

DBPLUS Performance Monitor description of changes in the versions 2018.4.1,2018.4.2

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

1 New in version 2018.4.1,2018.4.2

1.1 SQL Management Outline/Baseline/Profile

New version of the application adds the ability to manage objects such as:

- Outlines
- Baselines
- Profiles

1.1.1 Object search

A new **Plan Explorer** menu has been added, available from Database Analysis for each database. The screen provides information about all Outlines / Baselines / Profiles objects established in a given database. Available current information as well as historical data.

Browsing information about Outlines, such information's are presented:

- Signature a unique SQL text identifier
- Name name of the Outline created,
- > Owner the name of the user creating the Outline,
- > Category the category assigned when the Outline was created,
- Used contains information on the use of Outline by the query, [UNUSED] Outline has never been used by the query,
- > Timestamp date of creation of Outline,
- Version Oracle version for which Outline was created,
- Sql id query identifier,
- Hash Values query identifier,
- Statement text query text (SQL text),
- > Compatible whether outline hints for use are compatible during migration,
- Enabled information whether Outline is enabled,
- Format tooltip format [NORMAL / LOCAL]
- Migrated whether Outline has been migrated to SQL Baselines plan.

Attention! Not all Outlines will have assigned the SQL id / Hash Value. This will refer specifically to those Outlines that have been created in the past and for which queries are not currently performed.

Sack to dashboard	III Outlines	Sql Profiles Sql Ba	selines Outlines His	lory Profiles Hist	tory Baselines Hit	story									
O Performance	Filter by Hash Val	Filter by Hash Value Refresh													
Plan Explorer	CURRENT OUTLI	URRENT OUTLINE LIST													
Anomaly monitor	If plan ob)	V If plan object doesn't contain query hash information it could mean that query is executed very fast or plan objects is not used by any query.													
I/O Stats	Q. Search by a	ny value in below plan ob	ijects list												
Space monitor	Signature	Name	Owner	Category	Used	Timestamp	Version	Sql Id	Hash Value	Statement text	Compatible	Enabled	Format	Migrated	
Memory	0x034E85D5A44D	EE XXX13	APPS E	EFAULT	USED	2018-08-21 14:59:36	11.2.0.4.0	a5awcdipdgrua	1792761674	SELECT SUM(DECO	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	4
Sessions	0×164904E208C2/	A1C XXX6	APPS D	EFAULT	USED	2016-04-11 07:39:19	11.2.0.4.0	9uj02ub62kjxb	3425257387	SELECT unique to_ct	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	1
Backups	0x4F1118AA28CEI	F9C XXX5	APPS D	DEFAULT	UNUSED	2015-12-18 12:28:02	11.2.0.4.0			SELECT SUM(accourt	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	I
O. Laster	0x61B767FAA51BI	ED: XXX9	APPS E	DEFAULT	USED	2016-04-20 11:51:07	11.2.0.4.0			UPDATE /"+ use_nl(a	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	
E LOCKS	0x6ED01E4308C7	2F(XXX11	APPS E	DEFAULT	USED	2017-11-07 09:14:09	11.2.0.4.0	6366fsxydm0gt	2094629369	UPDATE XLA_ACCT	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	
Parameters	0x72D367E12DDA	.36 XXX8	APPS E	DEFAULT	USED	2016-04-11 11:33:01	11.2.0.4.0			SELECT SUM(CTL.E.	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	
() Logs	0x95CC80A7C5E2	02 XXX12	APPS E	DEFAULT	USED	2018-04-11 11:45:24	11.2.0.4.0	922k8jxab9at8	1421126440	select data.*, data.trx	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	
T Reports	0x9AA024B5DE4E	CE XXX10	APPS E	DEFAULT	USED	2017-03-22 10:17:46	11.2.0.4.0			INSERT INTO XX_NA	COMPATIBLE	ENABLED	NORMAL	NOT-MIGRATED	
	DETAILS FOR SE	LECTED PLAN OBJECT													
Version: 2018.4.1	SQL Text	hanges history													
	STATEMENT TEX	т													
	SELECT unique (select incrn	to_char(GNT.MENU_ s.name from wf_loc	ID) FROM fnd_grants al_roles incrns, fn	GNT, FND_IREP_F 1_user f where '	FUNCTION_FLAVORS HZ_PARTY' = incr	OBJTAB WHERE GNT. ns.orig_system an	object_id = 4201 d f.user_name =	AND (GNT.grantee 'SOATEST' and f.p	_key in (select r erson_party_id =	ole_name from wf_u incrns.orig_syster	user_roles wur, (_id and incrns.p	select 'SOATEST' artition_id = 9)	name from dual v	union all	^

In addition, information about all Outline is stored in the database in the Outlines History tab. To search for a historical Outline, select the appropriate date range.

