

<u>DBPLUS</u> <u>Performance Monitor for Oracle</u> <u>description of changes in version 2021.2</u>

<u>Date</u>: July 9, 2021



Table of Contents

1.1.	Collecting information about the OWNER and PARSING SCHEMA of the inquiry	3
1.2.	ogical Standby Monitoring	4
1.3.	Anomaly Monitor	8
1.4.	General Improvements	9
1.4.	. Comparing Explain Plan	9
1.4.	. Full screen	9
1.4.	. Small fixes and improvements	. 10



Below is a list of changes in the DBPLUS Performance Monitor system for monitoring Oracle databases.

New in 2021.2

1.1. Collecting information about the OWNER and PARSING SCHEMA of the inquiry

The DBPLUS Performance Monitor application collects information about queries performed in the monitored database. In the latest version of the application, we added information about:

- PARSING SCHEMA - the schema where the query was run,

- OWNER – owner of the object where the query is executed.

This information is collected during the snap procedure once every 15 minutes from the system views of Oracle databases. Adding additional information is the next step that will lead to the currently developed DBPLUS Query Advisor mechanism - which in the future will automatically display information on possible query optimization in a given database.

In the latest version, the information about **Parsing Schema** has been added by default to the grid presenting information about query statistics. Below is the table view in the Database Load tab:

Sql	Statements	Procedu	res Waits	Alerts & A	Anomalies	Plan Objects								Statements	filter: Top 3	20 statements b	y Elapsed time	+ UnGr	oup literals 👻	
SNA	PSHOT OF SQL	STATEMEN	ITS EXECUTE	D WITHIN 15 MIP	NUTES AT 202	1-07-04 10:23:34														0
Q,	Search statistic	c by sql text	, hash value o	r plan hash in b	elow snapsho	t table														
	Query text		Hash Value	Sql Id	Plan Hash	Parsing schema	Elapsed Time	Cpu Time	Time per 1 exec	Sorts	Fetches	Executions	Parse Calls	Disk reads	Buffer gets	Rows processed	Module	Db Load	Cpu Load	
							[Seconds]	[Seconds]	[Seconds]	[Rows]	[Rows]			[Blocks]	[Blocks]	[Rows]		[%]	[%]	
-lab12	28 select sql_id,	,plan_ha	3479946888	fnz5tdg7qrjn8	26396058	NAGIOS	164.19	74.70	3.1576	0	488	52	0	0	0 0	32 759	Lab128	5		5 *
SELEC	CT COUNT(*) FI	ROM HZ	4166349253	59k0ny7w5	40064658	APPS	139.32	61.07	0.0287	0	4 860	4 860	1	C	25 855 200	4 860		4		ł.
SELEC	CT NVL(MIN(PS	S.DUE_D	503502052	b498z9sg0	27016974	APPS	95.24	46.44	0.0004	0	254 096	254 097	4	C	6 353 520	254 096	XXINTNAL05	3		3
SELEC	CT CASH_POS	TED_FL	3159890070	d8gwadyy5	14895361	APPS	66.01	29.46	0.0003	856 012	428 021	214 003	16	0	10 529 570	214 018	e:SQLAP:frm	2		2
SELEC	CT R.Conc_Log	jin_Id, R	404546429	7q4znysc1t	16686014	APPS	64.17	2.01	0.0058	0	1 587	11 123	121	0	283 471	130	e:FND:cp:ST	2		3
SELEC	CT SUM(L_COL	UNT) FR	2886229678	99csrrfq0hrpf	21071028	APPS	61.09	27.03	0.0001	856 845	856 844	856 845	16	0	3 455 232	856 844	XXKASZOB21	2		2
lab12	28 select indx,(k	ksleswts	3774271015	gph5z07hg	112421917	NAGIOS	41.19	19.13	0.4160	0	198	99	0	0	0 0	16 533	Lab128	1		1

Information about the schema where the command was executed and the OWNER of the objects will allow a more accurate analysis of queries performed in the monitored database. In the case presented below: the time of a single execution of the same query for different OWNER values is an order of magnitude different between the slowest and the fastest execution of the query. This is due to the fact that the table in the other schema is several times larger than the same table in the another schemas. Such information was obtainable only when information about the OWNER of the objects participating in the query is also collected by the applications.

