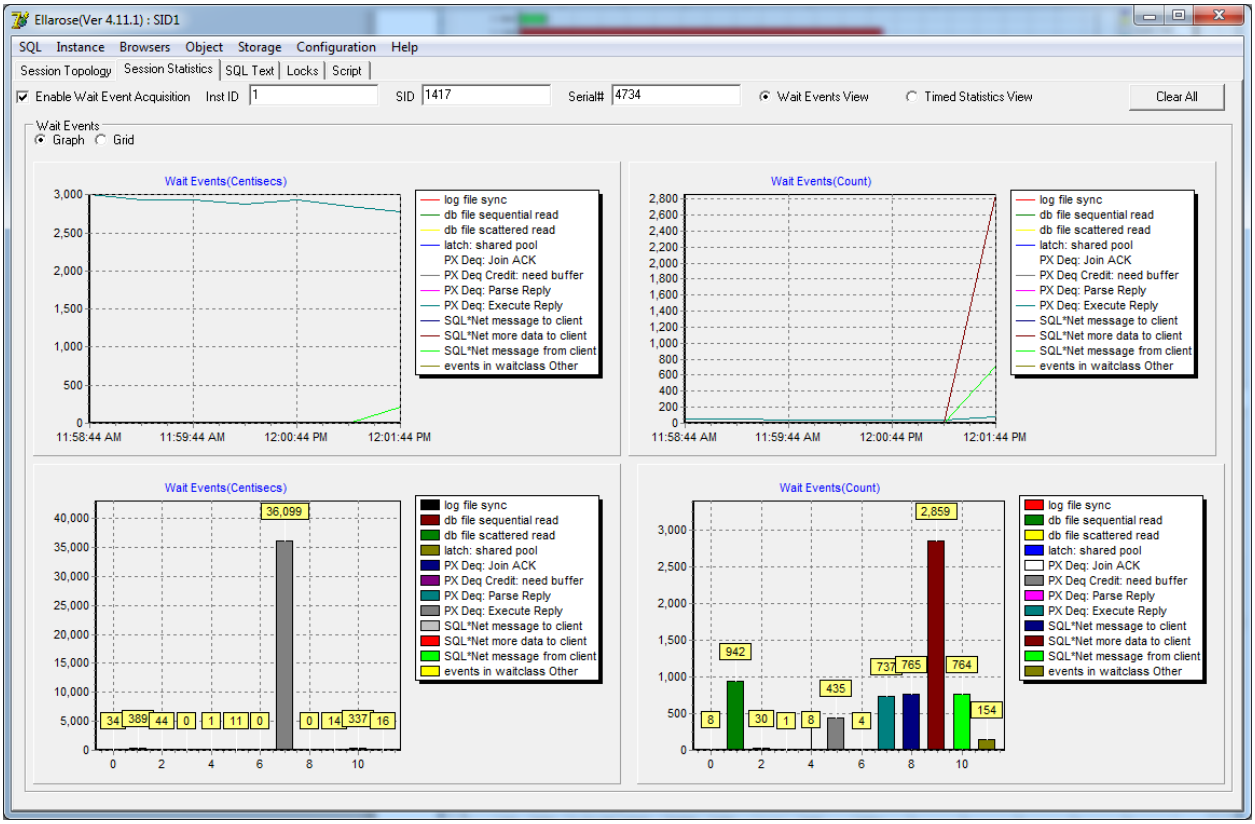


Illustration 4.2.1(a): Session Statistics Wait Events View(Graph)

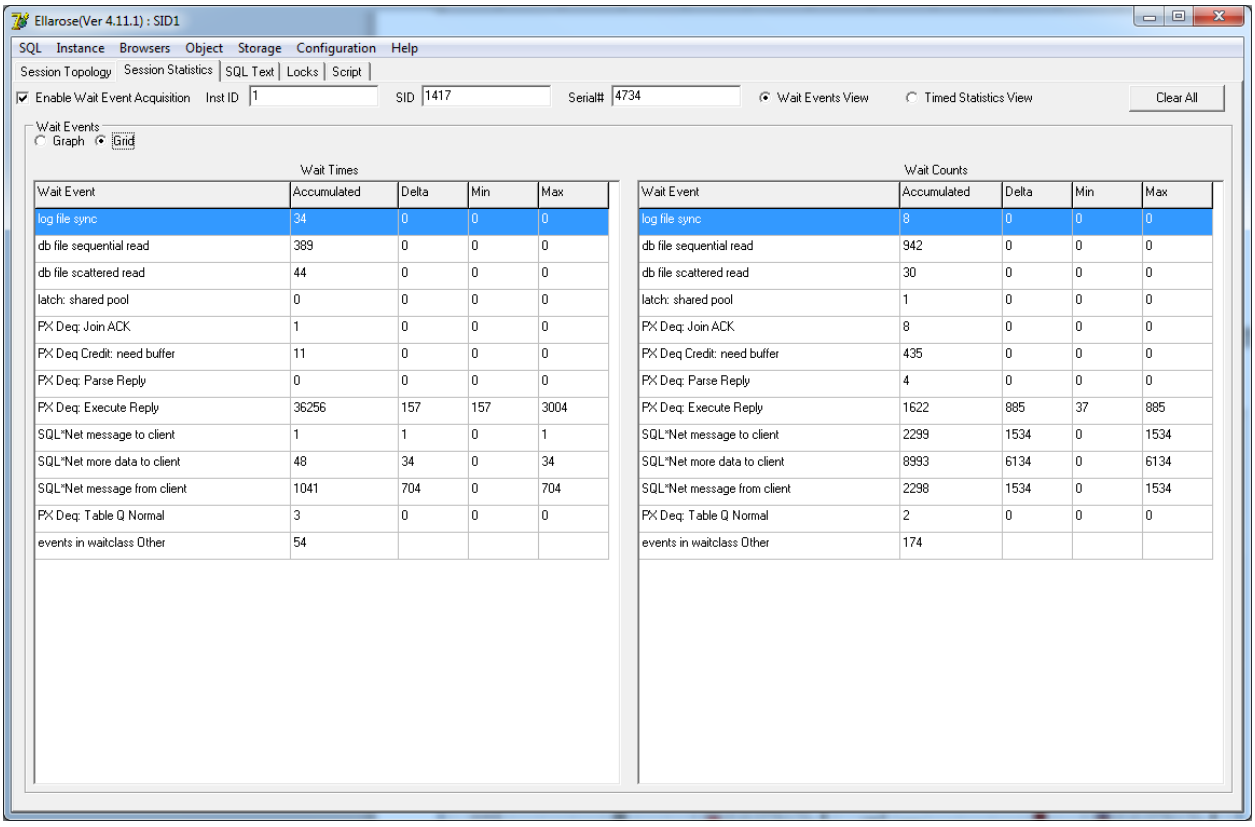


Illustration 4.2.1(b): Session Statistics Wait Events View(Grid)

Context:

Component ID	Component Type	Description
Enable Wait Event Acquisition	Checkbox	Check to acquire database session information. Session information is retrieved at regular intervals based on the "Default Interval" timer on the configuration/settings tab.
Inst ID	Field	Database Instance ID. Populate automatically when a row is selected from the session tab.
SID	Field	Session ID. Populate automatically when a row is selected from the session tab.
Serial#	Field	Session Serial#. Populate automatically when a row is selected from the session tab.
Wait Events (Graph or Grid)	Radio Button	Display wait event information in graph or grid format.
Wait Events View	Radio Button	Displays wait event information about a specific session.
Timed Statistics View	Radio Button	Displays raw performance statistics about a specific session.
Clear All	Button	Clears all graphs.

Usage:

1) The **"Inst ID, SID and Serial#"** are automatically populated into the **"Session Statistics"** form when one of the rows in the top grid(Accumulated Values) is clicked. Alternatively these values can be manually entered.
2) Check the **<Enable Wait Event Acquisition>** checkbox to display detailss for the chosen session.

Notes/Known Issues:

1) ** Bug ** Series colours for bar charts may not match that shown in the legend after the first session information is plotted. Check the plotted graph values against the grid values to determine actual wait time values.

4.2.2 Timed Statistics View

Displays accumulated, delta, min and max event details for a specific session.

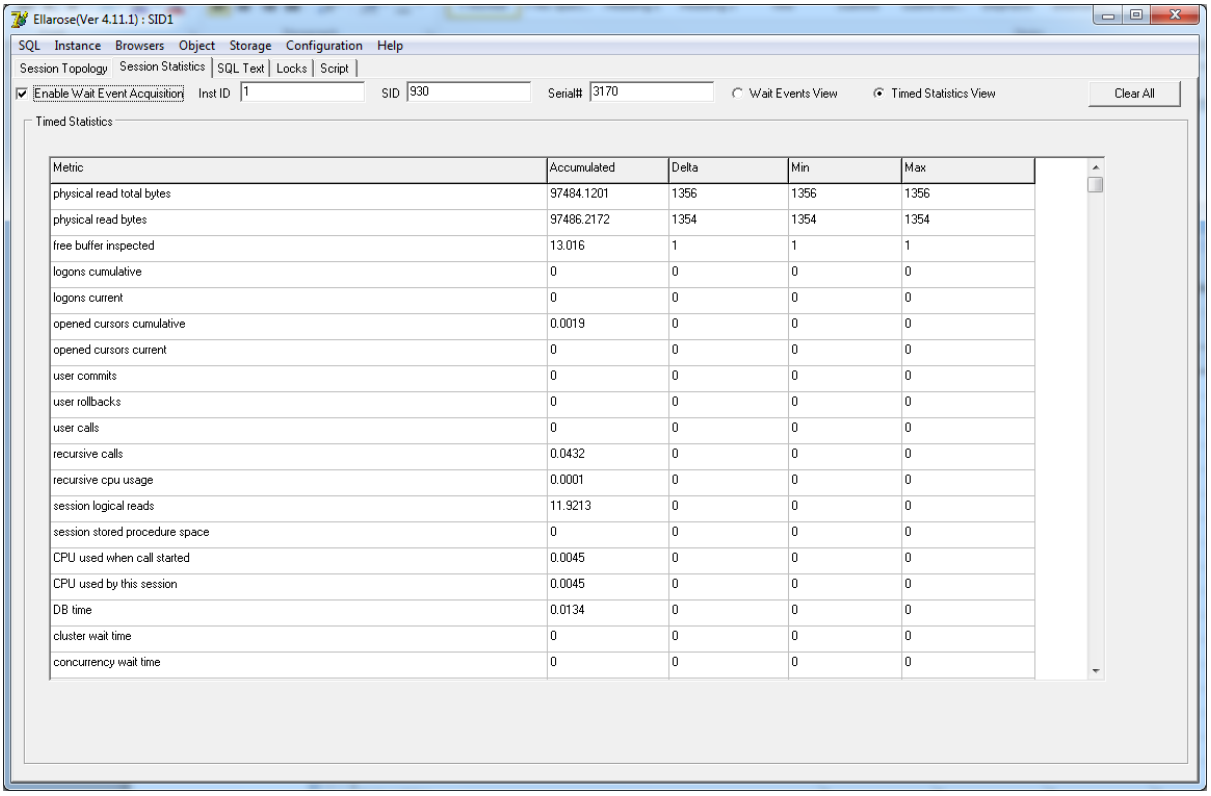


Illustration 4.2.1: Real-Time Timed Statistics for all session

Context:

Component ID	Component Type	Description
Enable Wait Event Acquisition	Checkbox	Check to acquire database session information. Session information is retrieved at regular intervals based on the “Default Interval” timer on the configuration/settings tab.
Inst ID	Field	Database Instance ID. Populate automatically when a row is selected from the session tab.
SID	Field	Session ID. Populate automatically when a row is selected from the session tab.
Serial#	Field	Session Serial#. Populate automatically when a row is selected from the session tab.
Wait Events (Graph or Grid)	Radio Button	Display wait event information in graph or grid format.

4.3 SQL Text

Displays the SQL text and associated execution plan for a given SQL ID

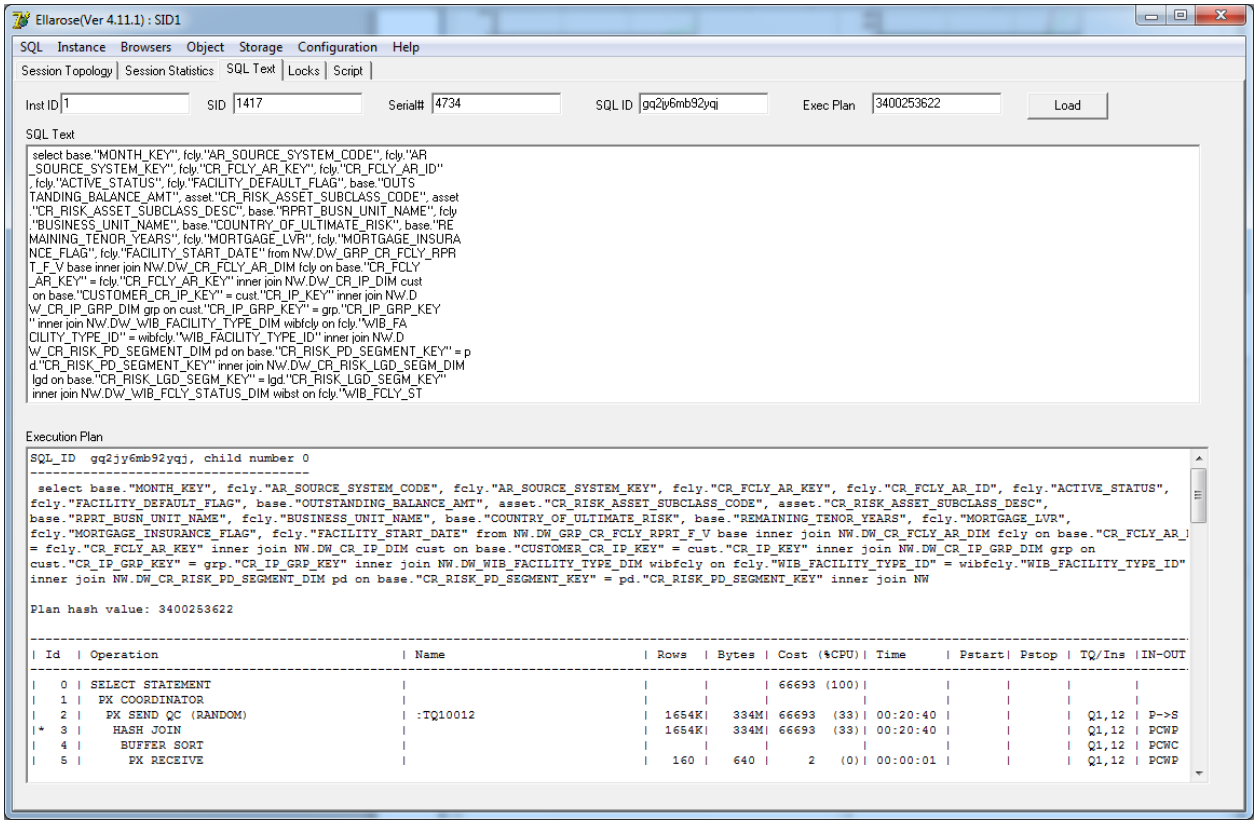


Illustration 4.3.1: SQL Text and Execution Plan

Context:

Component ID	Component Type	Description
Inst ID	Field	Database Instance ID. Populated automatically when a row is selected from the session tab.
SID	Field	Session ID. Populated automatically when a row is selected from the session tab.
Serial#	Field	Session Serial#. Populated automatically when a row is selected from the session tab.
SQLID	Dropdown	Used to determine which SQL ID and exec plan combination to display
Load	Button	Loads the SQL text and execution plan for the specified SQLID and exec plan combination.
SQL Text	Memo	SQL text of the SQL ID.
Execution Plan	Memo	Execution plan of the SQL ID and exec plan ID combination.

4.4 Locks

Display session lock information.

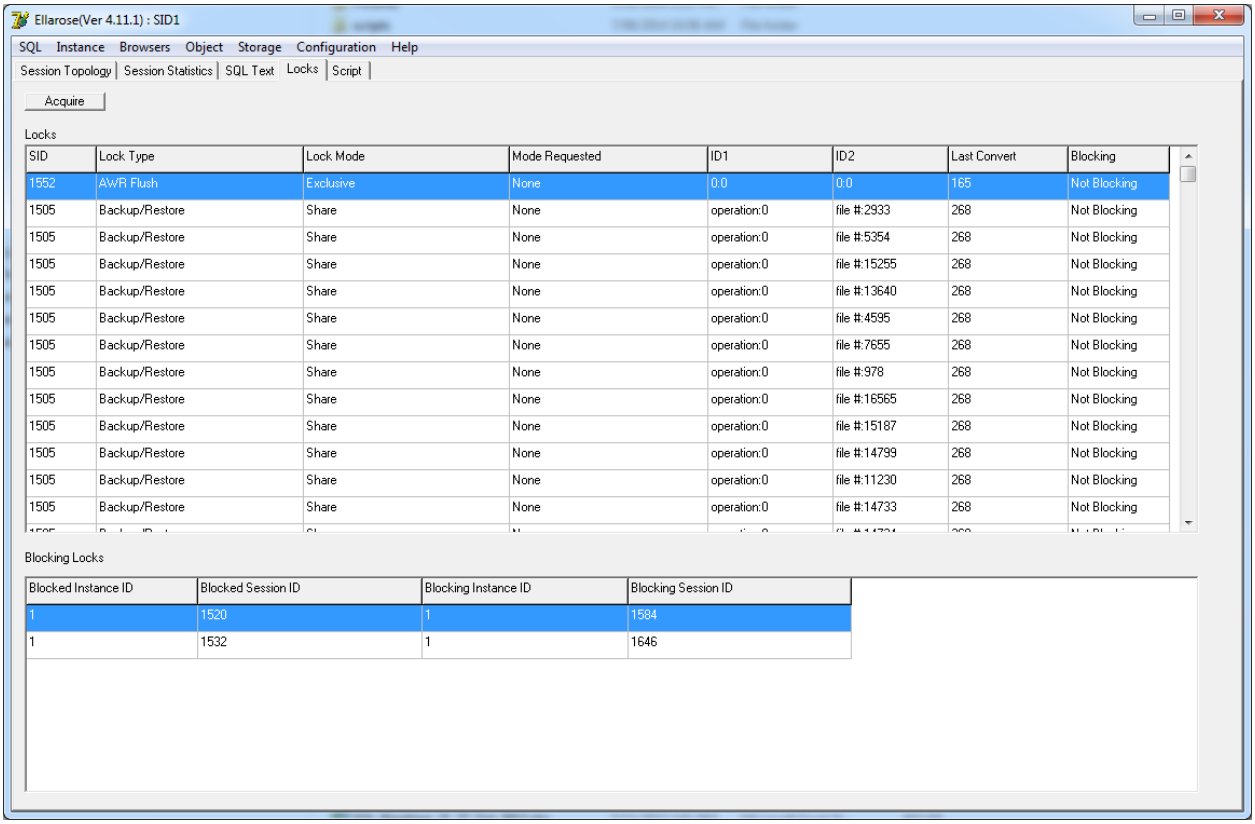


Illustration 4.4: Session Locking Information

Context:

Component ID	Component Type	Description
Acquire	Button	Retrieve lock information from database.