Another object that is made available for viewing is SQL Plan Baseline. The information available in the SQL Plan Baseline application includes:

- Signature unique identifier for the SQL text
- Statement text query text (SQL text),
- Sql id / Hash Value query identifier,
- Baseline name plan unique identifier Baseline plan



- Creator user creating Baseline
- > Origin how the Baseline Plan was created:
 - MANUAL-LOAD
 - AUTO-CAPTURE
 - MANUAL-SQLTUNE,
 - AUTO-SQLTUNE
 - Parsing schema the name of the schema,
- Description additional description,

 \geq

- Version database version at the time Baseline was created,
- Created data when Baseline was created,
- Last modified the date when Baseline was last modified,
- Last executed the date when Baseline was last executed,
- Last verified the date when Baseline was last verified,
- Enabled [YES / NO] information whether Baseline is available,
- Accepted [YES / NO] information whether Baseline is accepted,
- Fixed [YES / NO] information whether Baseline is repaired,
- Reproduced [YES / NO] indicates whether the optimizer could recreate the plan,
- > Auto-purge [YES / NO] information whether Baseline is automatically cleaned,
- > Optimizer cost cost optimizer when Baseline was created
- Module the name of the application module
- Action action in the application.

For SQL Baseline, as well as for Outline, information about historical data is also available.

III Outline	s Sql Profi	les	Sql Baselines	Outlines Histi	ory Prof	iles History	Baselines H	listory														
Filter by H	V Hash Value 🖉 Include dropped plan objects Refresh																					
CURRENT	RRENT SQL BASELINE LIST																					
Q If pla	an object does	n't cont	ain query hash i	nformation it	could mea	n that query	is executed	very fast or	plan objects	s is not used	by any query	<i>.</i>										x
Q Sear	h by any value i	n below p	olan objects list																			
Signature	Statement text	Sql Id	Hash Value	Plan baseline name	Creator	Origin	Parsing schema	Description	Version	Created	Last modified	Last executed	Last verified	Enabled	Accepted	Fixed	Reproduced	Autopurge	Optimizer cost	Module	Action	ls Droppe
761543994	SELECT dec			SQL_PLAN_	APPS	MANUAL-LO	APPS		11.2.0.4.0	2018-10-16	2018-10-16 1	2018-10-16 1		YES	YES	NO	YES	YES	94778	XXZOBR12_	Concurrent R	
180867670	SELECT dec			SQL_PLAN_	APPS	MANUAL-LO	APPS		11.2.0.4.0	2018-10-16	2018-10-16 0			NO	YES	NO	YES	YES	195448	XXZOBR12_	Concurrent R	

The Plan Explorer tab also provides information on Sql Profiles. Information is available from the table DBA_SQL_PROFILES.

For each Outlines / Baselines / Profiles object, a function that also displays deleted objects (Drop) is available - functions can be started by selecting "Include dropped plan objects".

1.1.2 Searching for queries related to objects

In the new version, a search engine has been added that is associated with Outlines / Baselines or Profiles. The search engine is available in the Sql Details tab under the [Find SQL] button. The search engine works in two ways:

- searching for queries that used any object in a given period (empty search field),

- searching for queries with an indication of the object's name (field supplemented with the name of the object, e.g. outline)

Statemen	t by text									36
Plan Flip-	Flop Statemen	XXX13								
New state	ements	Searc	h queries using outlin	nes 🗹 Searc	h queries usin	g profiles 🖉	Search querie	s using baselines		*
Statemen	ts using object	S Date from	2018/11/27	D		2018/11/27	23.59	di. Telumeu stat		•
Queries u	using plan obj									Search
FIND RESUL	LTS									
Hash Value	Outline name	Profile name Ba	seline plan name	Elapsed Time [Seconds]	Cpu Time [Seconds]	Executions	Disk reads [MB]	Buffer gets [Blocks]	Rows processed	Query text
1792761674	XXX13			5 402.88	414.34	13 647 832	10 919 MB	1 792 761 674	13 647 345	SELECT SUM(DECODE(CTL



1.2 Anomaly Monitor

In the new version of the application, the functionality of viewing anomalies (alerts) has been added. The browser is available from the Database Analysis> Anomaly Monitor database details.