Below, the page view in the SQL Details tab:

III Databas	e Load Wai	ts Latches SC	QL Analyze SQL Deta	ils SQL Plan Load	Trends Compare	Top SQL SQL	3D T	op Day Slow SQLs	Perf Counters	OS Stat	1				
18093552	189335526 From. 🖹 2021/05/01 00:00 lbs. 🖹 2021/07/04 23:59 📋 - 🖹 😰 Group by plan Group by Day 👻 🗋 Online values Refrest Find SQL														
STATEMEN	IT TEXT												View Session	History E Print Prev	iew Q Format SQL
select *	ilect * FROM DEFLUS_TAB1 HEERE SNAP_ID=1														
SQL STATI	SQL STATISTICS (SQL ID: 4az1m6cipv6)														
Date	Plan hash	Parsing schema	Elapsed Time	Cpu Time	Rows processed	Fetches		Executions	Parse Calls		Disk Reads	Disk Reads	Buffers Get	Buffer Quality	Elapsed Time
			[Seconds]	[Seconds]	[Rows]	[Rows]					[Blocks]	[MB]	[Blocks]	[%]	[Seconds]
2021-06-10	2180838784	ABC	0.0155	0.0155		0	25	25		25		0 MB	241	96.4	0.0006
2021-06-10	2180838784	ARTUR	0.0520	0.0329)	20	20		20	36	3 MB	9 539	96.4	0.0026
2021-06-10	2462600778	DBPLUS_REP	0.0145	0.0027)	34	34		34	1	5 0 MB	354	95.7	0.0004
2021-06-10	2462600778	ABC	0.0014	0.0014		0	16	16		16		0 0	16	100.0	0.0001
2021-06-10	2462600778	ARTUR	0.0017	0.0017)	7	7		7		0 MB	0	0	0.0002
			•										·		
Explain p	lan Graph									Shown	nultiple charts	Compare Plans	2462600778 (DBPLU	IS_REP) ▼	dd to SQL Plan
Show	plan obj	ects for 2462	600778												23
-Ovne	CT STATEMEN	I (Cost - 9 , By	nes - 0 . Cardinaling	- 0 . Search Columns -	0.)										
ė	TABLE ACCES	S (BY INDEX RO	WID) DBPLUS_TAB1 (Cost - 9 , Bytes - 205	56 , Cardinality - 2	2 , Search Column									
	LINDEX	(RANGE SCAN) DE	BPLUS_TAB1_SNAP_ID	(Cost - 1 , Sytes - 0	, Cardinality - 242	, Search Columns	- 1)								

If objects from different schemas are indicated in the execution plan for a given query, the information is presented in the Explain plan tab together with the execution plan.



Explain plan Graph	
-Cwners: ABC, ARTU	ts for 3791460739 R (Cost - 103, Bytes - 0, Cardinality - 0, Search Columns - 0)
-HASH JOIN (ce	st - 103 , Eytes - 56430 , Cardinality - 270 , Search Columns - 0)
-TABLE AC	CESS (FULL) ABC.DBPLUS_TAB1 (Cost - 3 , Bytes - 100 , Cardinality - 1 , Search Columns - 0)
TABLE AC	CESS (FULL) ARTUR.DBPLUS_TAB1 (Cost - 99 , Bytes - 29430 , Cardinality - 270 , Search Columns - 0)

Similarly, by presenting information on the Show Plan Objects page, using the DBPLUS query parser, the User can precisely indicate where in the query the object that belongs to the OWNER selected in the table.

SQL TEXT (HASH VALUE: 2910210970)	Objects Explorer Parse SQL Query	~ ⊅	EXPLAIN PLAN (PLAN HASH: 3799460739)	X Close Plan Objects	
1920 700 AUTO:.dojis.tal b MEDI :.dogis.tal b MEDI :.dogi.d :.b.rsp_14 AUD b.ensp_14 = 1				-Overen: ARC, ARCOM SCHLOT STATURED((Gene - 100, Rynes - 0, Genimality - 0, Pearth Columns - 0) 	53
OBJECTS USED IN EXPLAIN PLAN				INDEXES FOR SELECTED OBJECT ABC.DBPLUS_TAB1	
Туре	Owner	Object Name		Owner Name	
TABLE	ABC	DBPLUS_TAB1	No indexes found		
TABLE	ARTUR	DBPLUS_TAB1			

1.2. Logical Standby Monitoring

Logical Standby monitoring has been added in the latest version. Online monitoring is possible in the application from the Dashboard level. Monitoring depending on the source of data download has been added in two variants:

- Standby base monitoring from the Primary base.
- monitoring of the Standby database from data directly from the Standby database.

Monitoring Logical Standby from the Primary database

This mode is started automatically after detection of a Logical Standby configuration, when a database with the Primary role is added to the monitoring.

Information about the Standby status is visible on the Dashboard screen by clicking the Repl Status icon or selecting the **Standby Status** tab from the side menu.