4.5 Script

Controls the scripts executed to retrieve information from the database.

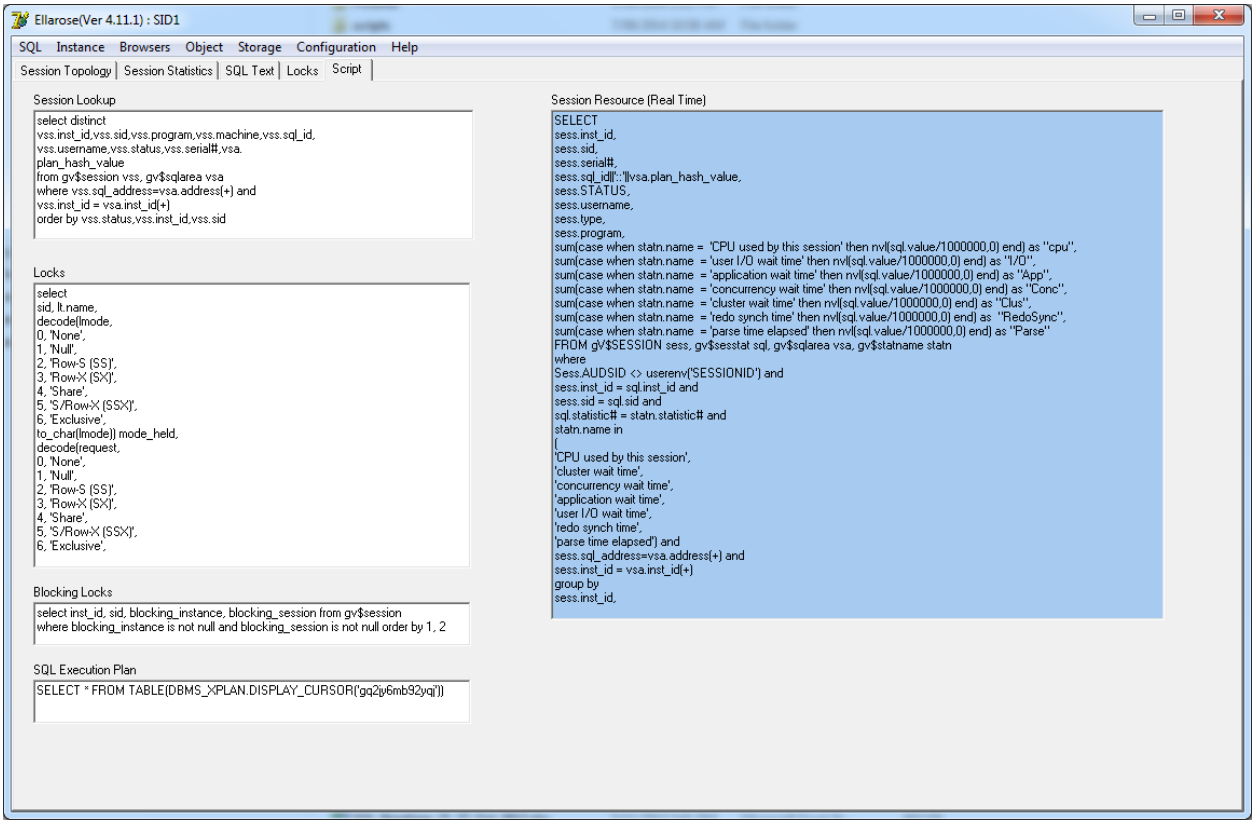


Illustration 4.5: Scripts used to retrieve session information

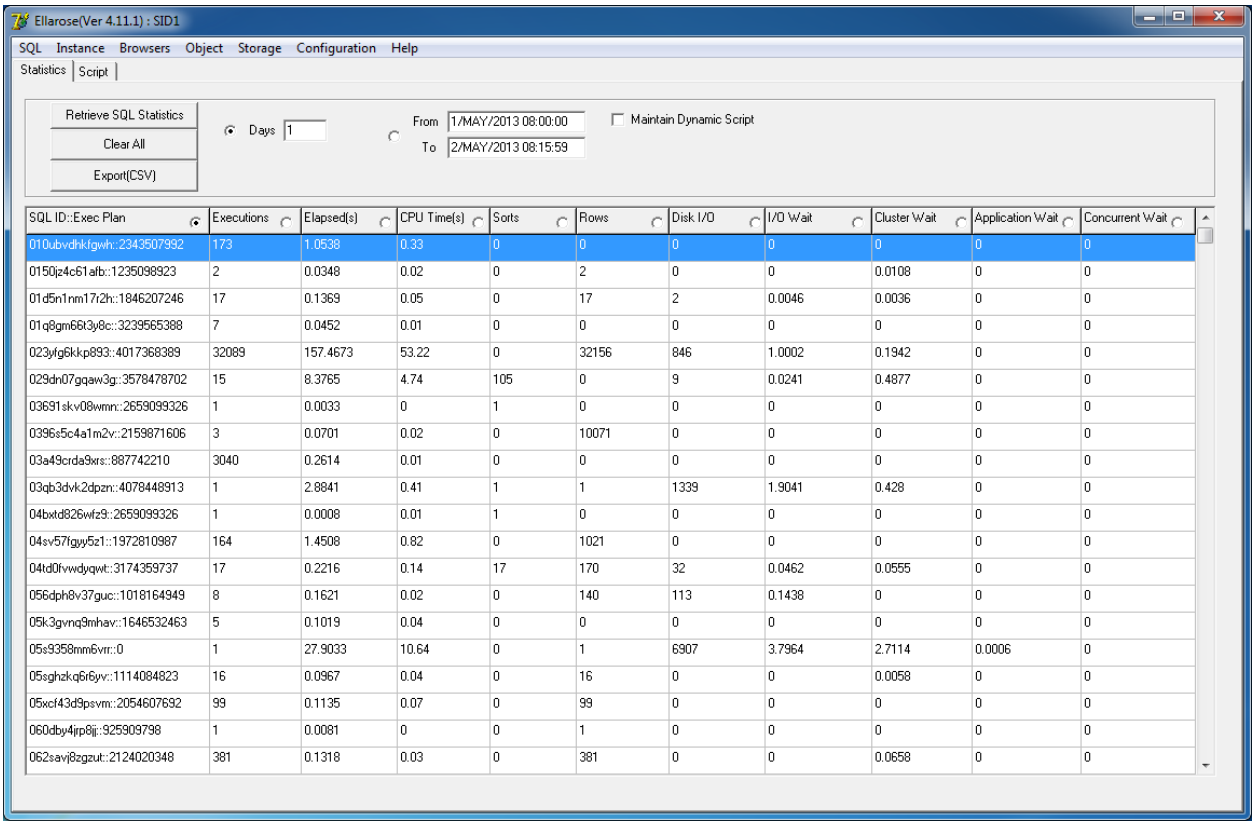
Context:

Component ID	Component Type	Description
Session Lookup	Textbox	Query to retrieve session information from the database.
Locks	Textbox	Query to retrieve lock information from the database.
Blocking Locks		Query to retrieve blocking lock information from the database.
SQL Execution Plan	Textbox	Query to retrieve execution plan details.
Session Resource	Textbox	Query to retrieve session resource query.

Section 5. SQL Topology

5.1 SQL Topology Stats Page

Displays a summary of SQL executions for a specific data range.



SQL ID::Exec Plan	Executions	Elapsed(s)	CPU Time(s)	Sorts	Rows	Disk I/O	I/O Wait	Cluster Wait	Application Wait	Concurrent Wait
010ubvdhkfgwh::2343507992	173	1.0538	0.33	0	0	0	0	0	0	0
0150jz4c61afb::1235098923	2	0.0348	0.02	0	2	0	0	0.0108	0	0
01d5n1nm17r2h::1846207246	17	0.1369	0.05	0	17	2	0.0046	0.0036	0	0
01q8gm66t3y8c::3239565388	7	0.0452	0.01	0	0	0	0	0	0	0
023yfg6kkp893::4017368389	32089	157.4673	53.22	0	32156	846	1.0002	0.1942	0	0
029dn07gqaw3g::3578478702	15	8.3765	4.74	105	0	9	0.0241	0.4877	0	0
03691skv08wmn::2659099326	1	0.0033	0	1	0	0	0	0	0	0
0396s5c4a1m2v::2159871606	3	0.0701	0.02	0	10071	0	0	0	0	0
03a49crda9xrs::887742210	3040	0.2614	0.01	0	0	0	0	0	0	0
03qb3dvk2dpzn::4078448913	1	2.8841	0.41	1	1	1339	1.9041	0.428	0	0
04bxtd826wfz9::2659099326	1	0.0008	0.01	1	0	0	0	0	0	0
04sv57fgyy5z1::1972810987	164	1.4508	0.82	0	1021	0	0	0	0	0
04td0fvwdyqwt::3174359737	17	0.2216	0.14	17	170	32	0.0462	0.0555	0	0
056dph8v37guc::1018164949	8	0.1621	0.02	0	140	113	0.1438	0	0	0
05k3gvnq9mhav::1646532463	5	0.1019	0.04	0	0	0	0	0	0	0
05s9358mm6vrr::0	1	27.9033	10.64	0	1	6907	3.7964	2.7114	0.0006	0
05sghzkq6r6yv::1114084823	16	0.0967	0.04	0	16	0	0	0.0058	0	0
05xcf43d9psvm::2054607692	99	0.1135	0.07	0	99	0	0	0	0	0
060dby4jrp8jj::925909798	1	0.0081	0	0	1	0	0	0	0	0
062savj8zgzut::2124020348	381	0.1318	0.03	0	381	0	0	0.0658	0	0

Illustration 5.1: SQL topology view

Context:

Component ID	Component Type	Description
Retrieve SQL Statistics	Button	Retrieve summarised Statistics on all SQL.
Clear All	Button	Clear the results grid.
Export CSV	Button	Export SQL topology grid details into CSV file. The file will be created in the path specified in the “CSV filename” on the configuration/setting tab.
Days	Field	Number of days of SQL statistics to retrieve.
From/To	Field	Date range of SQL statistics to retrieve.
Maintain Dynamic Script	Checkbox	The SQL script in the **“Raw Details”** tab can be tailored to requirements. Check this box so the SQL script is not overwritten when the **“Retrieve SQL Statistics”** button is clicked.
Grid Colum Header buttons	Radio Button	Click on one of the column header radio buttons to sort the contents of the grid. Contents will be sorted from largest to smallest.

5.2 Script

Control the script used to retrieve SQL details.

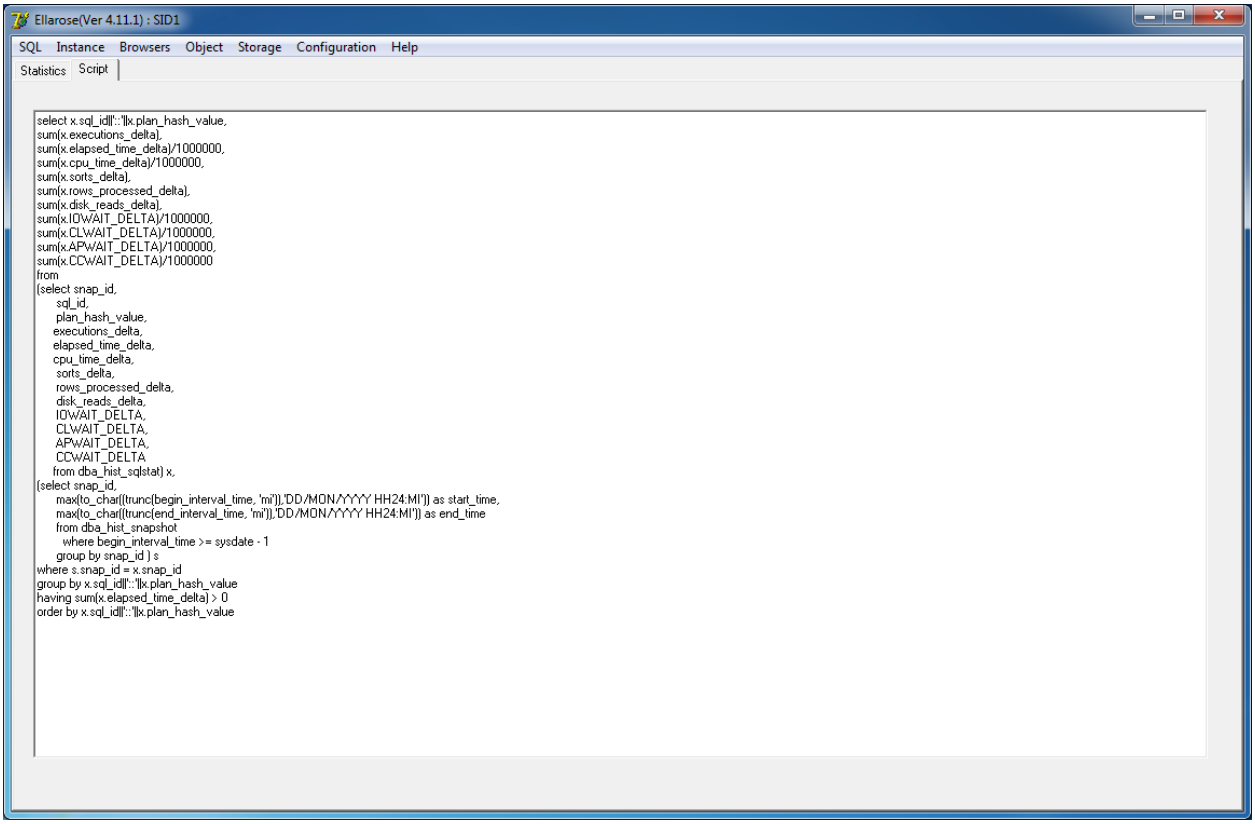


Illustration 5.2: Scripts used to retrieve SQL topology

Section 6. System Topology

System wide database statistics can be analysed based on a pre-determined date range. Values entered into the retrieval form determine the scope of the data retrieved.

6.1 Retrieval Tab

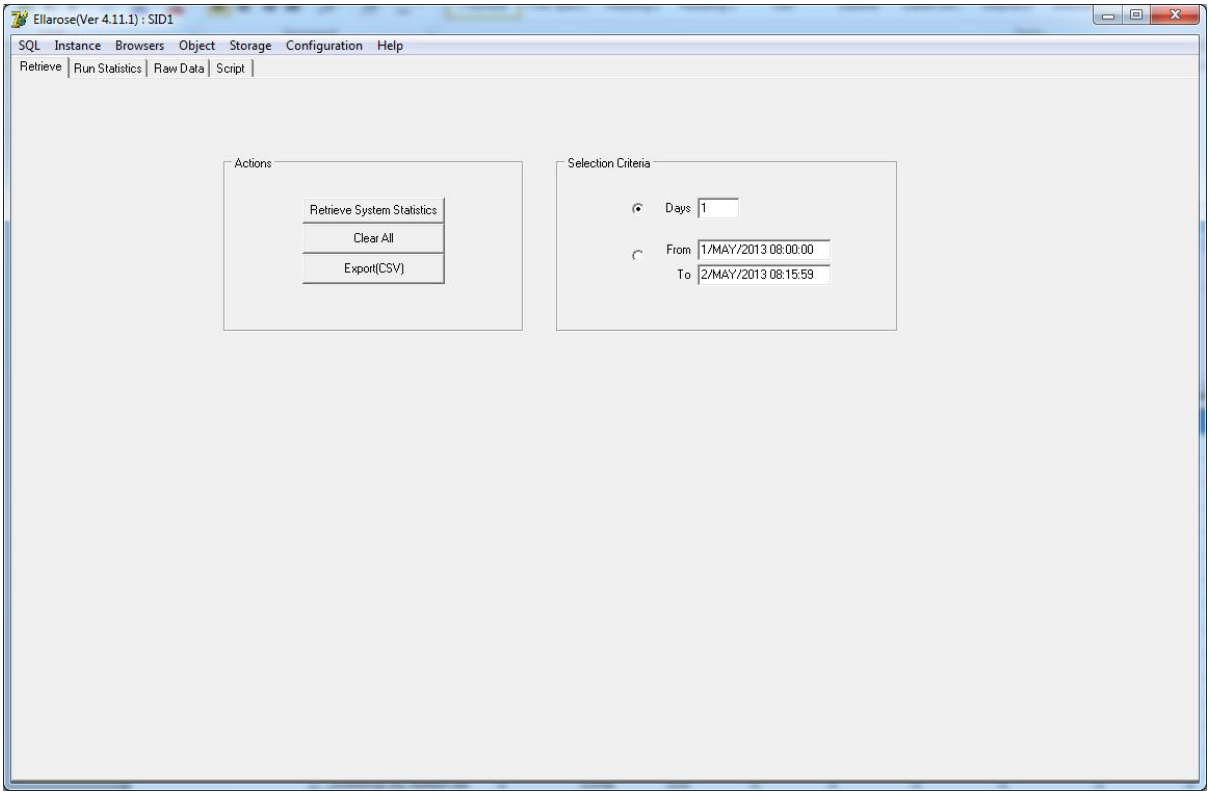


Illustration 6.1: System Topology Retrieval

Context:

Component ID	Component Type	Description
Retrieve System Statistics	Button	Retrieve system wide statistics for the database.
Clear All	Button	Clear all results.
Days	Field	Number of days of system statistics to retrieve.
From/To	Field	Date range of system statistics to retrieve.