1.2.1 Problem event viewer in the database

On the page user can choose between two tabs: Reasons Analysis and Reasons Overview.



1.2.1.1 Reasons Analysis

On the page you can choose several filters to help you find the problem you are looking for. As part of the filtering these options are available:

- · choosing a date or range of dates,
- sorting after month, day, hour, snap,
- (Trends or Online) the ability to indicate which type of alerts we want to view,
- Hash value selection of alerts in which the indicated query identifier occurred,
- Reason list the opportunity to indicate the dedicated causes of the problem,
- · Alert lists the ability to indicate dedicated alerts.

Screen of available filters on the Anomaly Monitor page:

III Reasons Analysis Reasons Overview									
ate from: 2018/11/19 to: 2018/12/03 Show reason type 🖉 Trends 🔍 Online Using Hash Value: Enter hash value Group by Day 🗸 Refresh									
Hide additional filters									
Reasons list	Reasons selected to filter	Alerts list	Alerts selected to filter						
Search by name	*	Search by name	-						
Network problem not caused by I/O disk storeage iss Performance problem for specified SQL Statements Performance problem for specified SQL Statements Performance problem for specified SQL Statements		IO:Block writes IO:Disk reads IO:Disk writes IO:Bead time							
Data writes time problem caused by slow I/O response Problem - wait: log file parallel write	*	IO:Single Block Read time IO:Single Block Write time	~						

After configuring the appropriate filters, click the [Refresh] button. As a result, a graph will be presented in which, apart from the basic data bases such as Elapsed Time, CPU Time o Waits, the number of occurrences of a given problem per unit of time will be presented in the form of bars in the graph. By indicating a given bar on the chart, a tooltip will be presented with information containing data on basic measures as well as the number of instances of a given problem per unit of time.



Reasons Analysis Reasons Overview		
Date from: 2018/11/19 to: 2018/12/03 Show reason type	e 🗷 Trends 🔲 Online Using Hash Value: Enter hash value	Group by Day 👻 Refresh
	Show additional filters	
REASONS & ALERTS IN LOAD TREND VIEW		Clear selectio
	Oracle trend statistics 2018-11-30 Elapsed Time: 120641 s Cpu Time: 47696 s • Waits: 20897 s • Data writes time problem caused by slow I/O response: 3 occurences • Data writes time problem caused by slow I/O response: 3 occurences • Performance check: 5 occurences • Elapsed Time: - Cpu Time: - Waits	2018-12-01 2018-12-03

Below the graph is a table containing additional information about the causes of alerts presented in the graph. The table contains:

- Start date / End date date range in which the given reason occurred,
- Class the class / area to which the given reason was assigned,
- Reason for the problem the cause of the problem,
- Occurance the number of instances of a given cause in the selected date range
- Alerts trends involved / IO involved / SQL Query involved sets of alerts included in the definition of a given problem cause.

The user can indicate the reasons for the problem in the table. Each selection / uncheck will convert the data in the chart and present only the selected rows.



The data contained in the table are average data for all occurrences of a given reason. For a more in-depth analysis of a given problem, after selecting a row, the table will display additional detailed information in the **Alerts Details** tab. This view contains information on alerts that have exceeded the thresholds defined for the given cause of the problem.

There is also a view grouping alerts of the same type that occurred after each other. This allows you to verify how long the problem lasted. This information is available in the Reasons Occurance Statistics tab.

Reasons Occurance Statistics	Alerts Details							
REASONS CHARACTERISTIC BETW	REASONS CHARACTERISTIC BETWEEN 2018-12-04 05:38:02 - 2018-12-14 17:44:14 FOR PERFORMANCE CHECK							
Start date		End date	Snapshots occurance	Problem duration rounded to snap intervals [HH:MI:SS]				
2018-12-04 05:38:02		2018-12-04 06:08:29	3	00:45:27				
2018-12-04 11:12:55		2018-12-04 11:12:55	1	00:15:00				
2018-12-05 05:59:20		2018-12-05 05:59:20	1	00:15:00				
2018-12-06 05:34:58		2018-12-06 05:34:58	1	00:15:00				
2018-12-07 15:56:14		2018-12-07 15:56:14	1	00:15:00				



In the case below for one (Occurrence = 1) occurrence of the problem Data reads time problem caused by slow I / O response. Values for each of the alert defined for this problem which exceeded the threshold values were presented.