Standby monitoring data is visible in two sections:

- Primary Database
- Standby Database

The Primary section has information related to monitoring the status of the Primary database from which data is replicated to the Standby databases. The section provides information about:

- NAME name of database,
- HOSTNAME database server name,
- OPEN MODE Open Mode
- PROTECTION MODE the data protection mode that is currently in force in the database,
- FORCE LOGGING whether the database is in forced login mode,
- CURRENT SCN currently processed change number, contains null if base is not in OPEN MODE,
- SWITCHOVER STATUS indicates whether switching is allowed,
- FS FAILOVER STATUS failover state,
- DATAGUARD BROKER whether the DataGuard configuration is managed by a broker,
- DATABASE ROLE database role
- LAST SEQUENCE NUMBER the last file the sequence number on the PRIMARY database side.

Primary database											
Name	Hostname	Open Mode	Protection Mode	Force Logging	Current SCN	Switchover Status	FS Failover Status	Dataguard Broker	Database Role	Last Sequence Number	
TERRAN	rod	READ WRITE	MAXIMUM PERFOR	YES	23951866	TO STANDBY	DISABLED	DISABLED	PRIMARY	367	



Information on the status of Standby databases is presented in the Standby database section. All this information comes from the system views available in the Primary database, therefore it may be presented with a delay in the PRIMARY database and on the Performance Monitor application level.

Standby database informa Configuration Wizard.	Q Standby database information collection has not been enabled. The presented information is collected from the PRIMARY database. Change the settings by extending the monitoring to the STB database in DBPLUS Configuration Wizard.													
Standby database								\$						
StandBy Name	Database Role	Repl. Status	Dest Id	Valid Now	Transmit Mode	Async Lag Delay [sec]	Async Files To Apply	Async NextTime						
TERRANSTB	LOGICAL	ST	2	YES	ASYNCHRONOUS	84 359	1	2021-07-08 13:48:37						

Monitoring Logical Standby downloaded directly from the views in the Standby database

When DBPLUS monitoring includes both the PRIMARY database and the Standby database, the application detects the configuration automatically and displays information directly from the Standby database.

Primary databa	ase																		\$
Name	Hostnam	ie	Open M	lode P	Protection Mode	Ford	ce Logging	Current SCN		Switchover S	Status	FS Failover S	itatus	Dataguar	d Broker	Dat	abase Role	Last	Sequence Number
TERRAN	rod		READ WRITI	E MAXIMUM PERFOR YE		YES	2	23751385		TO STANDBY	DISABLED			DISABLED		PRIMARY		366	
Standby datab	Standby database																		
Name	Database Role	SI	tatus	Dest Id	State		Transmit Mode	Last / Sequ	Applied ence	Applied SCN	A	pplied Time	Lates	t SCN	Latest Ti	ime	Mining SCN		Mining Time
TERRANSTB	LOGICAL STAND.			2	IDLE	A	SYNCHRONOUS	365		23737426	2021	1-07-08 13:48	2373742	6	2021-07-08	13:48	23737427	2	2021-07-08 13:48
Registered Logs	Processes	Stats	Events																٥
File Name	Sequ	ence	Fir	rst Change	Next Chang	je	Timestam	пр	Dic	t Begin	0	Dict End		Dict End		Thread	Number		Applied
/data/oracledata/TERI	RA 366		2359178	33	23737427		2021-07-08 13:5	51:56	NO		NO		NO		1		(CURRI	ENT
/data/oracledata/TERI	RA 365		2348641	19	23591783		2021-07-07 22:0	03:31	NO		NO		NO		1			YES	
/data/oracledata/TERI	RA 364		2337123	33	23486419		2021-07-07 10:0	03:44	NO		NO		NO		1		,	YES	
/data/oracledata/TERI	RA 363		2324462	26	23371233		2021-07-06 22:0	03:30	NO		NO		NO		1			YES	

Information about the Standby status is visible on the Dashboard screen after clicking the **Repl Status** icon or selecting the **Standby Status** tab from the side menu.

Standby monitoring data is visible in two sections:

- Primary Database
- Standby Database

The Primary Database section contains information related to standby monitoring that relates to the Primary database where data is replicated to the standby databases. The section in this configuration is completed with data that comes directly from the views from the Standby database. This information is refreshed automatically every 30 seconds, in the same way as other data displayed on the Dashboard screen. Information about the PRIMARY database is the same for each variant and is described above.