6.2 Run Statistics

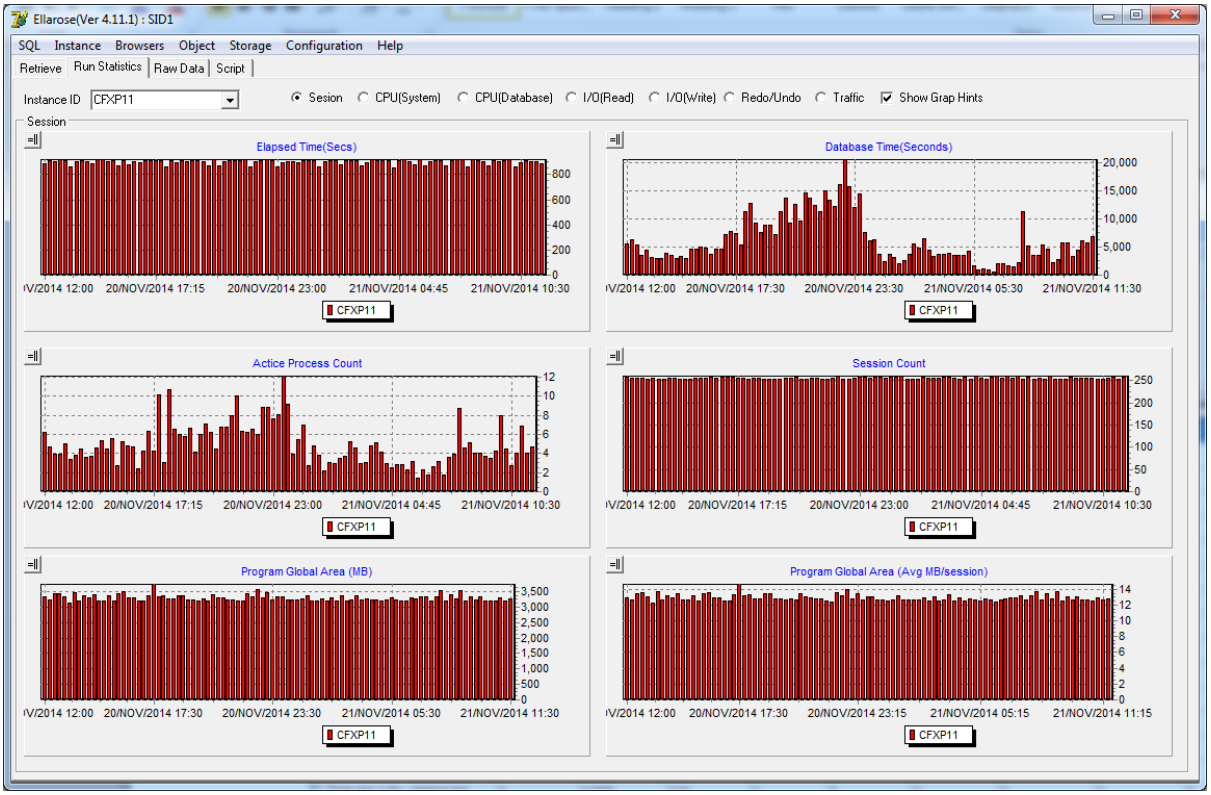


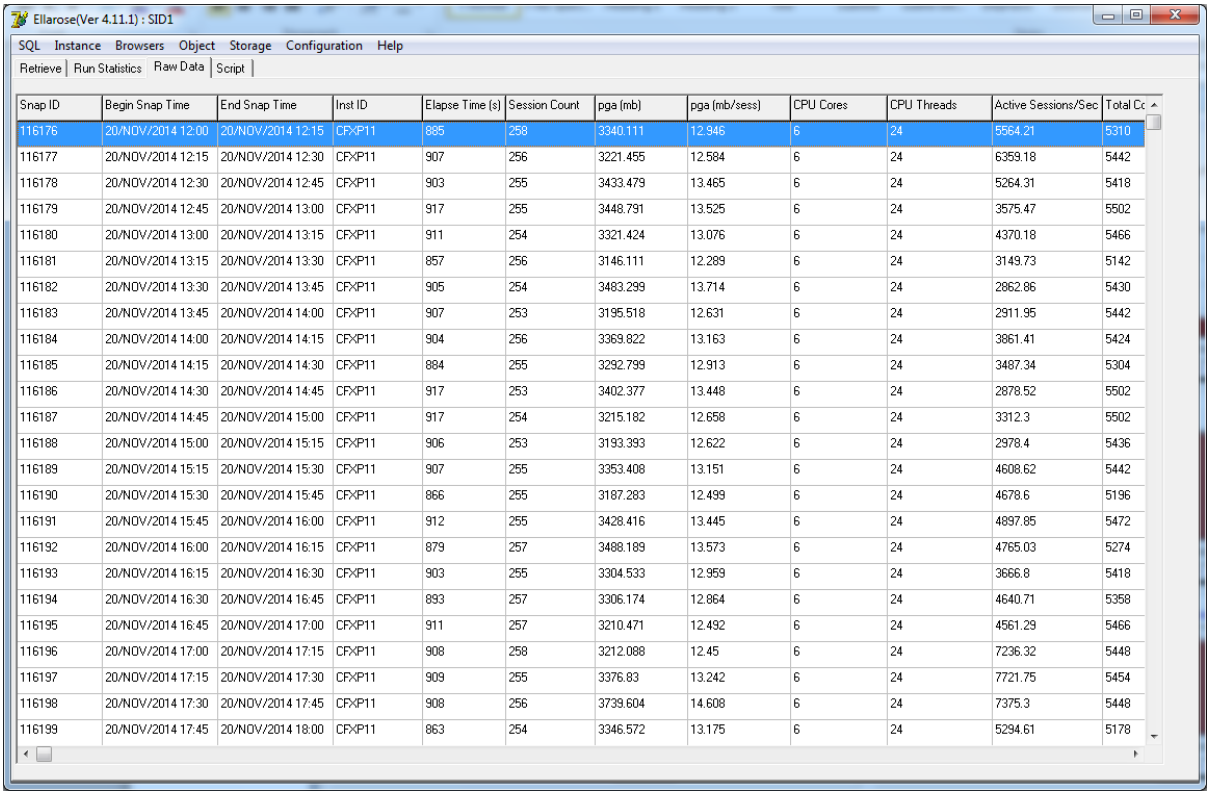
Illustration 6.2: System Topology Statistics

Context:

Component ID	Component Type	Description
Instance ID	Pull Donw	Select which instance to display statistics for.
Statistics Type	Radio Button	Selects which set of graphs to display.
Show Grid Hints	Checkbox	Displays a description of the graph when the mouse moves over it.

6.3 Raw Data

Raw data for system statistics.



Snap ID	Begin Snap Time	End Snap Time	Inst ID	Elapse Time (s)	Session Count	pga (mb)	pga (mb/sess)	CPU Cores	CPU Threads	Active Sessions/Sec	Total Cc
116176	20/NOV/2014 12:00	20/NOV/2014 12:15	CFXP11	885	258	3340.111	12.946	6	24	5564.21	5310
116177	20/NOV/2014 12:15	20/NOV/2014 12:30	CFXP11	907	256	3221.455	12.584	6	24	6359.18	5442
116178	20/NOV/2014 12:30	20/NOV/2014 12:45	CFXP11	903	255	3433.479	13.465	6	24	5264.31	5418
116179	20/NOV/2014 12:45	20/NOV/2014 13:00	CFXP11	917	255	3448.791	13.525	6	24	3575.47	5502
116180	20/NOV/2014 13:00	20/NOV/2014 13:15	CFXP11	911	254	3321.424	13.076	6	24	4370.18	5466
116181	20/NOV/2014 13:15	20/NOV/2014 13:30	CFXP11	857	256	3146.111	12.289	6	24	3149.73	5142
116182	20/NOV/2014 13:30	20/NOV/2014 13:45	CFXP11	905	254	3483.299	13.714	6	24	2862.86	5430
116183	20/NOV/2014 13:45	20/NOV/2014 14:00	CFXP11	907	253	3195.518	12.631	6	24	2911.95	5442
116184	20/NOV/2014 14:00	20/NOV/2014 14:15	CFXP11	904	256	3369.822	13.163	6	24	3861.41	5424
116185	20/NOV/2014 14:15	20/NOV/2014 14:30	CFXP11	884	255	3292.799	12.913	6	24	3487.34	5304
116186	20/NOV/2014 14:30	20/NOV/2014 14:45	CFXP11	917	253	3402.377	13.448	6	24	2878.52	5502
116187	20/NOV/2014 14:45	20/NOV/2014 15:00	CFXP11	917	254	3215.182	12.658	6	24	3312.3	5502
116188	20/NOV/2014 15:00	20/NOV/2014 15:15	CFXP11	906	253	3193.393	12.622	6	24	2978.4	5436
116189	20/NOV/2014 15:15	20/NOV/2014 15:30	CFXP11	907	255	3353.408	13.151	6	24	4608.62	5442
116190	20/NOV/2014 15:30	20/NOV/2014 15:45	CFXP11	866	255	3187.283	12.499	6	24	4678.6	5196
116191	20/NOV/2014 15:45	20/NOV/2014 16:00	CFXP11	912	255	3428.416	13.445	6	24	4897.85	5472
116192	20/NOV/2014 16:00	20/NOV/2014 16:15	CFXP11	879	257	3488.189	13.573	6	24	4765.03	5274
116193	20/NOV/2014 16:15	20/NOV/2014 16:30	CFXP11	903	255	3304.533	12.959	6	24	3666.8	5418
116194	20/NOV/2014 16:30	20/NOV/2014 16:45	CFXP11	893	257	3306.174	12.864	6	24	4640.71	5358
116195	20/NOV/2014 16:45	20/NOV/2014 17:00	CFXP11	911	257	3210.471	12.492	6	24	4561.29	5466
116196	20/NOV/2014 17:00	20/NOV/2014 17:15	CFXP11	908	258	3212.088	12.45	6	24	7236.32	5448
116197	20/NOV/2014 17:15	20/NOV/2014 17:30	CFXP11	909	255	3376.83	13.242	6	24	7721.75	5454
116198	20/NOV/2014 17:30	20/NOV/2014 17:45	CFXP11	908	256	3739.604	14.608	6	24	7375.3	5448
116199	20/NOV/2014 17:45	20/NOV/2014 18:00	CFXP11	863	254	3346.572	13.175	6	24	5294.61	5178

Illustration 6.3: System Statistics(Raw Data)

Context:

Component ID	Component Type	Description
Export CSV	Button	Export system wide topology grid details into CSV file. The file will be created in the path specified in the “CSV filename” on the configuration/setting tab.

6.4 Script

Script used to retrieve the system wide details.

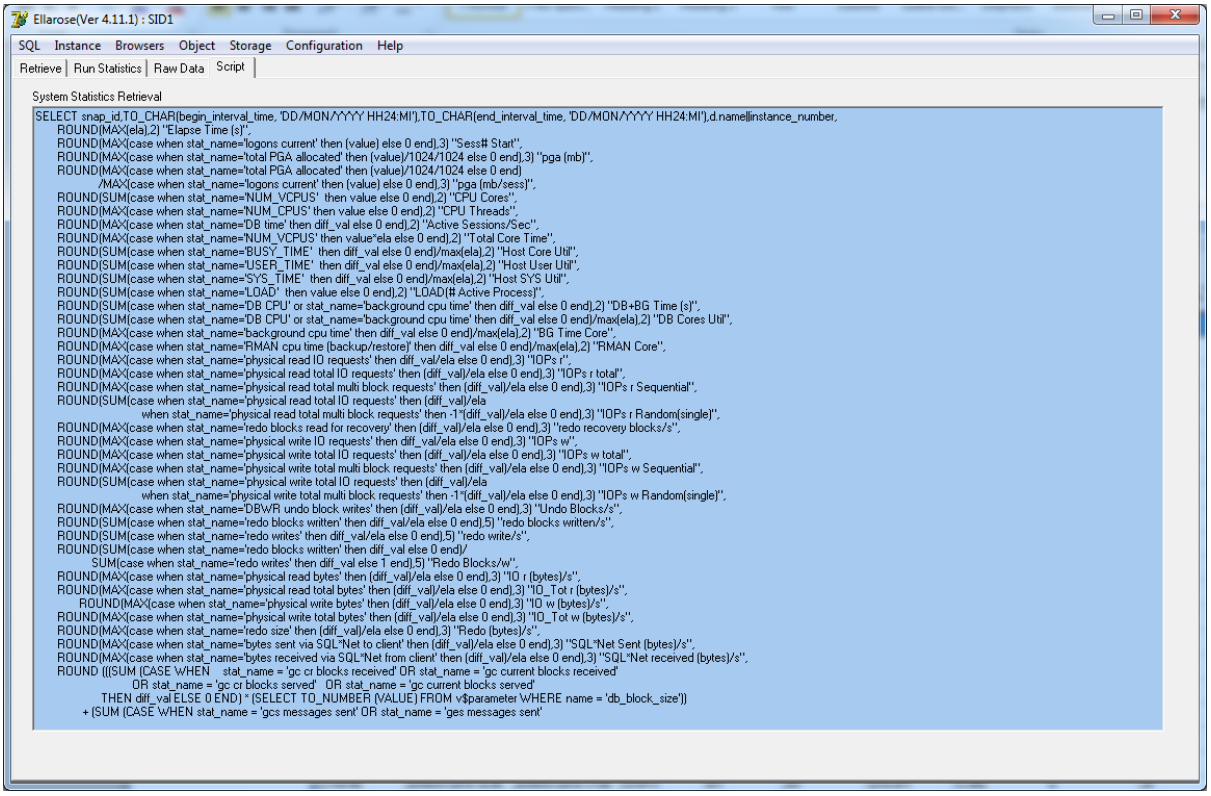
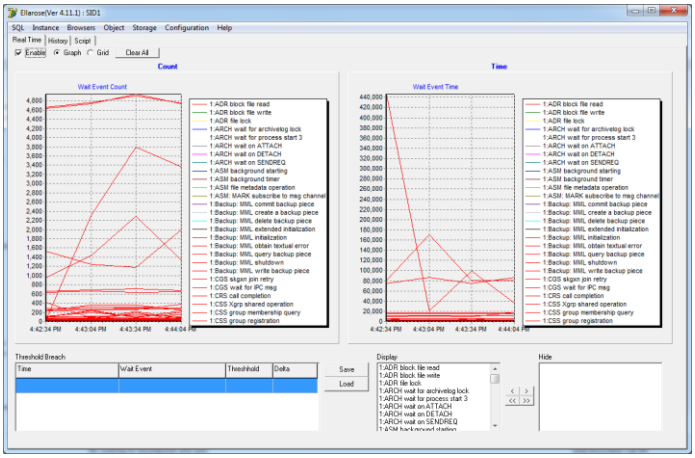


Illustration 6.4: Scripts used to retrieve System topology

Section 7. Instance: Wait Events

7.1 Real Time

Displays database wait events in the real time. The database dynamic performance views are polled at regular intervals, the delta values between polling are plotted into a graphical representation.



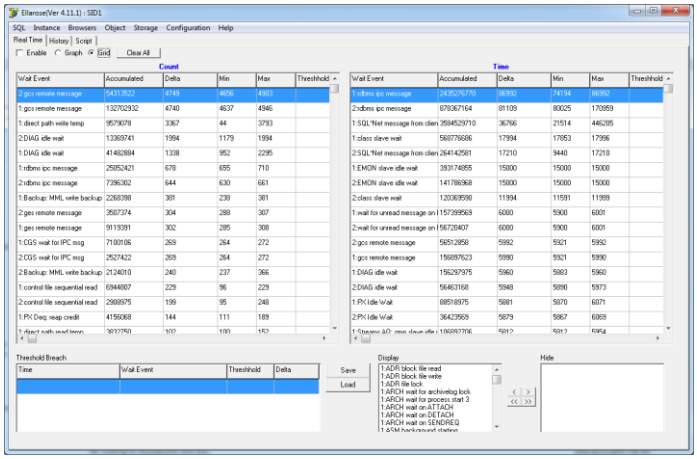


Illustration 7.1:Instance Wait Events(Graphs and Grid view)

Context:

Component ID	Component Type	Description
Enable	Checkbox	Check to acquire database wait event information. Wait event information is retrieved at regular intervals based on the "Default Interval" timer on the configuration/settings tab.
Graph or Grid	Radio Button	Display wait event information in graph or grid format.
Clear All	Button	Clear the contents of graphs, grids and select box.
Save	Button	Creates a threshold value file based on the highest delta values detected. Delta values are calculated when the monitoring is enabled.
Load	Button	Load threshold values from file. Threshold values are stored in a filename <SID>_wait_thresh.txt. The threshold values will be stored in the threshold column in the grid.
< > Move Single	Button	Removes or adds a single wait event type from the graphs.
<< >> Move All	Button	Removes or add all wait event types from the graphs.
Display Box	Select Box	List of wait events that will be included in the graphs.
Hide Box	Select Box	List of wait events that will be removed from the graphs.
Threshold Breach	Grid	List the time and type of wait event that breached a threshold. Breaches of wait event thresholds are only checked if thresholds are first loaded into the grid.
Wait Event Grid	Grid	Displays wait event name with various values: - Min: Minimum Delta - Max: Maximum Delta - Delta: Last Delta - Accumulated: Number of waits since instance startup - Threshold: Threshold value used for breach detection

7.2 Historical

Displays historical wait event information. Information is retrieved from historical AWR table. The historical delta values are plotted into a graphical representation.

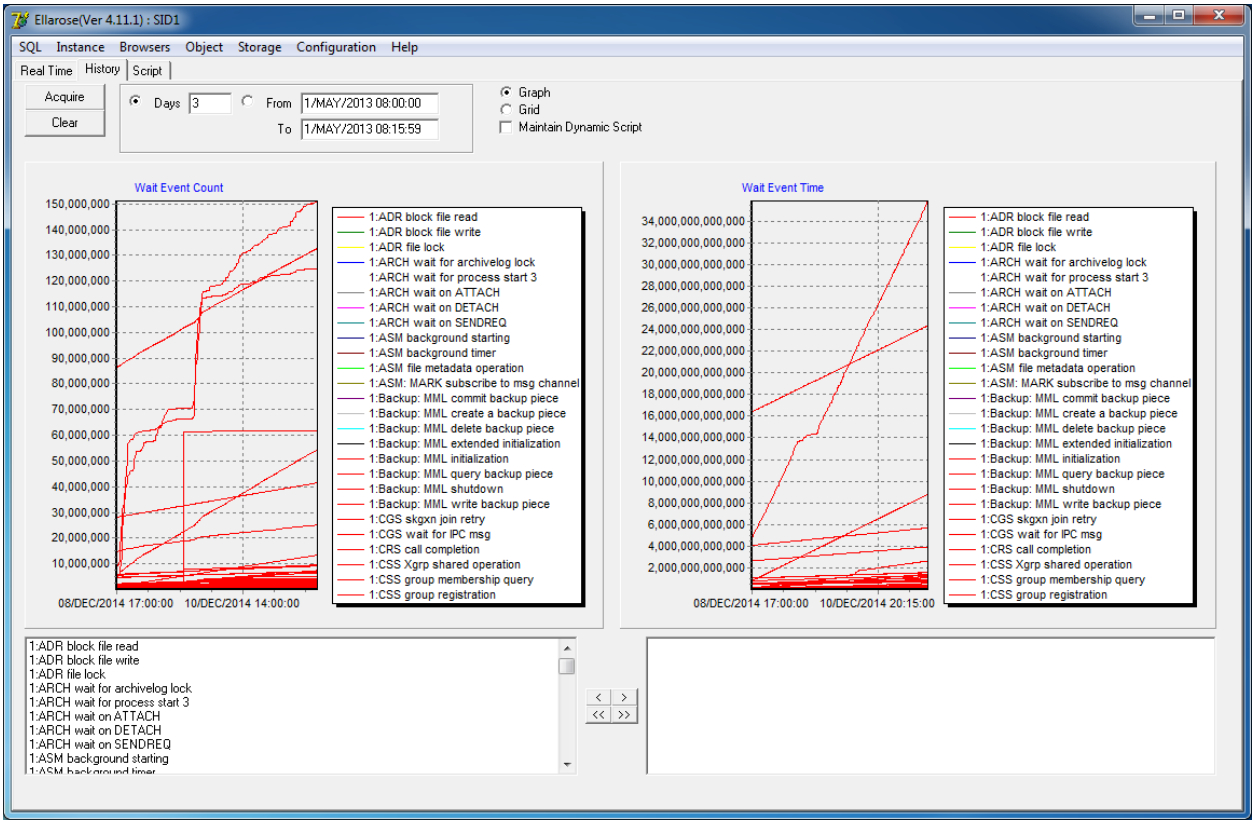


Illustration 7.2:Instance Wait Events(Historical view)

Context:

Component ID	Component Type	Description
Acquire	Checkbox	Click to retrieve wait event information.
Clear	Button	Clear the contents of graphs, grids and select box.
Days	Field	Number of days of SQL statistics to retrieve.
From/To	Field	Date range of SQL statistics to retrieve.
Maintain Dynamic Script	Checkbox	The SQL script in the **"Script"** tab can be tailored to requirements. Check this box so the SQL script is not overwritten when the **"Acquire"** button is clicked.
Graph or Grid	Radio Button	Display wait event information in graph or grid format.
< > Move Single	Button	Removes or adds a single wait event type from the graphs.
<< >> Move All	Button	Removes or add all wait event types from the graphs.
Display Box	Select Box	List of wait events that will be included in the graphs.
Hide Box	Select Box	List of wait events that will be removed from the graphs.
Wait Event Grid	Grid	Displays wait event name with various values: - Min: Minimum Delta - Max: Maximum Delta - Delta: Last Delta - Accumulated: Number of waits since instance startup - Threshold: Threshold value used for breach detection

7.3 Script

Controls the script used to retrieve real time and historical wait event information.