Alerts Details									
LIST OF ALERTS GE	LIST OF ALERTS GENERETED IN 2018-11-16 22:19:43 FOR REASON DATA READS TIME PROBLEM CAUSED BY SLOW I/O RESPONSE								
Logdate 🔺	Level	Alert name	Hash value	Message					
2018-11-16 22:19:43	Critical	Read time		Alert Type: I/O Stat, The measured statistic value is 110 % higher than average , Last value: 1814 s, Reference history value: 862.4 s					
2018-11-16 22:19:43	Critical	Single Block Read time		Alert Type: I/O Stat, The measured statistic value is 135 % higher than average , Last value: 0.0035 s, Reference history value: 0.0015 s					
2018-11-16 22:19:43	Warning	Elapsed Time		Alert Type: Load Trends, The measured statistic value is 81 % higher than average , Last value: 7557 s, Reference history value: 4164 s					

Note: information in the Alerts Details tab is only available for the last selected cause of the problem.

1.2.1.2 **Reasons Overwiew**

As part of this tab, the application allows you to view problems in one set. We can choose the same filters as for the Reasons Analysis tab and additionally the option of marking / deselecting grouping after the Cause.

III Reasons Analysis Reasons Overview								
e from: 💼 2018/11/01 ID: 💼 2018/12/03 Show reason type 🖉 Trends 🗈 Online Using Hash Value: Enter hash value								
	Hide additional filters	i .						
Reasons list	Reasons selected to filter	Alerts list	Alerts selected to filter					
Search by name	*	Search by name	*					
Network problem not caused by I/O disk storeage iss. Performance problem for specified SQL Statements Performance problem for specified SQL Statements Data writes time problem caused by slow I/O resport		IO:Block writes IO:Disk reads IO:Disk writes IO:Read time IO:Single Block Read time						
Problem - wait: log file parallel write	·	IO:Single Block Write time	*					

Depending on the checkbox [Group by reason], alert data will be displayed in various lists:

selected •

REASONS & ALERTS	REASONS & ALERTS OVERVIEW							
Logdate		Reason name						
	I/O/Data writes time problem caused by slow I/O response							
	Single Block Write time	Alert Type: I/O Stat, The measured statistic value is 10.5 times higher than allowed maximum , Last value: 1.87 s, Reference history value: 0.1623 s						
	Write time	Alert Type: I/O Stat, The measured statistic value is 2.6 times higher than allowed maximum , Last value: 10137 s, Reference history value: 2849 s						
2018-12-02 06:32:14	Wait Event Time	Alert Type: Load Trends, The measured statistic value is 119 % higher than average , Wait: log file sync, Last value: 60.6 s, Reference history value: 27.6 s						
	Elapsed Time	Alert Type: Load Trends, The measured statistic value is 66 % higher than average , Last value: 1769 s, Reference history value: 1067 s						
• ur	unselected							

•	unse	lected

REASONS & ALERT	REASONS & ALERTS OVERVIEW							
Logdate	Reason	Level	Alert name	Hash value	Message			
2018-12-02 06:32:14	I/O/Data writes time problem caused by slow I/O response	Critical	Single Block Write time		Alert Type: I/O Stat, The measured statistic value is 10.5 times higher than allowed maximum , Last value: 1.87 s, Reference history value: 0.1623 s			
2018-12-02 06:32:14	I/O/Data writes time problem caused by slow I/O response	Critical	Write time		Alert Type: I/O Stat, The measured statistic value is 2.6 times higher than allowed maximum , Last value: 10137 s, Reference history value: 2849 s			
2018-12-02 06:32:14	I/O/Data writes time problem caused by slow I/O response	Critical	Wait Event Time		Alert Type: Load Trends, The measured statistic value is 119 % higher than average , Wait: log file sync, Last value: 60.6 s, Reference history value: 27.6 s			
2018-12-02 06:32:14	I/O/Data writes time problem caused by slow I/O response	Warning	Elapsed Time		Alert Type: Load Trends, The measured statistic value is 66 % higher than average , Last value: 1769 s, Reference history value: 1067 s			
2018-12-02 06:32:14	I/O/Increase of query processing time caused by slow I/O response	Critical	Single Block Write time		Alert Type: I/O Stat, The measured statistic value is 10.5 times higher than allowed maximum , Last value: 1.87 s, Reference history value: 0.1623 s			