The Standby Database section contains information from the standby views. Description of the columns presented in the section:

- NAME name of Standby base,
- DATABASE ROLE the role of the Standby base,
- STATUS status based on DBPLUS monitoring,
- DEST ID Standby database ID from the base PRIMARY,
- STATE status of the data replication process to the Standby database,
- TRANSMIT MODE data transmission type
- LAST APPLIED SEQ sequence number that points to the last log file processed
- APPLIED SCN all transactions below this SCN have been processed,
- APPLIED TIME time the last transaction was processed,
- LATEST SCN the highest SCN sent to the replication process,
- LATEST TIME time of sending the highest SCN,
- MINING SCN SCN number last processed by the BUILDER process,
- MINING TIME time to process the SCN by the BUILDER process.

After selecting a specific Standby database on the list, additional tabs related to the efficiency of the data replication process to Standby are presented.



Register Logs Tab

Contains information on archived logs registered on the standby database side. Description of the columns presented in the tab:

- FILE_NAME path and name of the archived log file,
- SEQUENCE sequence number for a given log file on the standby side,
- FIERST_CHANGE change number for the given log file,
- NEXT_CHANGE revision number for the next log file,
- TIME_STAMP log file registration time,
- DICT_BEGIN indicates whether the beginning of the dictionary build is in this log file,
- DICT_END indicates if the end of dictionary compilation is in this log file,
- THREAD log file thread id,
- APPLIED information about the status of a given log file.

Registered Logs	Processes	Stats	Events								۵
File Name	Seq	uence	1	irst Change	Next Change	Timestamp	Dict Begin	Dict End	Dict End	Thread Number	Applied
/data/oracledata/TERRA	366		23591	783	23737427	2021-07-08 13:51:56	NO	NO	NO	1	CURRENT
/data/oracledata/TERRA	365		23486	419	23591783	2021-07-07 22:03:31	NO	NO	NO	1	YES
/data/oracledata/TERRA	364	364 23371233		23486419	2021-07-07 10:03:44	NO	NO	NO	1	YES	
/data/oracledata/TERRA	cledata/TERRA 363 23244626		23371233	2021-07-06 22:03:30	NO	NO	NO	1	YES		

Processes Tab

It presents information about the status of services responsible for the process of data transfer to the Standby database. This view is useful for diagnosing performance problems with the data replication process in the Standby database. Description of the columns presented in the tab:

- SID the session id for the process,
- TYPE role a given process is responsible for in the replication process,
- STATUS description of the current action that a given process performs,
- HIGH SCN the highest identifier of LCRs processed by the given process.

	Registered Logs Processes	Stats	Events							
	SID			Туре 🗸	Status	High SCN				
	99			APPLIER	ORA-16116: brak zadań	22243576	*			
87				COORDINATOR	ORA-16116: brak zadań	22387422				
	88			BUILDER	ORA-16116: brak zadań	22387415				
	86			READER	ORA-16240: Oczekiwanie na plik dziennika (nr wątku 1, nr sekw	22387422				
	107			APPLIER	ORA-16116: brak zadań	15158626				
	82			PREPARER	ORA-16116: brak zadań	22387414				

Stats Tab

It presents information about the current status (refreshed once every 30 seconds) of statistics related to the process of data replication to the Standby database. Description of the columns presented in the tab:

- NAME name of the given statistic,
- VALUE the statistic value.

٥	¢
Value	
9912	^
34994	
0	
147	
0	
134	+
	Value Value 9912

Events Tab

Contains information about events related to the processing of changes on the standby database side. This view is used to determine the cause of errors that occur while processing changes on the side of the Standby database. Description of the columns presented in the tab:

• EVENT_TIMESTAMP – time of logging an entry to the log,



- START SCN SCN number associated with the transaction launched on the PRIMARY database side,
- CURRENT SCN SCN number associated with the change on the PRIMARY side, if the log contains an
 error, the line indicates which log file contains the source of the problem,
- COMMIT SCN SCN change number commit on the PRIMARY database side,
- STATEMENT content of the query what was the processing at the time of the error event,
- STATUS description of the reason for the change not being transferred to the Standby base
- SRCCONNAME indicates the name of the PRIMARY database where the transaction was
 - performed.