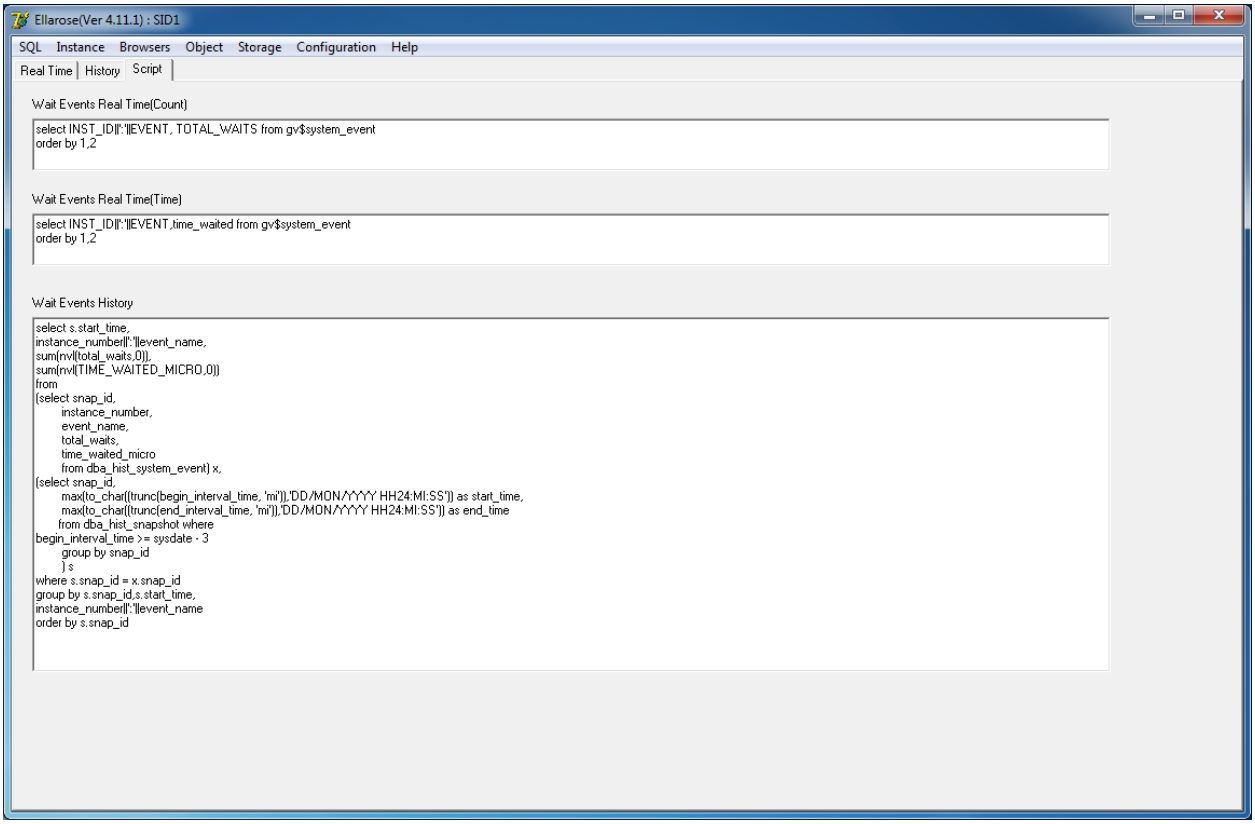


Illustration 7.3: Scripts used to retrieve instance wait event information

Section 8. Instance: Latching

8.1 Latch Overview(Real Time)

Displays database latching events in the real time. The database dynamic performance views are polled at regular intervals, the delta values between polling are plotted into a graphical representation.

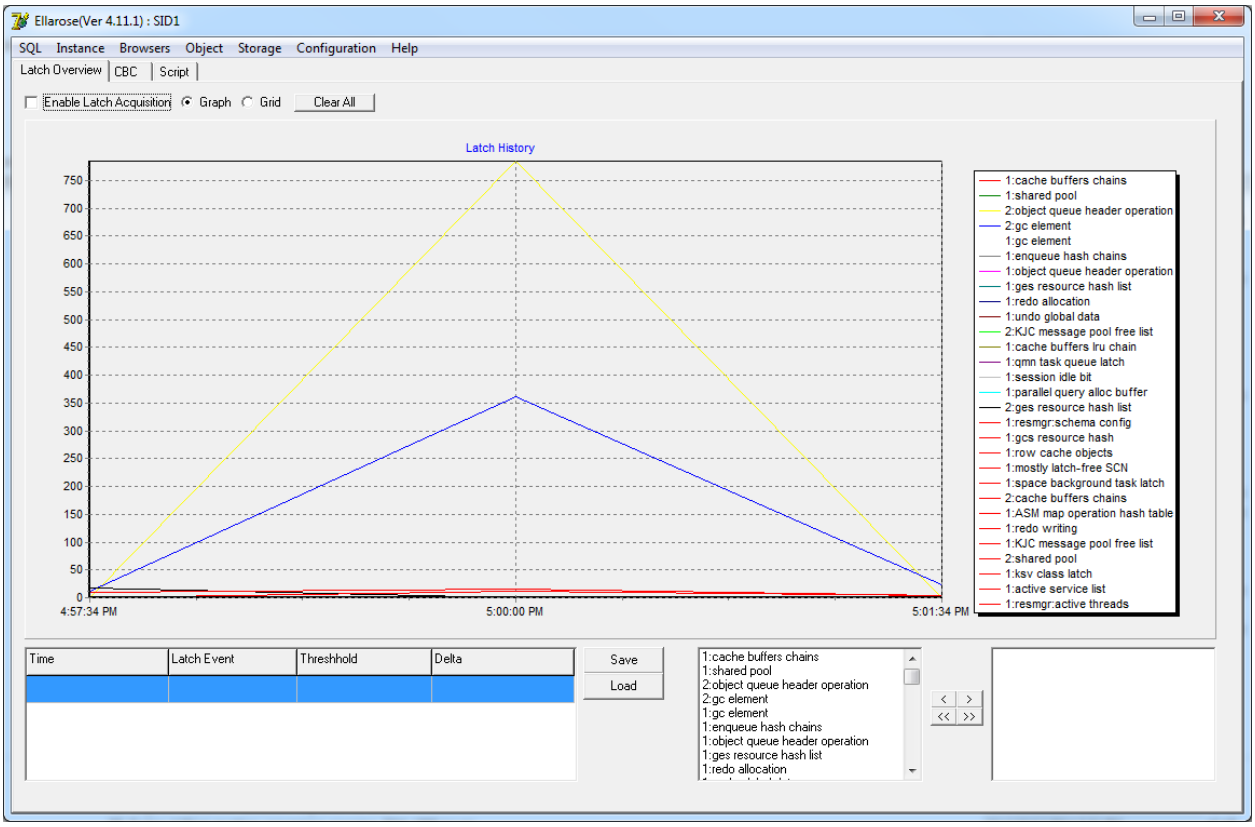


Illustration 8.1: Latch Events(Graph view)

Context:

Component ID	Component Type	Description
Enable Latch Acquisition	Checkbox	Check to acquire database latch event information. Latch event information is retrieved at regular intervals based on the "Latch Interval" timer on the configuration/settings tab.
Clear All	Button	Clear the contents of graphs, grids and select box.
Graph or Grid	Radio Button	Display latch event information in graph or grid format.
Save	Button	Creates a threshold value file based on the highest delta values detected. Delta values are calculated when the monitoring is enabled.
Load	Button	Load threshold values from file. Threshold values are stored in a filename <SID>_latch_thresh.txt. The threshold values will be stored in the threshold column in the grid.
< > Move Single	Button	Removes or adds a single latch event type from the graphs.
<< >> Move All	Button	Removes or add all latch event types from the graphs.
Display Box	Select Box	List of latch events that will be included in the graphs.
Hide Box	Select Box	List of latch events that will be removed from the graphs.
Threshold Breach	Grid	List the time and type of latch event that breached a threshold. Breaches of latch event thresholds are only checked if thresholds are first loaded into the grid.
Latch Event Grid	Grid	Displays latch event name with various values: - Min: Minimum Delta - Max: Maximum Delta - Delta: Last Delta - Accumulated: Number of latches since instance startup - Threshold: Threshold value used for breach detection

8.2 CBC

Displays database cache buffer chain latching events in the real time. The database dynamic performance viewed are polled at regular intervals, the delta values between polling are plotted into a graphical representation.

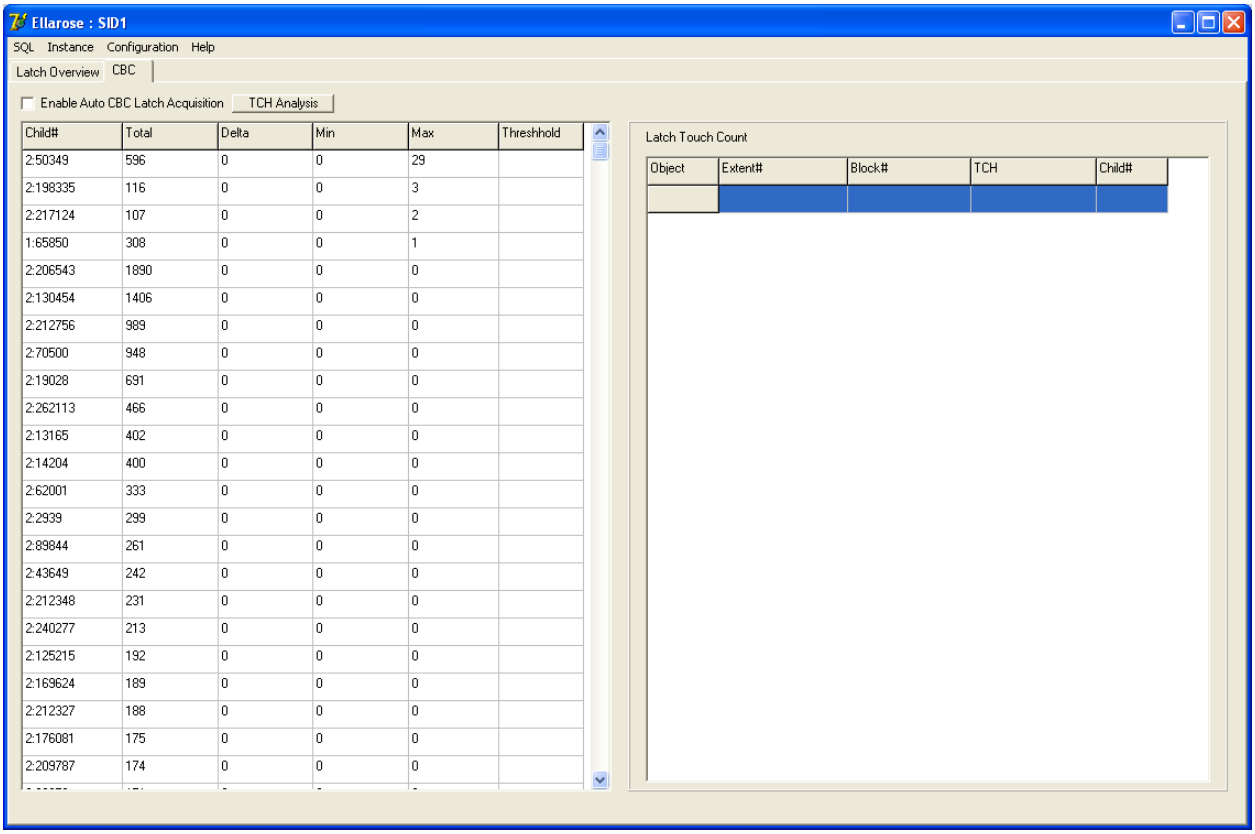


Illustration 8.2:CBC Latch Information

Note:

CBC latch information can take a long time to retrieve. Consider extending the latch interval timer so CBC queries do not start stacking up.

Context:

Component ID	Component Type	Description
Enable Auto CBC Latch Acquisition	Checkbox	Check to acquire database cache buffer chain latch event information. Latch event information is retrieved at regular intervals based on the “Latch Interval” timer on the configuration/settings tab.
Latch Event Grid	Grid	Displays CBC latch event name with various values: - Min: Minimum Delta - Max: Maximum Delta - Delta: Last Delta - Accumulated: Number of latches since instance startup - Threshold: Threshold value used for breach detection
TCH analysis	Button	Performs a touch count analysis on the child latch which has been selected.
Latch Touch count Grid	Grid	Displays object information showing hot CBC latches. ** Pressing this button can take a long time to return results**

8.4 Script

Controls the script used to retrieve latch information from the database.

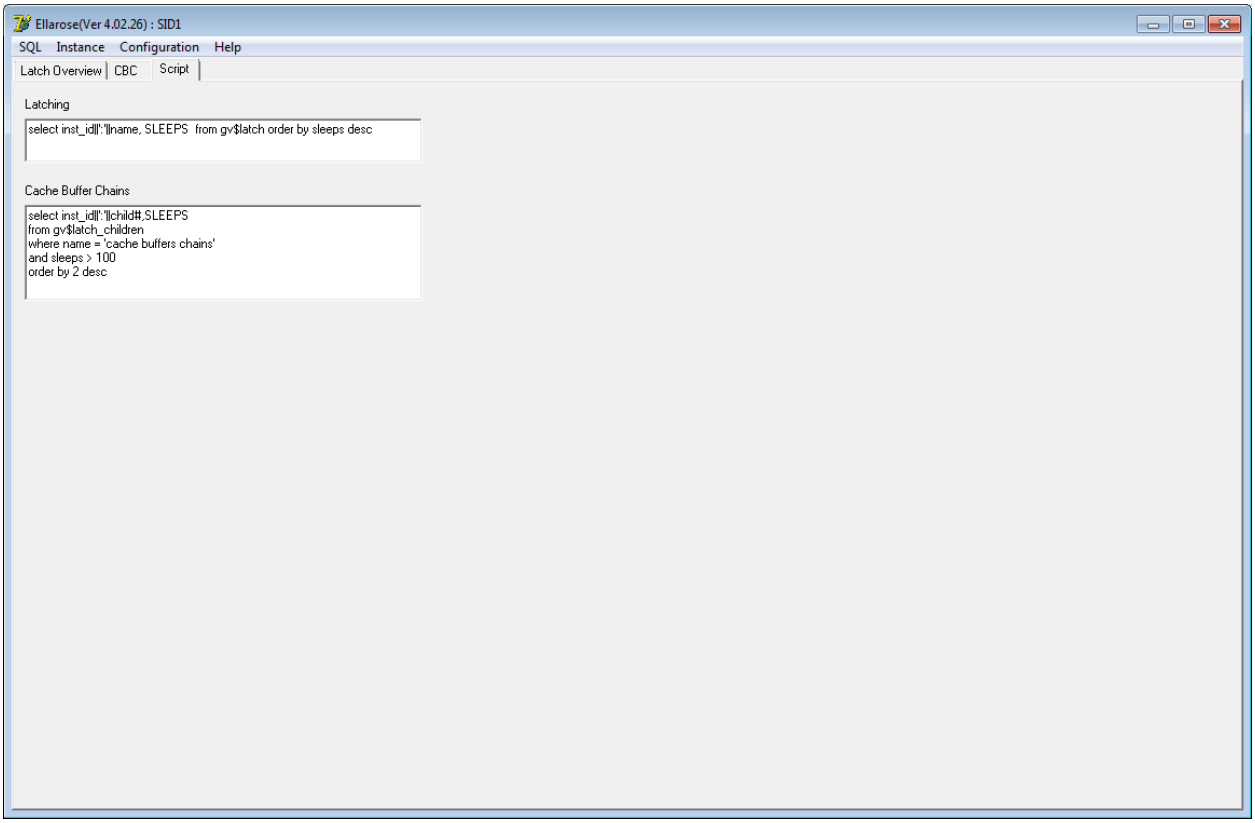
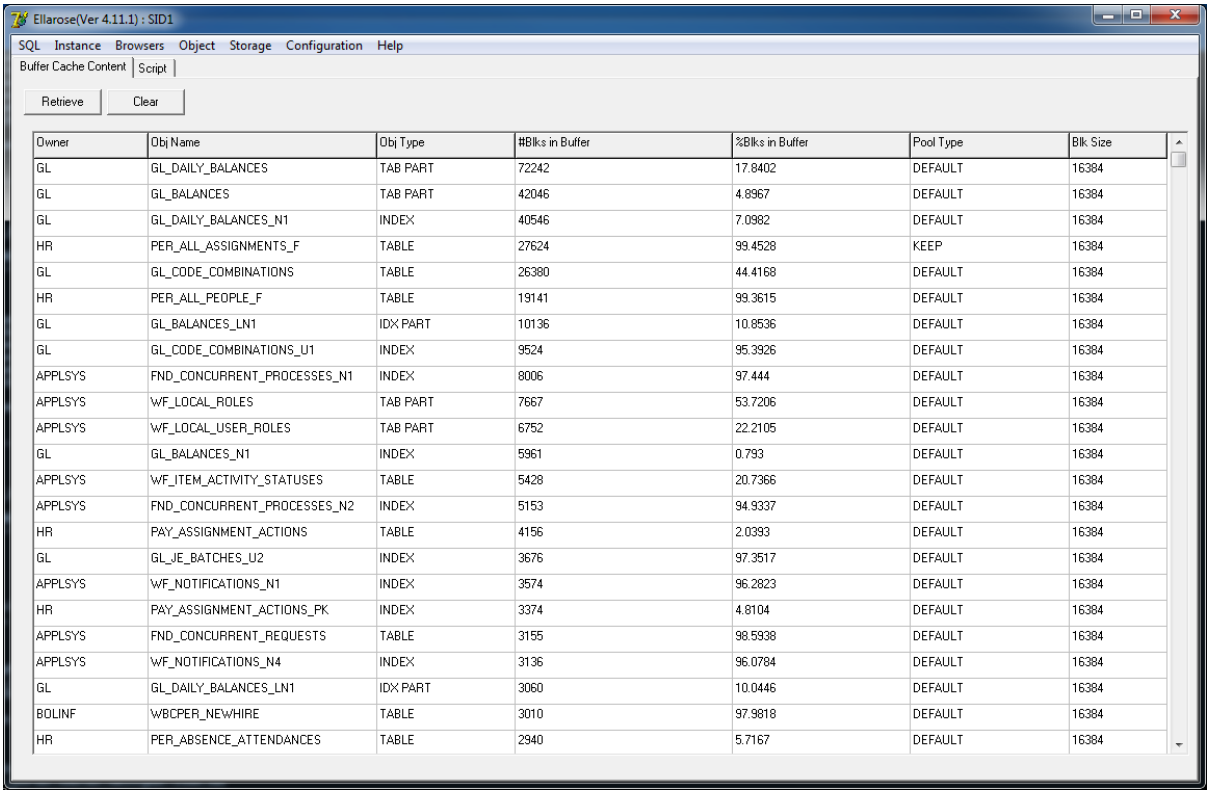


Illustration 8.4: Scripts used to retrieve latch information

Section 9. Buffer Cache Content

Displays every object currently residing in the buffer cache.