1.2.2 Setting a class for a given cause of the problem

In the new version of the application, information about the class assigned to the cause of the problem has been added. Setting the class is nothing but an additional categorization of problems. The problem class is defined in the dictionary table available in the menu Configuration> References lists> Reasons class.



Reference types management		
REFERENCE	REFERENCE LIST ITEMS	
List Name	Enter the name for new item	Add item
Server types	Name	
	1/0	Edit ×
Reason class	Network	Edit
	Memory	Edit ×
	Lock	Edit
	Log	Edit
	Latch	Edit ×
	New process	Edit

The class can be set by defining the new cause of the problem as well as modifying the existing one in the **Reasons & Problems definition** tab

Reason description	Network problem not caused by	I/O disk storeage issues			
Calculation Type	Based on Trends				
Reason Class	1/0 +				
Enabled					
les & Formulas	otifications & Conditions				
AND OR				Add rule Add	group
Trends:Wait	Event Time - [TCP Socket%] 👻			D	elete
AND OF			Add rule	Add group De	elete
	ND OR		Add rule	Add group Dele	te
	NOT:10:Disk reads 👻			Delete	
	NOT:IO:Single Block Read time	-		Delete	
es preview: Trends:Wai	Event Time - [TCP Socket%] AND ((NO	CIO:Disk reads AND NOT	10:Single Block Re	ad time) OR (NOT I	D:Disk write
D NOT:IO:Single Block	write unie))				

1.2.3 Change in verifying the change of the query explain plan

The new version has modified the functionality associated with verification whether the impact on exceeding the threshold set in the alert definition (applies only to alerts for queries - SQL Query) was influenced by the change of the query plan.

From now on the Alert definition for e.g. Elapsed Time with the change plan check option will be presented and configured separately than the Elapsed Time alert without this option selected.

Dashboard	III Mail set	ings General settings	Alerts definition	Reasons & Problems definition	Events subscription								
Database Analysis										Refresh			
Space monitor	ALERTS CO	ALERTS CONFIGURATION Add new alert											
Parameters	Alert type •	Alert description Enabled Level value WARNING Level value CRIT											
1 Reports	Sql Query	Execution	2 50 %										
Servers monitor	Sql Query	Elapsed Time (for plan cha	ied Time (for plan changes only)										
Configuration	Sql Query	Elapsed Time per 1 exec (f	or plan changes only)				2	2	50 %	100 %			
 Settings Databases 	Sql Query	Disk reads (for plan change	es only)		2					100 %			
 References lists Security 	Sql Query	Execution (for plan change	s only)				2	×.	50 %	100 %	-		
Alert settings	Load Trends	Elapsed Time					2	8	50 %	100 %			
🗇 Help	Load Trends	Wait Time					2	×	30 %	80 %			



This change allows for more precisely defining problem definitions that cause the database performance degradation.

III M	ail settings	Gene	eral settings	Alerts definition	Reasons & Problems definition	Events subscription								
										Refresh				
Q	Q List of performance problems which apply to all oracle databases. Please be aware that Online issues are calculated every 30 seconds other problems every 15 minutes. Any changes in below lists are recognizes by DBPLUS.Catcher monitoring service up to 15 minutes													
REAS	Add new definition													
Тур	e	Class			Reason/Problem description		ł	habled						
Trends	Pr	ocess	Problems co	ouse Query change pl	lan		P		Trends:Elapsed Time AND (SQLQuery:Elapsed Time (for plan changes only	y) AND SQLQuery				
Trends	Pr	ocess	Database p	erformance degradati	on couse SQL query change plan		2		(Trends:Elapsed Time AND Trends:Wait Time AND Trends:Execution) AND	(NOT:SQLQuery:1				
Trends	1/0)	Network pro	blem not caused by I.	/O disk storeage issues		2		Trends:Wait Event Time - [TCP Socket%] AND ((NOT:IO:Disk reads AND NO	OT:IO:Single Block				
Trends	1/0)	Problems co	ouse increase Executi	ions and Disk Reads		P	1	Trends:Elapsed Time AND ((SQLQuery:Elapsed Time AND SQLQuery:Elapsed	sed Time per 1 exe				