•						
Registered Logs Processes Stats Events					3	¢
Event Timestamp Start SCN	Current SCN	Commit SCN	Statement	Status	SrcConName	
2021-07-01 22:03:32 22247682	22247683	22247686	grant select,insert on sys.ora_temp	ORA-16227: DDL skipped due to m	TERRAN	^
2021-07-01 22:03:31 222247501	22247502	22247505	grant select,insert on sys.ora_temp	ORA-16227: DDL skipped due to m	TERRAN	
2021-07-01 22:03:32 22247973	22247974	22247977	grant select,insert on sys.ora_temp	ORA-16227: DDL skipped due to m	TERRAN	
2021-07-01 22:03:32 22248078	22248079	22248082	grant select,insert on sys.ora_temp	ORA-16227: DDL skipped due to m	TERRAN	
2021-07-01 22:03:32 22248202	22248203	22248206	grant select,insert on sys.ora_temp	ORA-16227: DDL skipped due to m	TERRAN	
2021-07-01 22:03:32 22248493	22248494	22248497	grant select,insert on sys.ora_temp	ORA-16227: DDL skipped due to m	TERRAN	-

Extended monitoring – Standby database configuration

In a situation where only the PRIMARY database is added to the monitoring, the Performance Monitor application allows the User to extend the monitoring with information on Standby coming directly from the Standby database.

To do this, complete the configuration from the level of the DBPLUS Configuration Wizard installed on the Windows server together with the DBPLUS Performance Monitor application.

After starting the Configuration Wizard program, go to the PRIMARY database settings, and then from the Standby DBs tab, complete the configuration for the Standby databases. If there are many Standby bases assigned to a given PRIMARY base, add configurations for the next Standby using the Add another standby option. The user should have the minimum rights: CONNECT and SELECT_CATALOG_ROLE.

DBPLUS Performance Monitor for ORA	CLE- system configurator			- 🗆 X
System architecture List of DPM components and it's avail	ailability and activity			Version 2021.2.1
Monitored Databases	Database connection details Oracle database	nr monitoring purposes		×
✓ 2 databases monitored	Connection login Conne	ection properties Export Stand	dby DBs	
TERRAN/rod	Standby List	TERRAN	~	Add another standby
XE/DESKTOP-HR1BE66	Included in Monitoring	Yes	~	
	Connection Type	Basic ~	•	
	Host name	192.168.1.140	SID	TERRAN
	Connect by	SID ~	Service name	
			TCP Port	1522
	Authentication	Oracle Authentication	\sim	
	User name Password	user_STB		
	1 435 1014	••••		
Add another database	Save Test conne	ction Remove database from	n monitoring	Close
Please click on the Configuration system. The wizards lets you inclu	Wizard to install/repair DBPLU ude oracle databases in monit	IS Performance Monitor oring process too.	Re	fresh Configuration Wizard

Important! Such additional configuration is not associated with the need to purchase an additional DBPLUS Performance Monitor license.



1.3. Anomaly Monitor

Anomaly Report

As part of the Anomaly Monitor module, which presents information about problems detected in the monitored database, a reporting module is available. The reporting module is available under the **Report** button.



A report from a given period can be generated using a saved template (TEMPLATE), which has been predefined in DBPLUS, or the User can configure his own report.

Each User can add their own templates or edit existing ones added by other Users. Predefined DBPLUS templates cannot be modified.

In the further part of the configuration, the User can set the language in which the report will be generated, the date range for which the reports will be generated, the name of the report and the file.

The report is divided into chapters that contain specific types of graphs. The chapters correspond to the charts available from the DBPLUS application. When the User selects the entire chapter using the checkbox, it will automatically not be taken into account when generating the report.

DatabaseLoad

It allows to generate a chart of database performance over a given period of time.

TopWaits

It allows to generate a chart in two variants:

- Top Waits
- Selected Waits

In the case of **Top Waits**, the chart will show the top expectations that occur in the database over a given period of time. As part of the configuration, the User may indicate the number of waits to be included in the chart and select the option that will display a summary of the data visible on the chart.

The Selected Waits option allows to generate a chart for waits specified by the User.

Loadtrends

The charts in this chapter provide a long-term presentation of the main performance statistics. Thanks to LoadTrends, it is possible to estimate whether the recent performance changes in the database are bringing the expected effect.

I/O Stats

The graphs available on the screen allow the User to report the performance of the disk array. The user can select all I / O performance indicators available in the application.

OS Stats

This chapter allows the User to generate graphs that show the utilization of the CPU on the database.

Space Size

It allows to generate a chart of the size of the monitored database. The application also allows the User to generate a graph that shows the size of the Tablespace specified by the User. Selecting the additional Show summary option will generate a summary for a given chart in a tabular form.



Main Performance Problem

This chapter was also available in previous versions of the application. Currently, it is possible to configure the visibility of query plans in the report for problems related to queries.

Update of problem classes

In the DBPLUS performance Monitor application, the Anomaly Monitor menu presents information on the problems detected in the monitored database. Problems are grouped into classes. In case of problems related to increasing a given Wait level, they will be named according to the class of the given Wait. Of course, if the problem is not related to the wait, the name of the class has been predefined by DBPLUS analysts so far.