9.1 Buffer Cache Content



Owner	Obj Name	Obj Type	#Blks in Buffer	%Blks in Buffer	Pool Type	Blk Size
GL	GL_DAILY_BALANCES	TAB PART	72242	17.8402	DEFAULT	16384
GL	GL_BALANCES	TAB PART	42046	4.8967	DEFAULT	16384
GL	GL_DAILY_BALANCES_N1	INDEX	40546	7.0982	DEFAULT	16384
HR	PER_ALL_ASSIGNMENTS_F	TABLE	27624	99.4528	KEEP	16384
GL	GL_CODE_COMBINATIONS	TABLE	26380	44.4168	DEFAULT	16384
HR	PER_ALL_PEOPLE_F	TABLE	19141	99.3615	DEFAULT	16384
GL	GL_BALANCES_LN1	IDX PART	10136	10.8536	DEFAULT	16384
GL	GL_CODE_COMBINATIONS_U1	INDEX	9524	95.3926	DEFAULT	16384
APPLSYS	FND_CONCURRENT_PROCESSES_N1	INDEX	8006	97.444	DEFAULT	16384
APPLSYS	WF_LOCAL_ROLES	TAB PART	7667	53.7206	DEFAULT	16384
APPLSYS	WF_LOCAL_USER_ROLES	TAB PART	6752	22.2105	DEFAULT	16384
GL	GL_BALANCES_N1	INDEX	5961	0.793	DEFAULT	16384
APPLSYS	WF_ITEM_ACTIVITY_STATUSES	TABLE	5428	20.7366	DEFAULT	16384
APPLSYS	FND_CONCURRENT_PROCESSES_N2	INDEX	5153	94.9337	DEFAULT	16384
HR	PAY_ASSIGNMENT_ACTIONS	TABLE	4156	2.0393	DEFAULT	16384
GL	GL_JE_BATCHES_U2	INDEX	3676	97.3517	DEFAULT	16384
APPLSYS	WF_NOTIFICATIONS_N1	INDEX	3574	96.2823	DEFAULT	16384
HR	PAY_ASSIGNMENT_ACTIONS_PK	INDEX	3374	4.8104	DEFAULT	16384
APPLSYS	FND_CONCURRENT_REQUESTS	TABLE	3155	98.5938	DEFAULT	16384
APPLSYS	WF_NOTIFICATIONS_N4	INDEX	3136	96.0784	DEFAULT	16384
GL	GL_DAILY_BALANCES_LN1	IDX PART	3060	10.0446	DEFAULT	16384
BOLINF	WBCPER_NEWHIRE	TABLE	3010	97.9818	DEFAULT	16384
HR	PER_ABSENCE_ATTENDANCES	TABLE	2940	5.7167	DEFAULT	16384

Illustration 9.1: Buffer Cache Content

Context:

Component ID	Component Type	Description
Retrieve	Button	Display the current content of the buffer cache.
Clear	Button	Clear the contents of the grid.

Section 10. SGA Hit Ratios

Displays hit ratios for the data dictionary, buffer cache and library cache memory structures.

10.1 SGA Hit Ratios

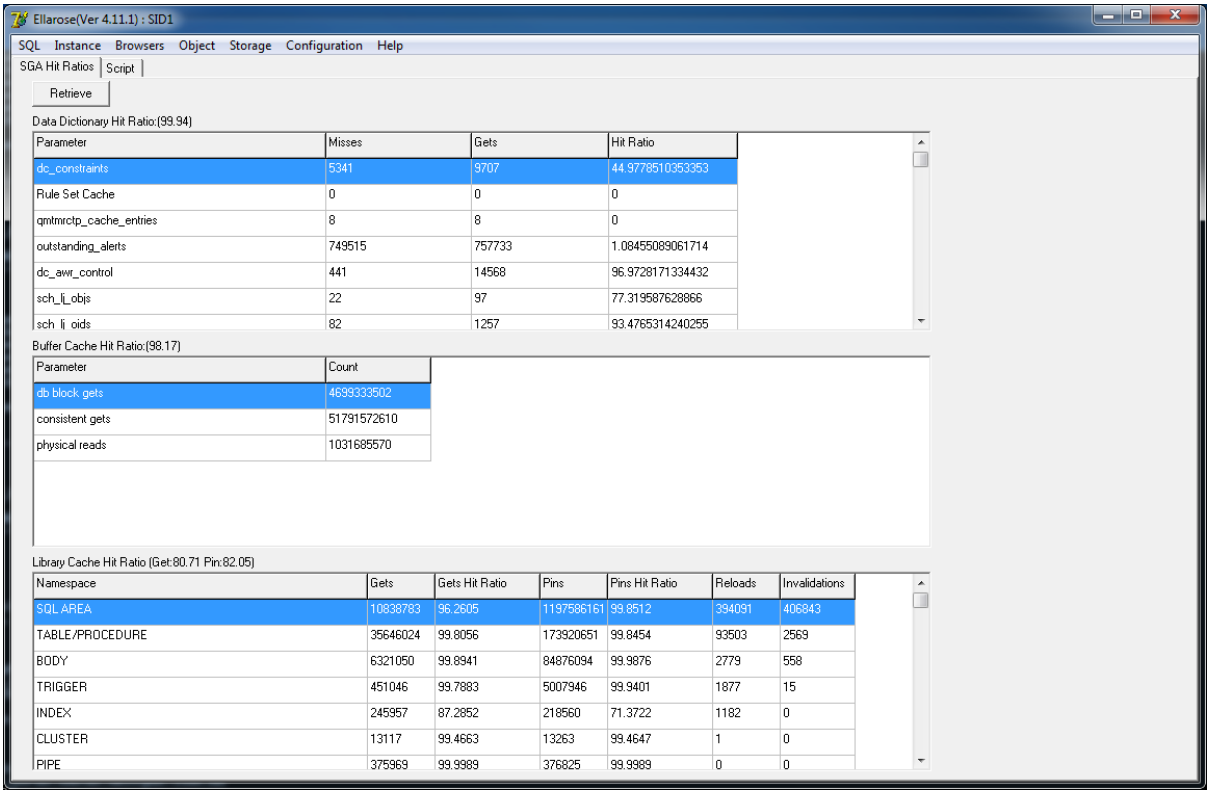


Illustration 10.1: SGA Hit Ratios

Context:

Component ID	Component Type	Description
Retrieve	Button	Displays hit ratios for various memory structures of the SGA.

Section 11. Advisors

11.1 Retrieve

Advisor information can be analysed based on a pre-determined date criteria. Values entered into the retrieval form determine the scope of the advisor information retrieved.

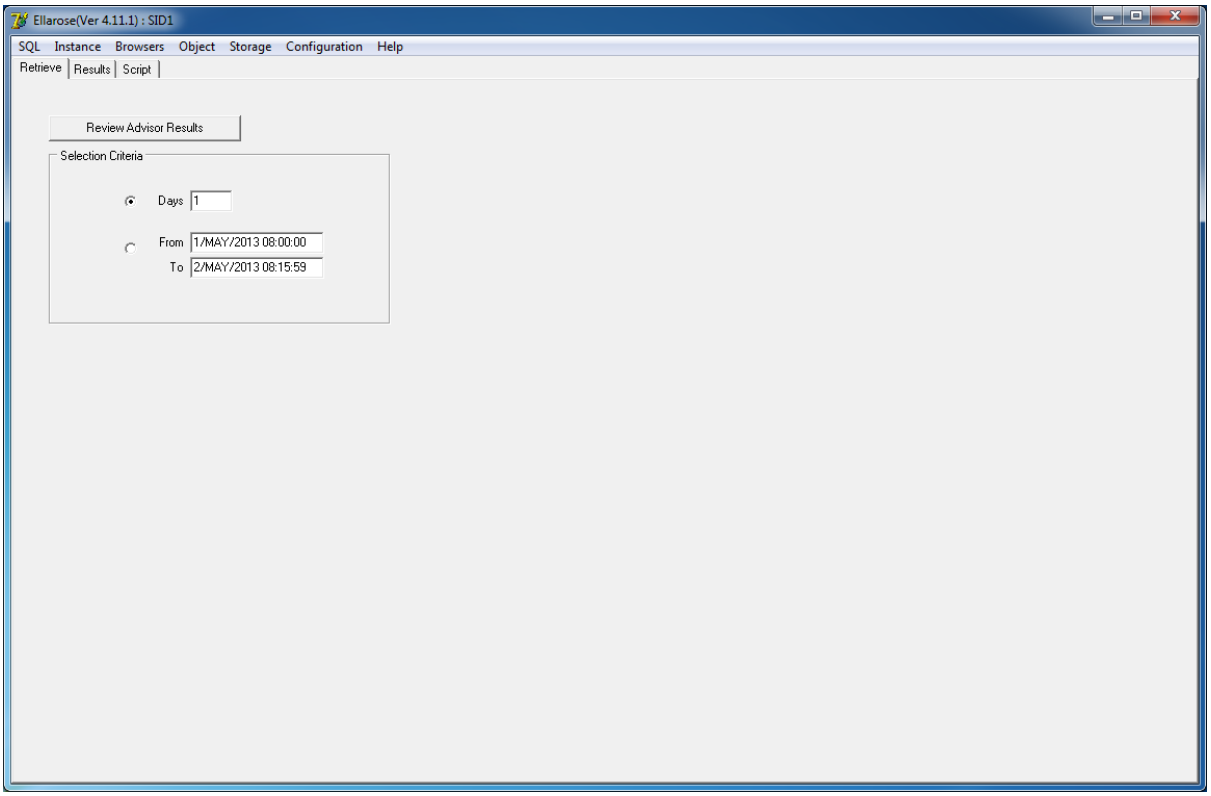


Illustration 10.1: Advisor Retrieval From

Context:

Component ID	Component Type	Description
Retrieve Advisor Results	Button	Click to retrieve advisor information based on the entered date criteria.
Days	Field	Number of days of advisor information to retrieve.
From/To	Field	Date range of advisor information to retrieve.

Usage:

1) Enter the amount of information to retrieve. Either enter the number days of history(from now) or enter a date/time range. Be sure to click the radio button which signifies the appropriate method of date criteria.
2) Click the **<Retrieve Advisor Results>** button.

11.2 Results

Advisor information is displayed according to the criteria entered on the retrieval form as per below:

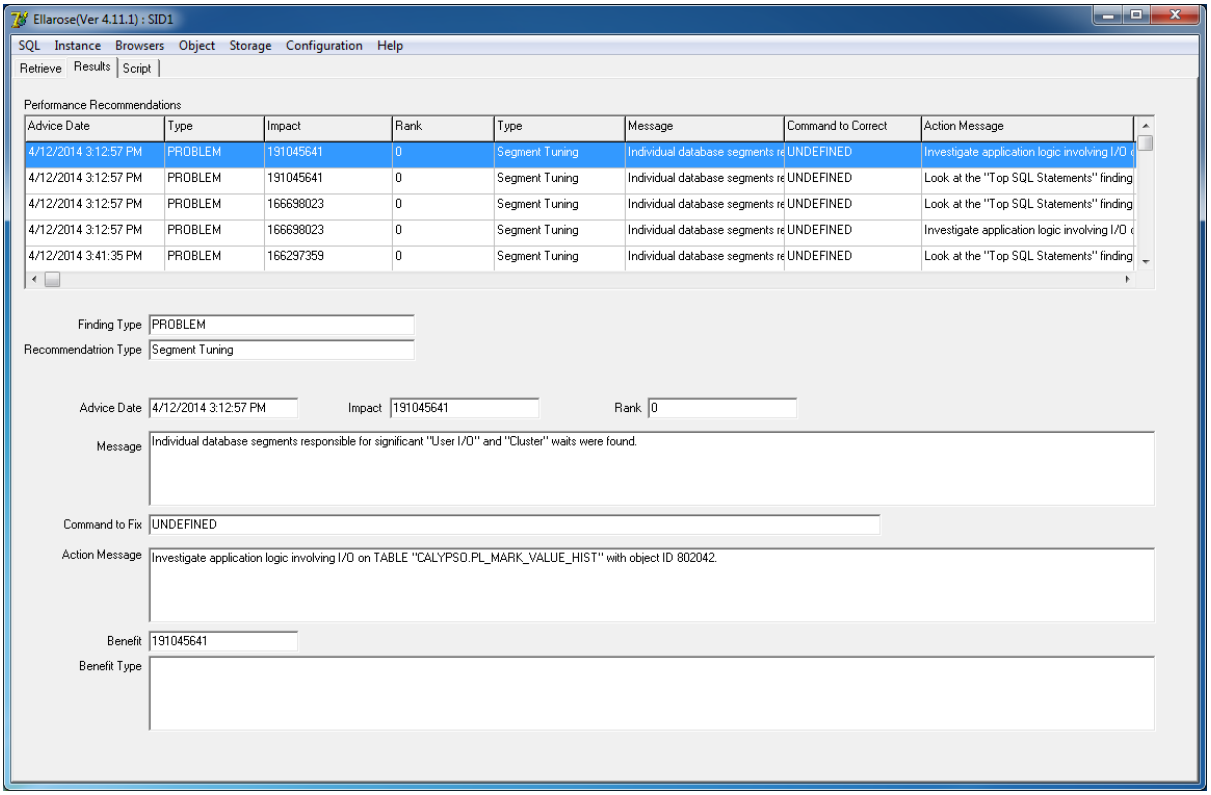


Illustration 11.2: Advisor Results

Usage:

1) Double click on a row in the grid to display the complete advice in the fields at the bottom of the form.

11.3 Script

Controls the query which is submitted to the database to retrieve information.

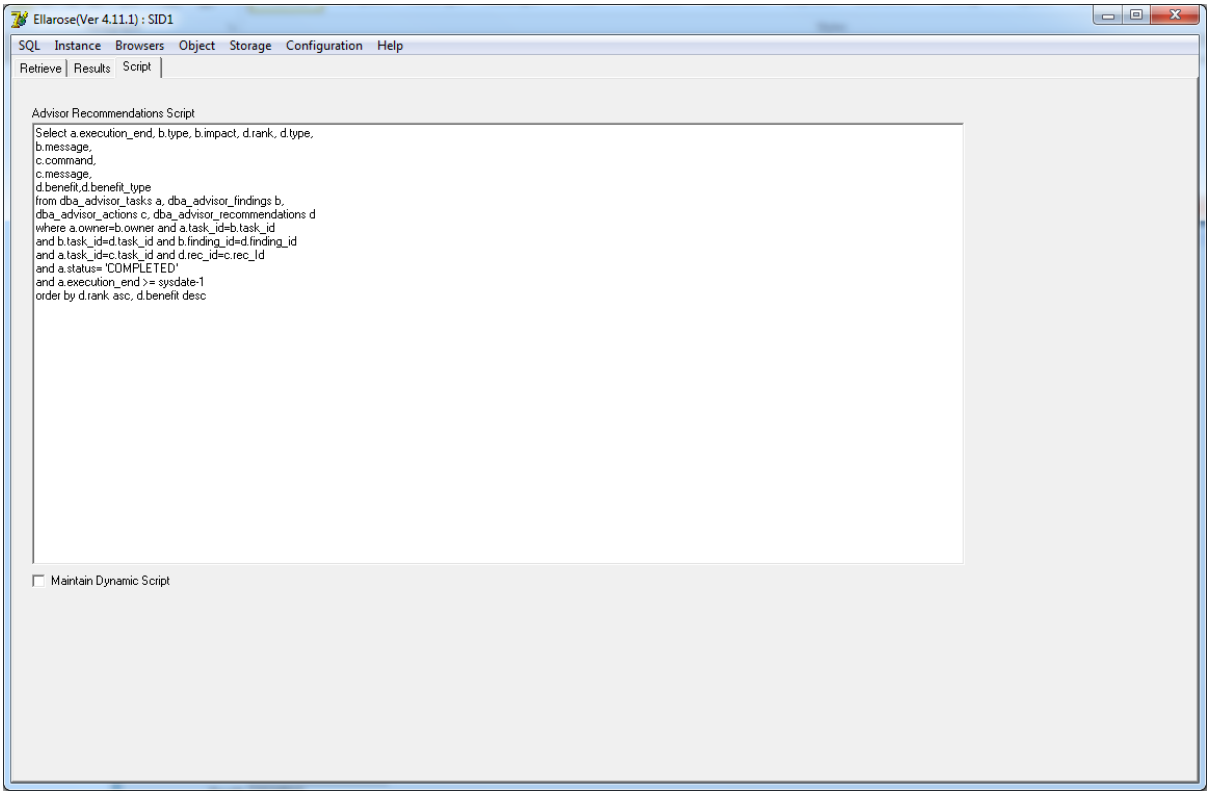


Illustration 11.3: Scripts used to retrieve advisor information

Context:

Component ID	Component Type	Description
Advisor Recommendations Script	Textbox	Controls the query over DBA_ADVISOR* tables.
Maintain Dynamic Script	Checkbox	Normally the query is constructed and executed based on literals populated in various fields. The queries in the text boxes can be manually modified and then executed provided the “Maintain Dynamic Script” box is checked. Check this box so the SQL script is not overwritten when the retrieve button is clicked.

Section 12. Object Browser

The object browser is used to display information on various objects within the database.