Improved Change Plan alerts

One of the most common problems with database query performance is changing the execution plan. In the Anomaly Monitor module, the application indicates when a plan change causes a performance problem. In the latest version, we have tightened the indication of performance problems about plan change in case the plan change occurs several times during a single snap. As part of the improvement, a special algorithm has been added to check whether the plans on which the query works allow raising an alert and reporting anomalies.

Note !! The report cannot be run on IE (Internet Explorer).

1.4. General Improvements

1.4.1. Comparing Explain Plan

In the latest version of the application, we improved the way of showing differences in plans. When the query uses many execution plans in the DBPLUS Performance Monitor application, in the SQL Details tab, it is possible to compile performance statistics for each plan as well as use the Compare plans function to compare the differences between individual execution plans.

In the application, the difference between the plans is marked in yellow. In the case when the performance plan consists of many lines, the comparison of both plans is difficult, therefore, in order to facilitate the comparison of statements, "artificial" lines are inserted in the plan in some places.



1.4.2. Full screen

An option has been added to the application that presents charts and execution plans on the entire screen. The functionality is available after clicking on the "full screen" button visible in the upper-right corner of the chart / execution plan.

DBPLUS



The option is available for the single plan view as well as for the Compare Plans option.

Explain plan Graph	Show multiple charts Compare Plans 2971448781 - Add to SQL Plan 1406635509 -
<pre>Show plan objects for 2971448781 Overan: ZX Overan</pre>	<pre>Show plan objects for 1406635509 Conner: ZK Overset: ZK UVENEE STITLEMENT (curs - 44, Symes - 5, Cardinality - 0, Smarth Columns - 0) UVENTE XLINKS_STMMAAY UVENEE STITLEMENT (curs - 4, Symes - 10, Cardinality - 1, Smarth Columns - 0) UVENTE (SAMDES (SX) UXLINKS_STMMAAY UVENEE (SAMDES SCAN) IXLINKS_STMMAAY UVENEE (SAMDES SCAN) IXLINKS SCAN) UVENEE (SAMDES SCAN) IXLINKS SCAN) UVENEE (SAMDES SCAN) IXLINKS SCAN) UVENEE (SAMDES SCAN) UVE</pre>

After clicking on the "full screen" icon, the information contained in the inquiry plans will be displayed in full screen in a new browser window. This will greatly facilitate the possibility of analyzing query plans.

O DBPlus - Performance Monitor × +		• - • ×
C A Niezabezpieczona sqlmon.intercars.local/DPMOracle/explain_plan.aspx A		Pa 🖈 🚺 E
QUERY HASH: 51141286, SID: FK01	2971448781 +	1409635509 +
Order: EX Order: EX	vsh Columne = 4) = 4 : }	Over: EX Over: EX

1.4.3.Small fixes and improvements

As part of the latest update, we added minor permissions and fixes:

Session history presentation in the SORT tab

On the session history screen (path: Session menu> Session / Sort / Undo history), after selecting the session identifier - SID in the filter, the SORT tab displayed an incorrect view without information about the SORT space used by the session. The problem has been corrected.

Additional information about the columns in the index

Information about the details of the columns included in the index has been added to the Show Plan Objects screen for index objects. Additional information such as "Unique value" or "Density" will help verify that the columns are correctly ordered in the index.