12.1 Retrieval

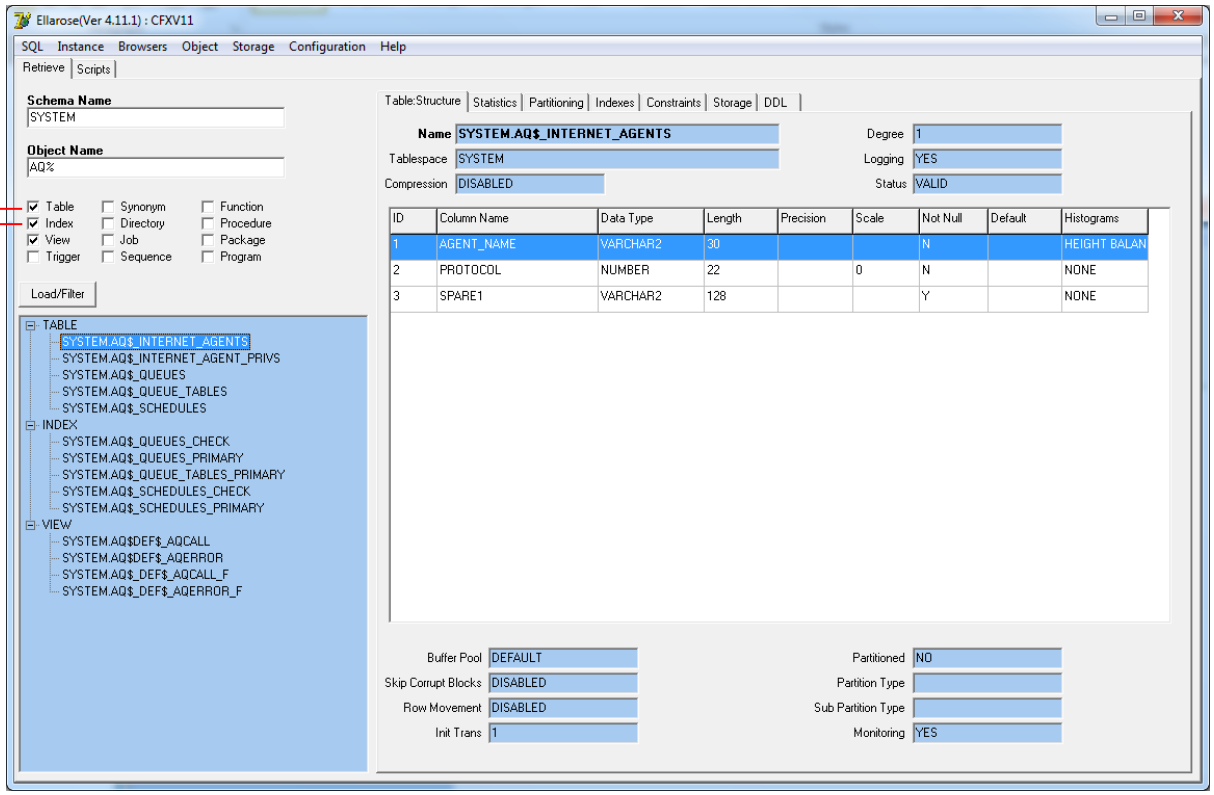


Illustration 12.1:Object retrieval form

Right Click to refine index retrieval criteria

Right Click to refine table retrieval criteria

Context:

Component ID	Component Type	Description
Schema Name	Field	Filter objects based on a schema name. Wildcard of “%” can be used.
Object Name	Field	Filter objects based on an object name. Wildcard of “%” can be used.
Object Type(s)	Checkbox	Filter objects based on an object type. Check the objects which should be returned.
Load/Filter	Button	Retrieve a list of objects into the bottom left tree view based on the filter criteria.

Usage:

1) Filter the list of objects to retrieve by entering the required filter information.
2) Click the **<Load/Filter>** button.
3) Double click on an object in the bottom left tree view to display detailed information about it.

12.2 Script

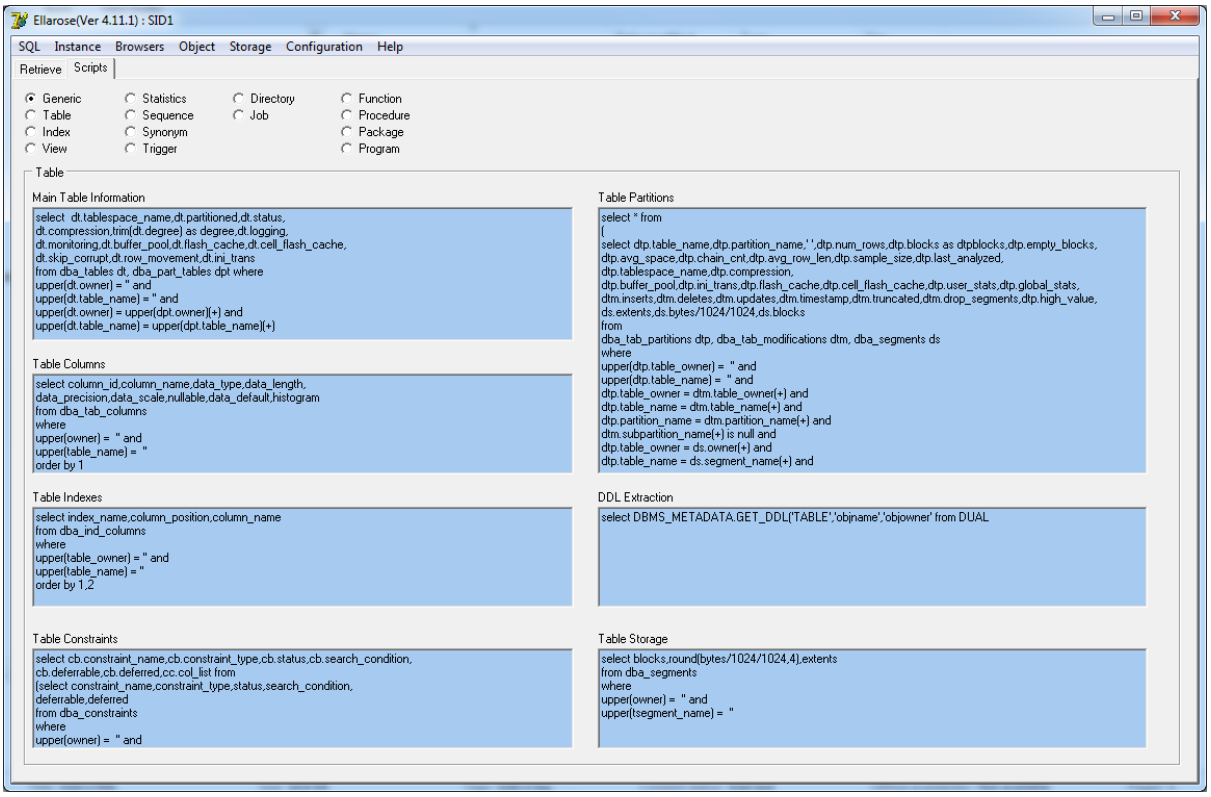


Illustration 12.2: Scripts used to retrieve object information

Section 13. Security Browser

The security browser is used to display information on various security attributes within the database as follows:

- Users(With role summary)
- Users(With role detail – hierarchy view)
- Roles
- Profiles
- Tablespace Quotas

13.1 Retrieval

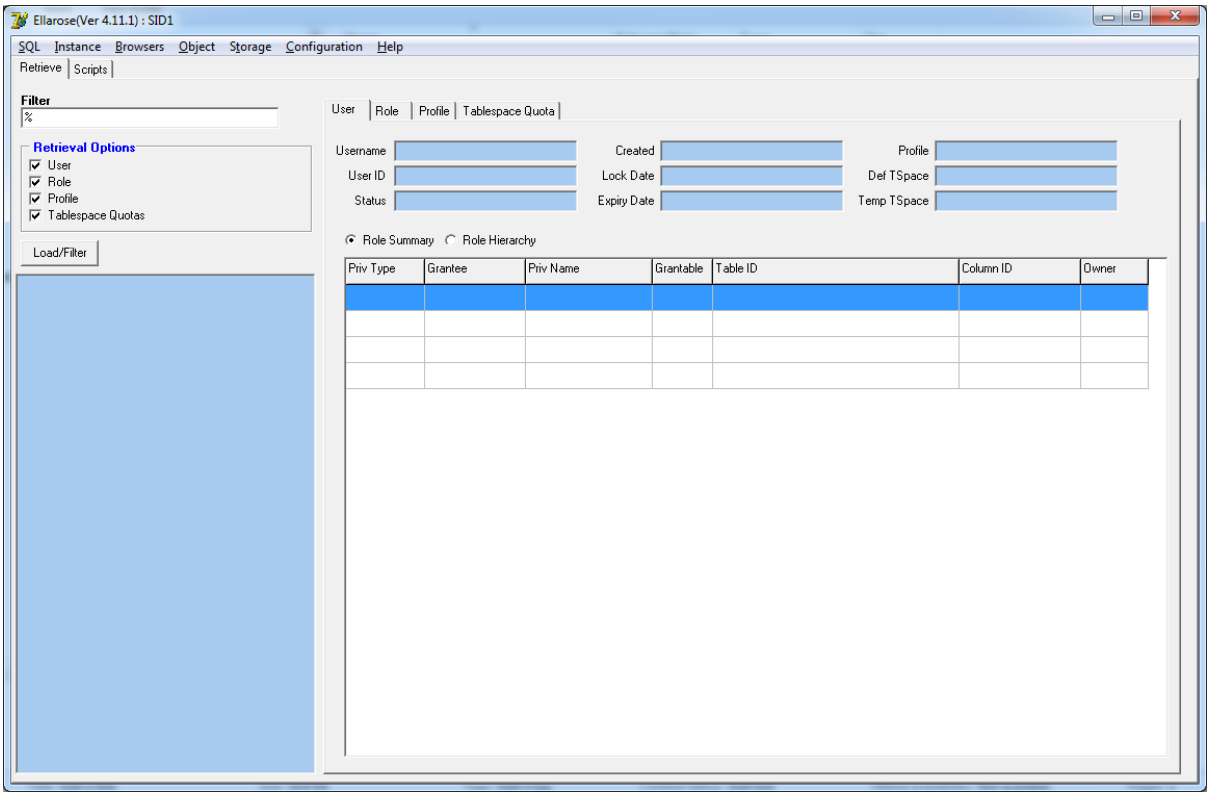


Illustration 13.1: Security retrieval form

Context:

Component ID	Component Type	Description
Filter	Field	Filter objects based on a security object name. Wildcard of "%" can be used.
Retrieval Options	Checkboxes	Filter security objects based on the security type.
Load/Filter	Button	Load/Filter the security list in the bottom left tree view.

Usage:

1) Filter the list of security objects to retrieve by entering the required filter information.
2) Click the **<Load/Filter>** button.
3) Double click on a security object in the bottom left tree view to display detailed information about it.

13.2 User Details(Role Summary)

Displays user information with a high level view of role allocation.

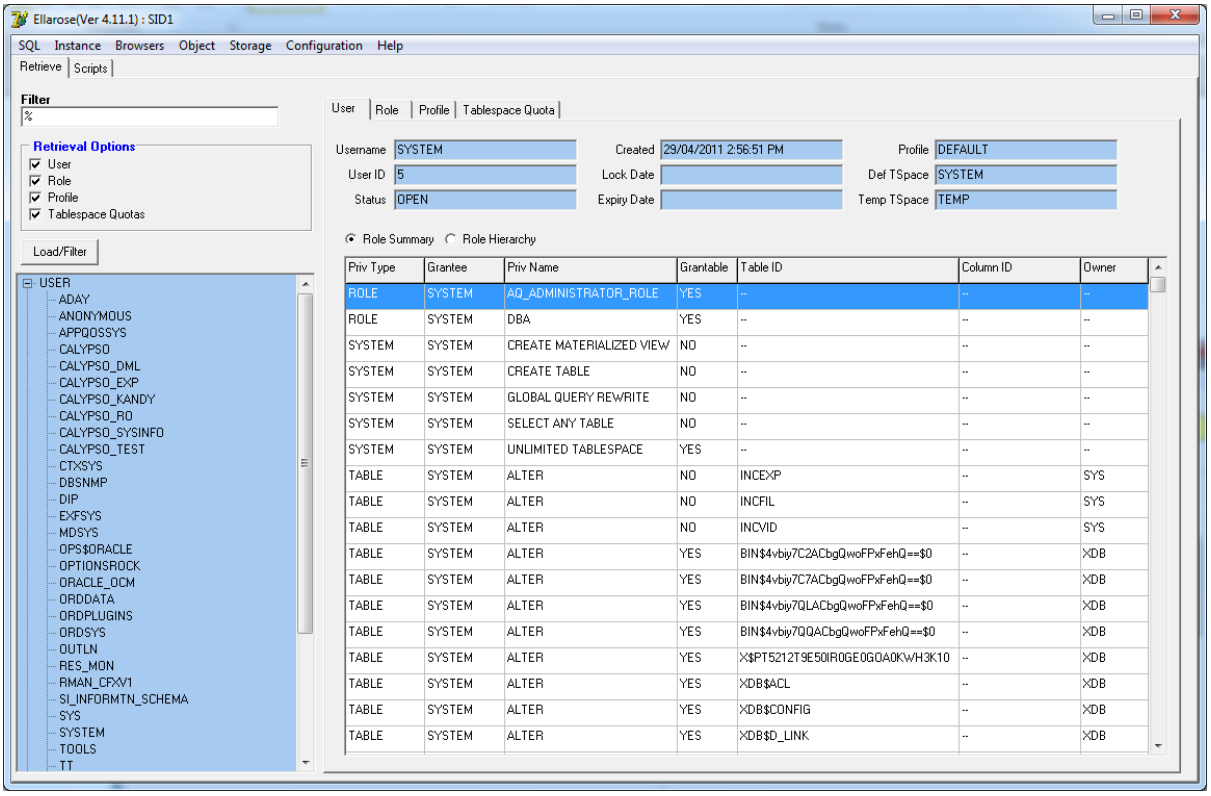


Illustration 13.2:User Information(Summary)

Usage:

1) Double click on the user name in the left tree view to display details about the user.

13.3 User Details(Role Hierarchy)

Displays user information with a detailed view of role allocation.

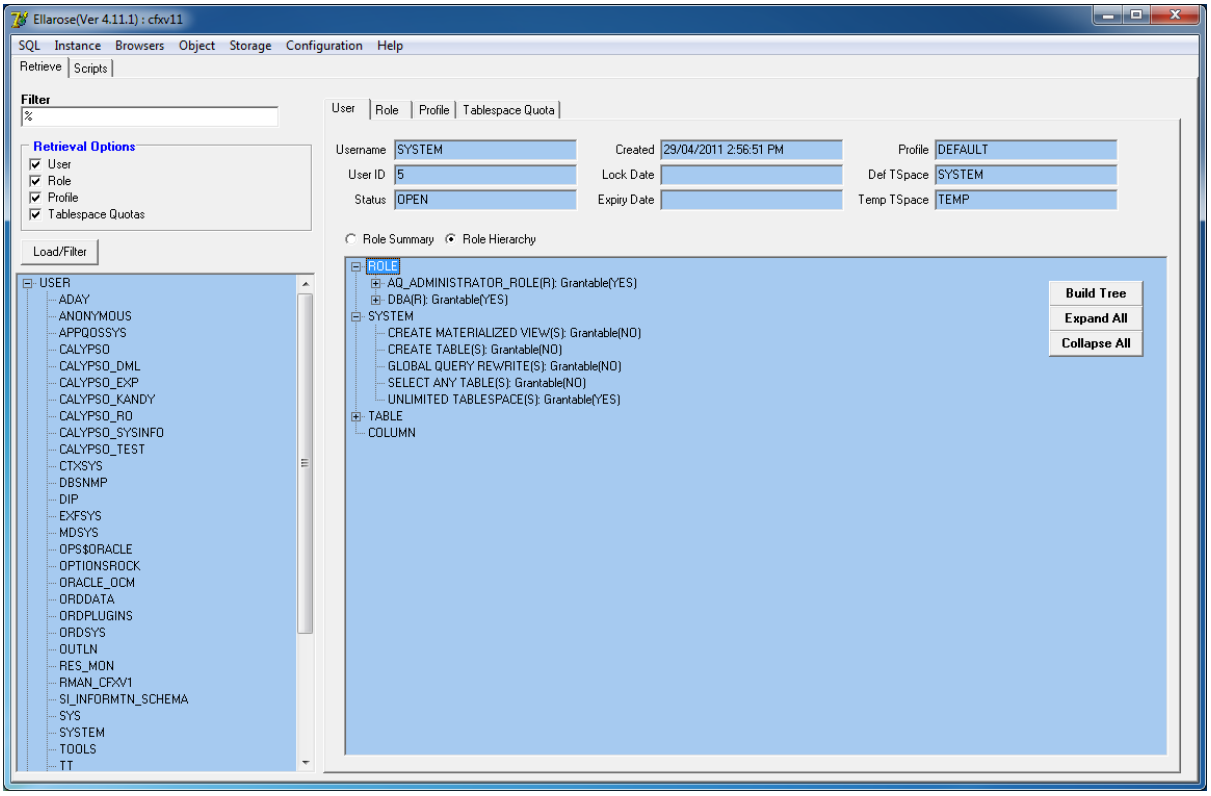


Illustration 13.3:User Information(Detailed)

Usage:

1) Double click on the user name in the left tree view to display details about the user.
2) Click on the **<Build Tree>** button to display a hierarchical view of role allocation for the user.

13.4 Role

Displays a hierarchical view of role allocation for a specific user.

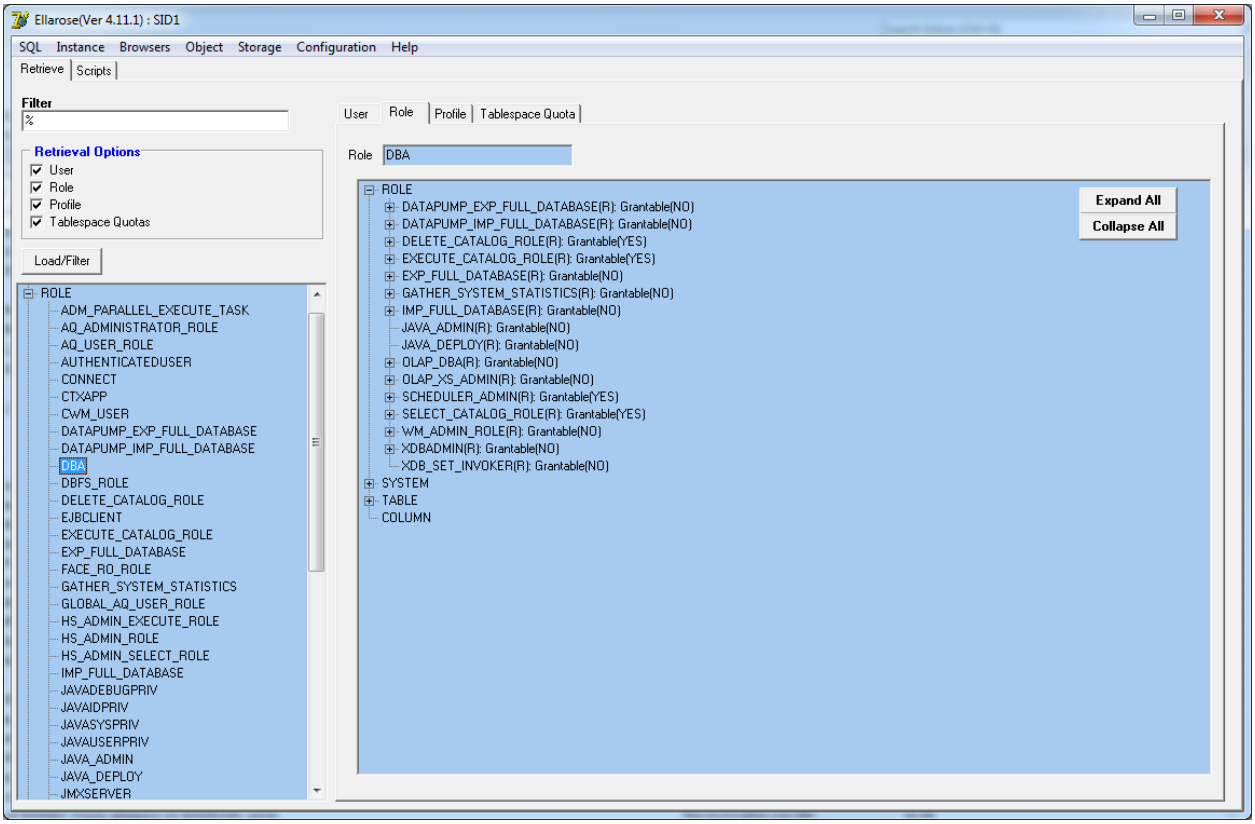


Illustration 13.4:Role Information(Detailed)

Usage:

1) Double click on the role name in the left tree view to display details about the role.