DB	ΡΙ	LUS
better	perfo	prmance

NUME Open And And And Section 2 Open And And Section 2 Open And And Section 2 S											
Setting in the setting	SQL TEXT (HASH VALUE: 803499563)		Obje	cts Explorer 🛛 Parse SQL Query 🗸 🛱	EXPLAIN PLAN (PLAN HASH: 1635416733)			X Close Plan Object			
INCRETIONALICAL CALCANA INCRETIONALICAL CALCANA TARK CALCANA CALCANA <td colspan="10"><pre>start * * * * * * * * * * * * * * * * * * *</pre></td>	<pre>start * * * * * * * * * * * * * * * * * * *</pre>										
	OBJECTS USED IN EXPLAIN PLAN				INDEXES FOR SELECTED OBJECT CALLC	ENT.JC_CALL_DATA					
TABLE CALLEENT CALLEENT CALLEENT CALLEONT CALLEONT Option Control CALLEONT CALLEONT CALLEONT CALLEONT CALLEONT Option Control Tampa Control CALLEONT CALLEONT CALLEONT CALLEONT CALLEONT Option Control Tampa Control Tampa Control CALLEONT CALLEONT CALLEONT CALLEONT CALLEONT Tampa Control Tampa Control Tampa Control CALLEONT CALLEONT CALLEONT CALLEONT CALLEONT Tampa Control Tampa Control <t< td=""><td>Туре</td><td>Owner</td><td></td><td>Object Name</td><td>Own</td><td colspan="5">Owner Name</td></t<>	Туре	Owner		Object Name	Own	Owner Name					
olicEnt pic_OLL_ONT OBJECT CLICENT CLICENT <t< td=""><td>TABLE</td><td>CALLCENT</td><td>IC_CALL_DAT</td><td>A</td><td>CALLCENT</td><td></td><td colspan="5">IC_CALL_DATA_CALLID_IDX</td></t<>	TABLE	CALLCENT	IC_CALL_DAT	A	CALLCENT		IC_CALL_DATA_CALLID_IDX				
pic_LCENT pic_LLEDAT_CALLSTANT_DAX CALLECT CALL_CATA_CALLSTANT_DAX CALLECT CALL_CATA_CALLSTANT_CALL CALLECT CALL_CATA_CALLSTANT_CALL CALLECT CALL_CATA_CALLSTANT_CALL CALLECT CALL_CATA_CALLSTANT_CALLST					CALLCENT		PK_IC_CALL_DATA				
Operations Delaster INDEX_CALL_DDAX_CALL_DD Image: Call participant of the partitetee of the participant of the partitetee of the participant of t					CALLCENT		IC_CALL_DATA_CALLSTART_IDX				
Operations											
Vieweiter Peaktion Peaktion Type Length Utilipie refere Density Lannahyzet Sample area Culture 4 4000 APCAR2 0.000 5.000000000000000000000000000000000000	Object columns Details for INDEX CALLO	CENT.IC_CALL_DATA_CALLID_IDX						Load object properties (slower)			
Column Paction Type Length Observations Operation Last analyzed Sample state CALLID CALLSCOMO 4 ARCLAR2 6 6 5 10 000000000000000000000000000000000000	Control by country hame	_									
CALLED 1 VRRCHAR2 0 51152 0.00000/17/2021-96-20 22:91.5 21 CALLEGENO 2 LUMBER 22 2 0.0000000/02:149-20 22:91.5 3 3 CALLSFART 3 TMESTAMP(7) 1 4.46 240 0.00000000/02:149-20 22:91.5 9.574.5	Column	Position	Туре	Length	Unique values	Density	Last analyzed	Sample size			
2 UMBER 22 22 0.00000000000000000000000000000000000	CALLID 1	VA	ARCHAR2	100	5 911 552	0.00000475	2021-06-28 22:09:15	21 67			
3 TNESTANP(7) 11 44840 0.00000002/2021-06-02.22:01:5 9.574.59	CALLSEQNO 2	NU	UMBER	22	22	0.0000000	2021-06-28 22:09:15	8 30			
	CALLSTART 3	ra	MESTAMP(7)	11	4 426 240	0.0000000	2021-06-28 22:09:15	9 574 55			

Presentation of the BINDs

In the SQL Details tab, to verify the parameters with which the query is triggered, display the query with the Online value option. In this case, for a given query plan (if this information is in the database), information will be presented in the Explain Plan tab. The application will present up to 10 values of each parameter. It should be remembered that if the query is executed simultaneously from many sessions, each of them may have a different date formatting set.

III Database	Load Waits	Latches SQL A	sQL Detail	s SQL Plan	Load Trends Comp	are Top SQL	SQL 3D Top Day	Slow SQLs F	erf Counters C	S Stat						
257274743													2 o	Inline values Refr	esh Find SQL	
STATEMENT	View Session (listory = Print Perview Q Format SQL															
SELECT GR	SELECT GRU_T.KOD FROM GRU_T.TCM_GRU_T NREEE TOM_GRU_T.GRU_T.KOD AND TOM_GRU_T.TOM_KOD152 AND GRU_T.MSK-DECODE(:51 ,'T','X','G') CREER BY GRU_T.KOD															
50. EXITISTICS (50. ID: Bejthrepship) Grid view: General statistics + O											\$					
Plan hash	hash Parsing schema Elapsed Time Cpu Time Rows processed Petrles Executions Parse Calls Disk Reads Disk Reads Disk Reads Disk Reads Uniter Caulity Versions count Module Outline category Elapsed Time per Exec															
434371058	TERIN	6 045	4 3 294.6	104 766 8	51 152 184 13	47 407 40	2 90 64	2 778 09	B 6 079	MB 1 455 174 103	100.0)	B JDBC Thin Client	DEFAULT	0.0001	
3757328946	TERIN	12	0 5.7	h 218.8	30 295 514	76 68	4 68	3 4 01	2 31	MB 1 838 697	99.8	8	JDBC Thin Client	DEFAULT	0.0002	
Explain pla	n Graph											Compare	Plans 434371	1058 ¥ 🗠	dd to SQL Plan	
Show	plan objects	for 434371	58												23	
-Owner	TERIN T STATEMENT ()	Cost - 11 , Bytes	- 0 , Cardinality -	0 , Search Colu	uns = 0)											
	ESTED LOOPS (Cost - 11 , Byte	- 92 , Cardinality	- 4 , Search Co	umum = 0)											
	-NESTED LOO	PS (Cost - 11 ,	Bytes - 92 , Cardin	ality - 7 , Sear	ch Columna - 0)											
	-INDEX	(RANGE SCAN)	IOW_GRU_T_PK (Co:	nt - 4 , Sytes -	98 , Cardinality - 1	, Search Columns	- 1)									
	18000 8000	on (ny runny i	onio, ono_i (coi	e i , syster ,	, cardinarity 1	Search Column	• /	_								
-Faran	eters list :B2(VARCHAR2(3)	2)): 'A33DD0',	'AF1A54','D98889	','GOSTA9','A2	EDA3','9D3F1A','I	91379','CF8491	,'ADE007' 🕥									
II L	B1 (VARCHAR2 (3)	2)): 'T'														