13.5 Profile

Display information for the chosen profile.

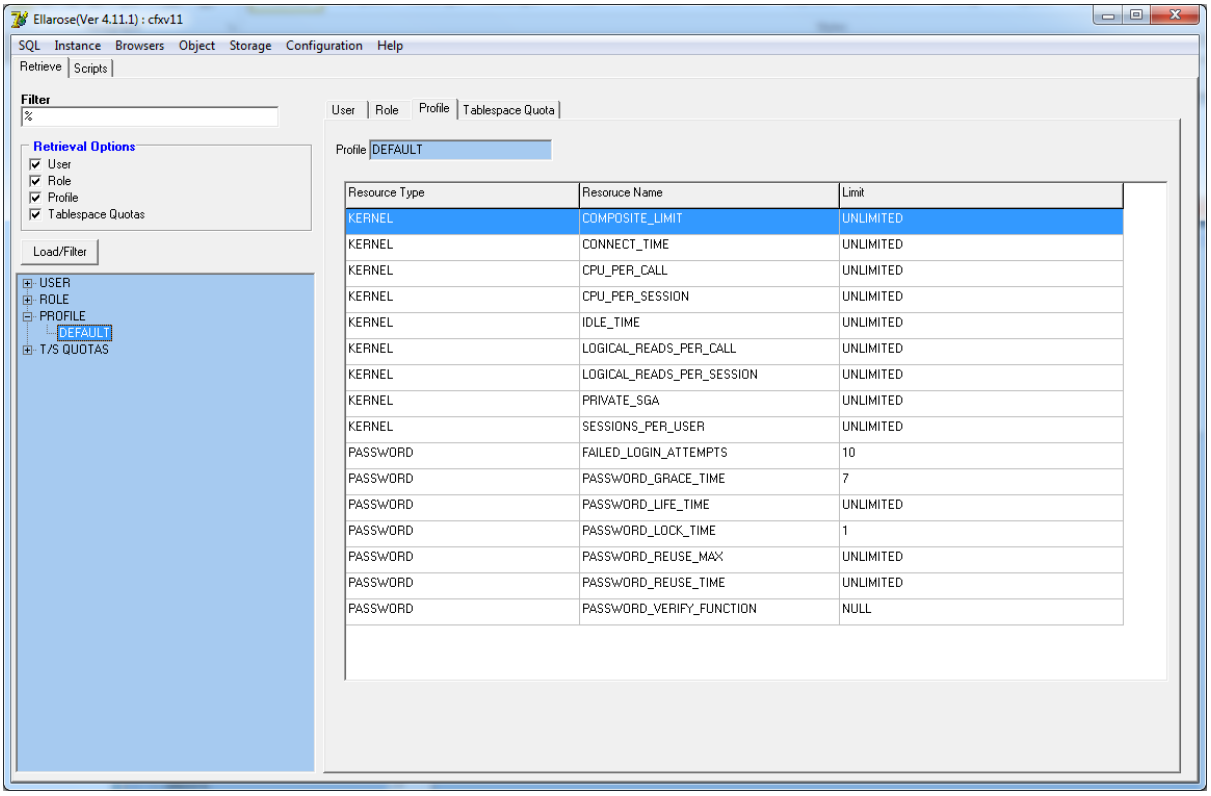


Illustration 13.5: Profile Information

Usage:

1) Double click on the profile name in the left tree view to display details about the profile.

13.6 Tablespace Quotas

Display tablespace quota information for the chosen user.

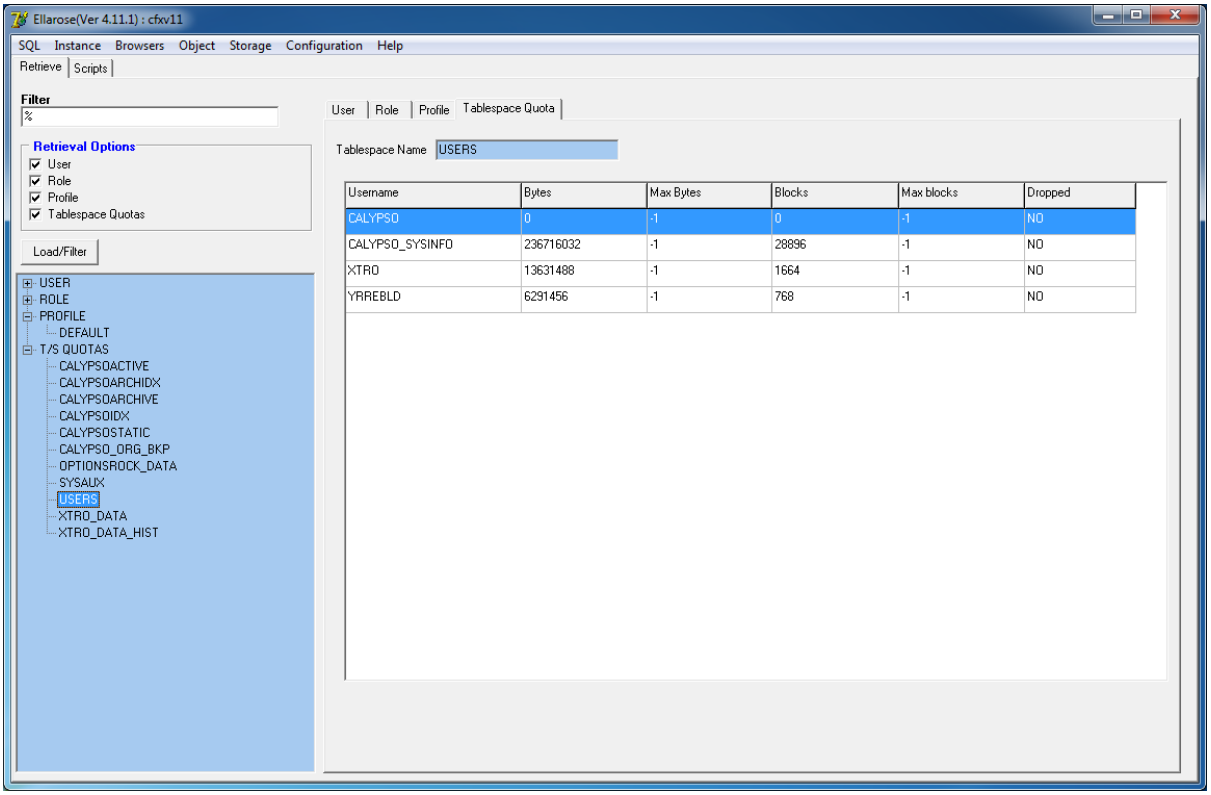


Illustration 13.5: Tablespace Quota Information

Usage:

1) Double click on the user name in the left tree view to display its tablespace quota information.

13.7 Script

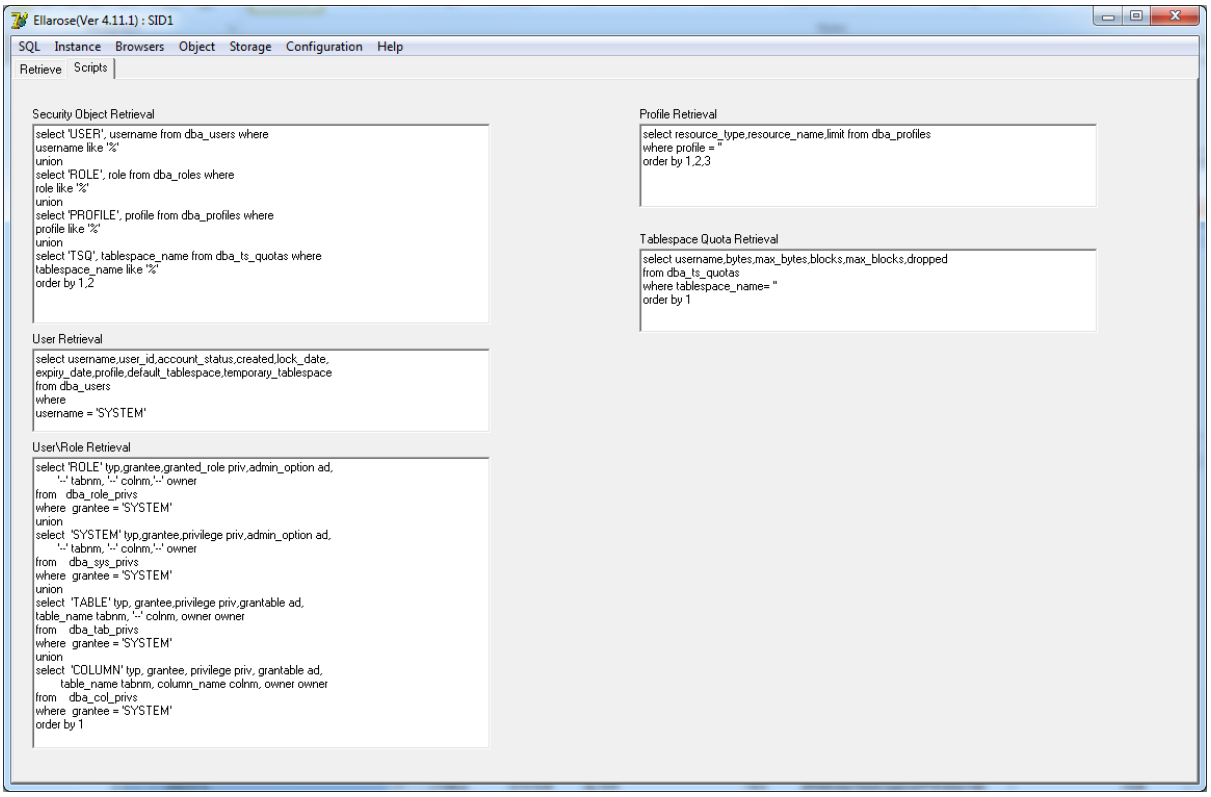


Illustration 12.2: Scripts used to retrieve security object information

Section 14. Storage Browser

Display information for tablespace and datafiles.

14.1 Retrieval

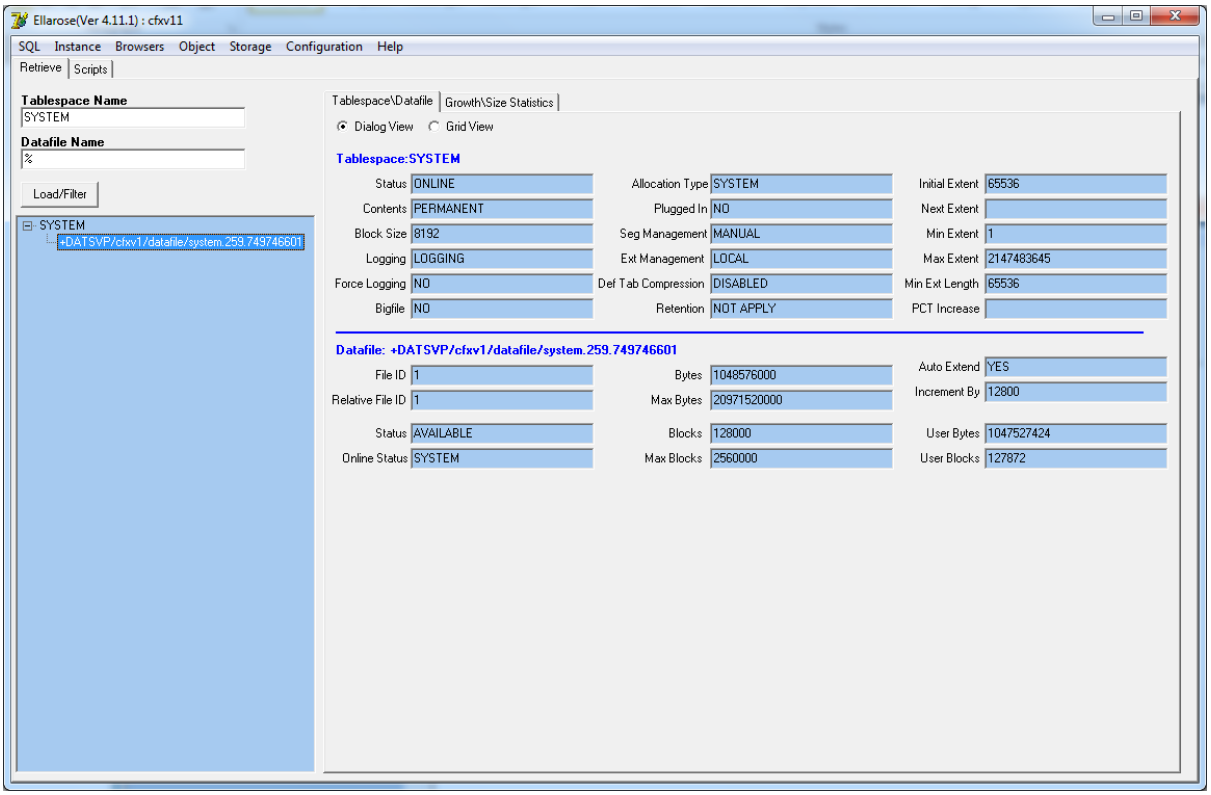


Illustration 14.1:Storage retrieval form

Context:

Component ID	Component Type	Description
Tablespace Name	Field	Filter tablespace information based on tablespace name. Wildcard of “%” can be used.
Datafile Name	Checkboxes	Filter datafile information based on datafile name. Wildcard of “%” can be used.
Load/Filter	Button	Load/Filter the tablespace and datafile list in the bottom left tree view.

Usage:

1) Filter the list of storage information to retrieve by entering the required filter information.
2) Click the **<Load/Filter>** button.
3) Double click on a tablespace or datafile in the bottom left tree view to display detailed information about it.

Section 15. Object Statistics

Display various logical and physical characterises for tables and indexes as follows:

- Physical and logical read statistics
- Physical write statistics
- Growth Statistics(Trend analysis and forecasting)

15.1 Retrieval

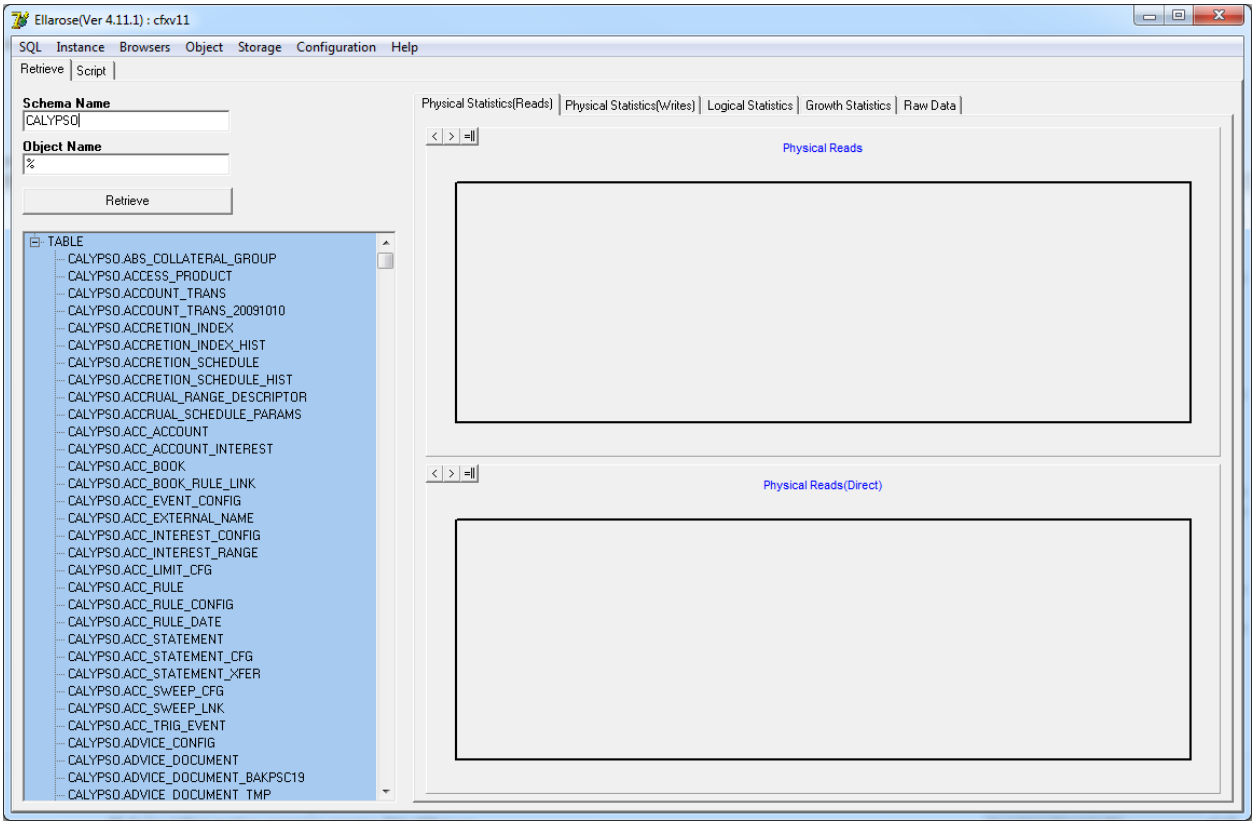


Illustration 15.1: Object statistics retrieval form

Usage:

1) Filter the list of object information to retrieve by entering the required filter information.
2) Click the **<Retrieve>** button.
3) Double click on an object in the bottom left tree view to display detailed information about it.

15.2 Script

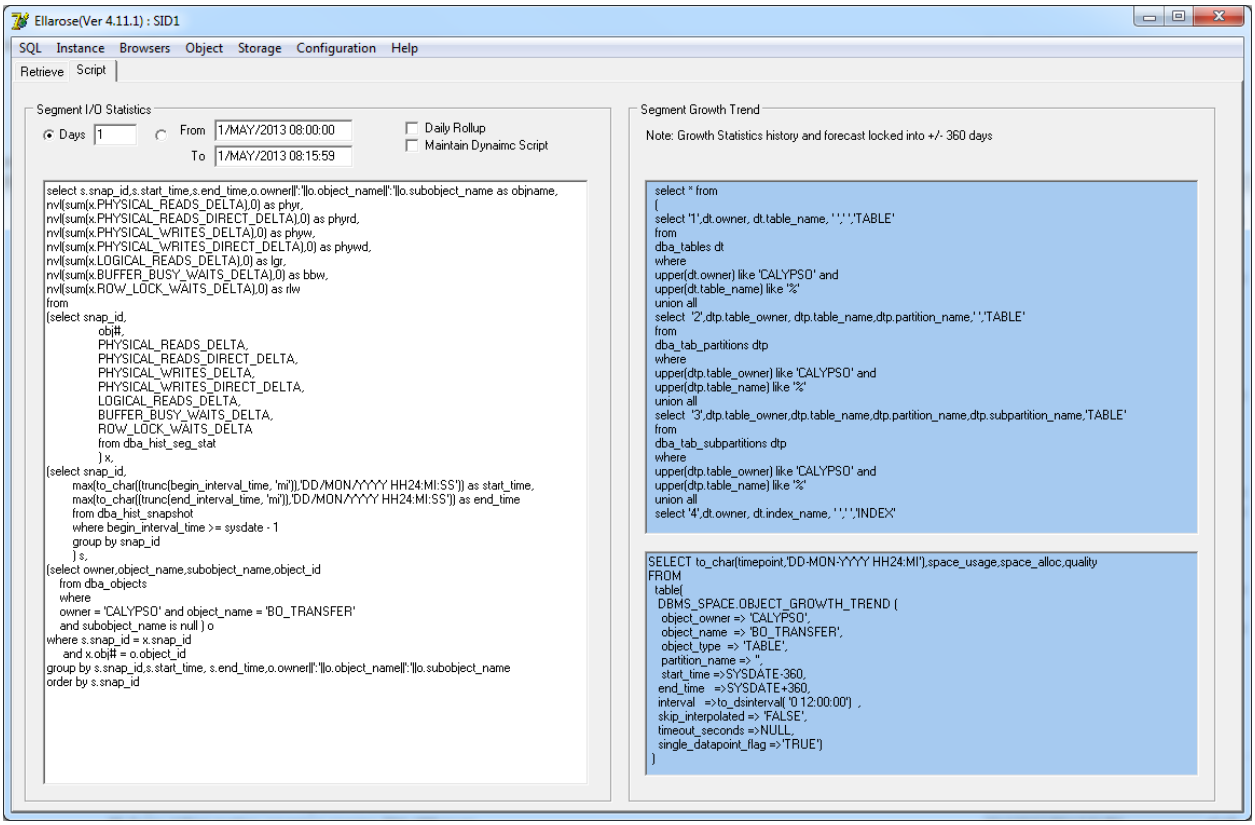


Illustration 15.2: Scripts used to retrieve security object information

Usage:

1) I/O statistics can be refined based on a data range. Enter the required date refinements.
2) Statistics are usually displayed per AWR snapshot. Click on **<Daily rollup>** to aggregate up to 24 hours.
3) The segment I/O statistics can be modified to suit special requirements. Enable the **<Maintain Dynamic Script>** checkbox to ensure modification to the script are not overwritten,

Note:

1) The segment growth information is fixed at 360 days history and 360 days forecast.

Section 16. Datafile Statistics

Displays I/O response time information for database files.

16.1 Retrieve

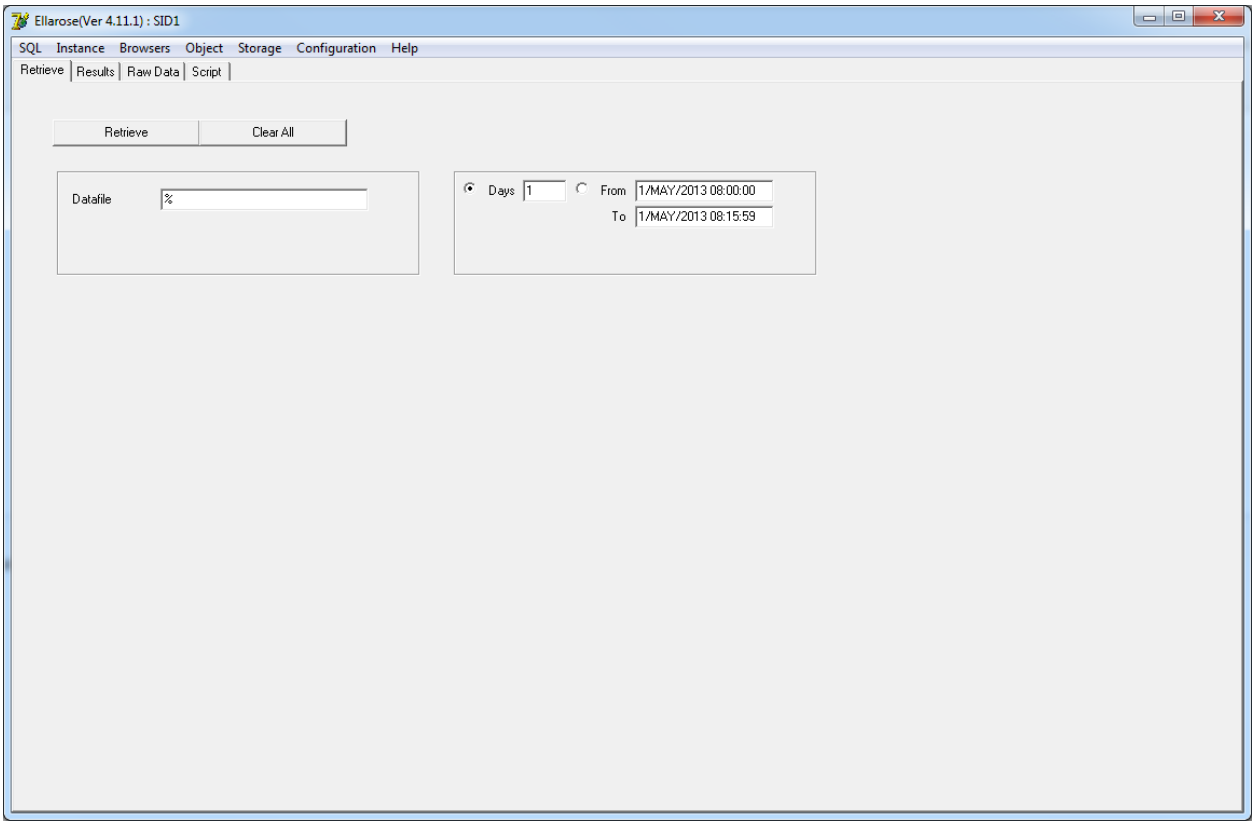


Illustration 16.1: Datafile statistics retrieval form

Context:

Component ID	Component Type	Description
Retrieve	Button	Click to retrieve datafile information based on the date criteria.
Clear All	Button	Clear any previous datafile information retrieved.
Days	Field	Number of days of datafile information to retrieve.
From/To	Field	Date range of datafile information to retrieve.

Usage:

1) Enter the amount of information to retrieve. Either enter the number days of history(from now) or enter a date/time range. Be sure to click the radio button which signifies the appropriate method of date criteria.
2) Click the **<Retrieve>** button.

16.2 Results

Various forms of statistics for datafile operations are available as follows:

- Read and Write operations count
- Total Read and Write Response times
- Average Read and Write Response times

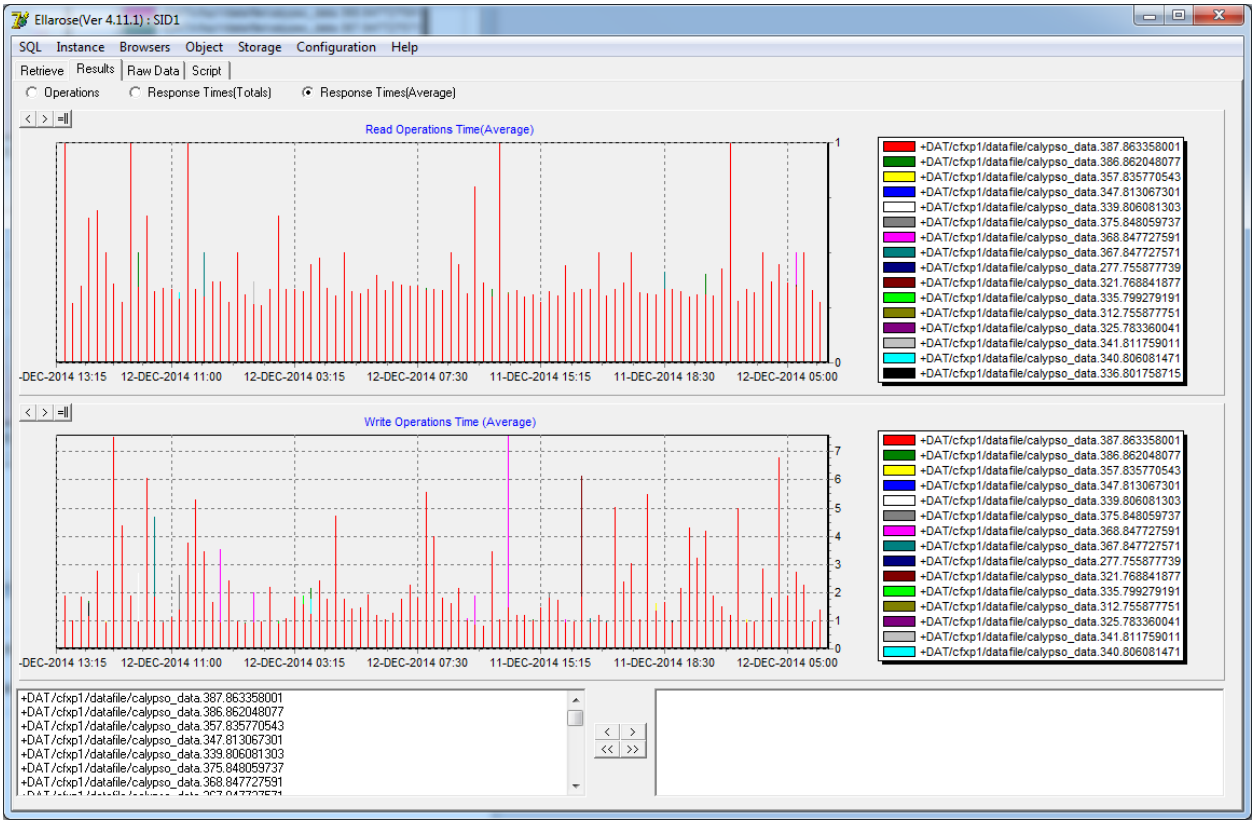


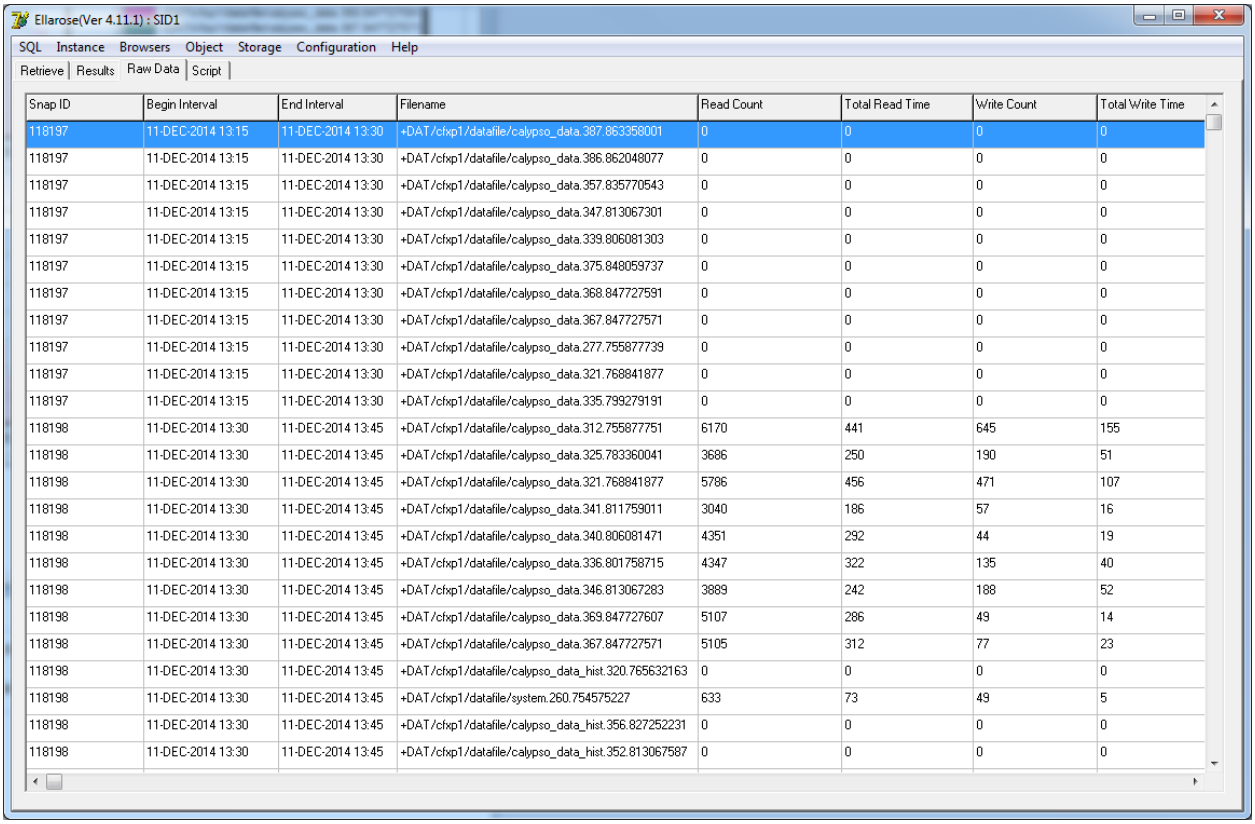
Illustration 16.2: Datafile statistics

Usage:

1) Information for individual datafiles can be excluded/included in the graphs by using the directional buttons on the bottom of the form.
2) Select the datafile and then click the appropriate directional button

16.3 Raw Data

Display raw data retrieved from the query.



Snap ID	Begin Interval	End Interval	Filename	Read Count	Total Read Time	Write Count	Total Write Time
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.387.863358001	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.386.862048077	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.357.835770543	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.347.813067301	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.339.806081303	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.375.848059737	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.368.847727591	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.367.847727571	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.277.755877739	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.321.768841877	0	0	0	0
118197	11-DEC-2014 13:15	11-DEC-2014 13:30	+DAT/cfxp1/datafile/calypso_data.335.799279191	0	0	0	0
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.312.755877751	6170	441	645	155
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.325.783360041	3686	250	190	51
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.321.768841877	5786	456	471	107
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.341.811759011	3040	186	57	16
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.340.806081471	4351	292	44	19
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.336.801758715	4347	322	135	40
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.346.813067283	3889	242	188	52
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.369.847727607	5107	286	49	14
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data.367.847727571	5105	312	77	23
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data_hist.320.765632163	0	0	0	0
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/system.260.754575227	633	73	49	5
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data_hist.356.827252231	0	0	0	0
118198	11-DEC-2014 13:30	11-DEC-2014 13:45	+DAT/cfxp1/datafile/calypso_data_hist.352.813067587	0	0	0	0

Illustration 16.3: Performance Statistics(Raw Data)

16.4 Scripts

Controls the query which is submitted to the database to retrieve information.

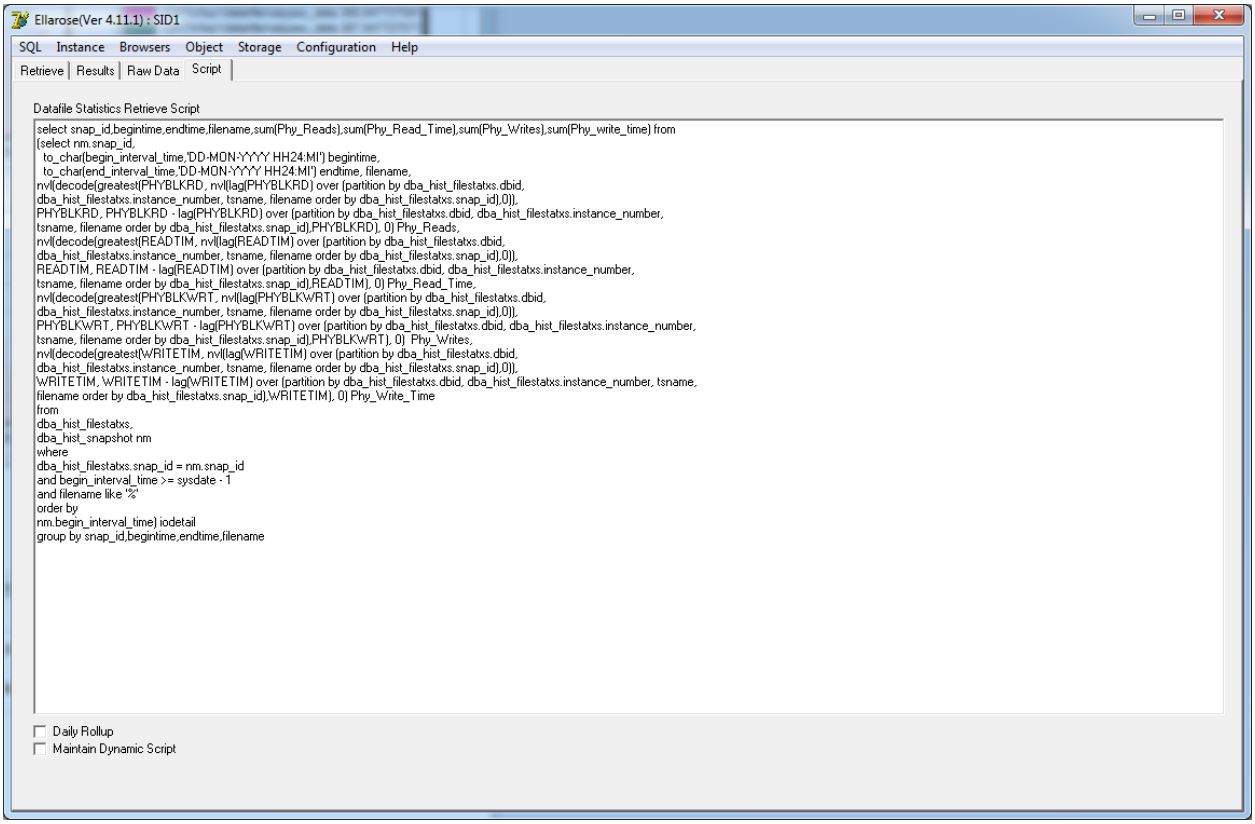


Illustration 16.4: Scripts used for datafile statistics retrieval