SQL Details

In some customers monitoring the Oracle database, the information about the query did not have calculated basic performance statistics such as Elapsed Time or CPU Time. This is usually because the TIMED_STATISTICS parameter is set to "FALSE" at the database level. A message has been added to the SQL Details page to inform you about such an event.

1496155715	i											2	Online values Refres	Find SQL
STATEMENT	TEXT												Print Preview	Q, Format SQL
MERGE /*+ AFLAGS, ST 1), 1, GRE DBMS_STATS S.BLOCKS, SQL STATIST	dynamic_samplin; TATUS, SID, SERIJ KATEST (T.ROWCHT, &_INTERNAL.GET_TZ 'TRUE') ELSE NUI TRCS	g(ST 4) dynamic_ AL#, FART#, BO# M.INSERTS), LEA ABLE_BLOCK_COUNT LL END * NVL(TS.	<pre>sampling_sst_odn() FROM (SELECT /*+ ST((M.INSERTS + M (U.NAME, O.NAME, 1 BLOCKSIZE, :B6))</pre>	ST) */ INTO STAN no_expand dynam .DELETES + M.UPI NULL, NULL, 'IRU OSIZE, 0.0BJ# 00	S_TARGET¢ ST USIN uic_sempling (4) dy NATES), GREATEST(T (E') WHEN S.TYPE¢ NJ¢, O.TYPE¢ TYPE¢	G (SELECT STALM namic_sampling .ROWCNT, (T.ROM = 5 THEN DBMS_3 , 32 AFLAGS, 0	ENESS, OSIZE, OBJ est_odn */ DECOL ACNT + M.INSERIS STAIS_INTERNAL.SE STATUS, :B5 SID,	<pre>P#, TYPE#, CASE W E(BITAND(T.FLAGS - M.DELETES)))) GGMENT_NUMBER_BLO :B4 SERIAL#, NU</pre>	REN STALENESS > ,16), 16, ROUND / (T.ROWCNT + 0. CKS(T.TS\$, T.FII IL PART\$, WOLL F	LOG(0.01, NVL(LC (LOG(0.01, NVL(01))), 0.01)), Z#, T.BLOCK#, S. NO#, TO_NUMBER(P.	C_STALE_PCT, :81 LEAST(100, GREAT 1), -100.0) STALE TYPE#, S.CACHEHIN VALCHAR) LOC_STAL)/100) THEN 12 EST(0.01, (DE NESS, CASE WHE T, NVL(S.SPARE E_PCT FROM SYS	<pre>8 ELSE 0 END + AFLJ CODE (BITAND (M.FLAGS N T.FILE# = 0 THEN 1,0), 0.DATAODJ#, .SEG# 5, SYS.IS# Ti rid view: General</pre>	GS , tatistics → ⊅
Q There	There was found statistics with not collecting Elasped Time or Cpu Time. Please verify settings for TIMED_STATISTICS parameter on database or on session level. This parameter specifies whether or not statistics related to time are collected in database													
Plan hesh	Elapsed Time [Seconds]	Cpu Time [Seconds]	Rows processed	Fetches (Rows)	Executions	Parse Calls	Disk Reads	Diak Reads	Buffers Get (Blocks)	Buffer Quality	Versions count	Module	Outline category	Elapsed Time per 1 Exec [Seconds]
	0				1 000			0						