1.2.4 New parameter controlling the alert function

The new Minimal History Days parameter has been added for alert settings. The parameter is visible in the main menu Configuration> Alerts settings in the General settings tab. It mainly concerns new databases connected to monitoring. Specifies the minimum time after which trend-based alerts will be calculated. The problem occurred after start monitoring new database a large part of alerts was not able to correctly show

the problem due to the lack of a "stable" trend. The parameter is modifiable and can be changed if necessary.

D	BPIUS Better performance	:a: 1	for ORACLE									
	Dashboard		Mail settings Gene	ral settings	Alerts definition	Reasons & Problems definition	Events subscription					
	Database Analysis		Elanaed Time areator	400]							
	Space monitor		than	400 👻	400 seconds Alerts would only be ran it the eliapsed unite for an sqr statements would take at least seconds in duration of 15 minutes (snapshot time)							
	Parameters		History Days	🕑 Mon 🛛	Mon 🕏 Tue 🕏 Wed 🕏 Thu 🕏 Fri 🔲 Sat 🗎 Sun recomend to select working days only							
ω.	Reports			We recomen								
0	Servers monitor		Number of Days Back	30	How long history w	rould be included in snapshot alerts	s calculation					
٥	Configuration	1	In History	5	<i>N</i> .							
ŀ			Minimal History Days	7 *	Minimal number of	days required to calculate trend es	stimations. It lets to avoid random alerts when instance monitring has just started					
	Security	5	TATEMENTS SETTINGS									
	Alert settings		Number of Top Queries	20	chosen by Elaps	sed time + How many top	p statements from each snapshot would be check by Alert Engine					
(e)			to check	Ţ								
Vers 2018	sion: 8.4.2		Number of Days Back in History	7	How long statemer	nt history would be included in snar	pshot alerts calculation					



1.3 Changes in the DBPLUSCATCHER monitoring service

1.3.1 Support for communication error ORA – 12571

A correction for the DBPLUSORACLECATHER service related to the ORA-12571 communication error has been implemented. The problem was the failure to execute the procedure in the event of receiving such an error code. Currently, this error will cause the DBPLUSORACLECATHER service to restart.

1.3.2 Support for the problem of the lack of space caused by the long procedure of searching for literals

The problem occurred in databases in which there is a high level of queries using literals. In some cases, a high percentage of literals caused delays in generating a snap. The problem has been fixed and will not occur in later versions.

1.4 Group wait by class, screen Waits > Analyze

The new version of the software has added wait sort functionality by class. Depending on the period you selected, you can now see the share of a given class in the total number of waits. The functionality works for grouping after performance wait and for all waits.



The data is also available in a tabular version. A validation class was assigned to each valid.

WAITS STATISTICS			
Q. Search wait by any value from below table column			
Name	Class	Total wait time in period [Seconds]	Load [%]
TCP Socket (KGAS)	Network	2 717 547.690	41.8
db file sequential read	User I/O	1 832 068.380	28.2
log file sync	Commit	621 167.250	9.6
db file parallel write	System I/O	404 865.220	6.2
log file parallel write	System I/O	229 403.240	3.5
enq: TX - row lock contention	Application	140 640.650	2.2
read by other session	User I/O	106 637.980	1.6
db file scattered read	User I/O	100 981.600	1.6



1.5 Searching for sessions for a given waits, screen Session/Sort/Undo history

The new version of the application adds the ability to search information about the user's session using a given type of wait. We start the search by pressing the "Hide additional filters" button and then from the list of available waits we add the ones we want to view.

After pressing the Refresh button, only those sessions that were waiting, for a wait selected by the user from the list will be presented in the given period.

At the same time, you can also select other filters, e.g. such as SID session ID or Hash Value.

III Sessions So	ort usage sessions	Undo usage sessions	Sessions history Ses	sion / Sort / Undo histo	ry									
From: 2018/11	1/23 00:00 to: [2018/11/23 23:59	Using Hash Value/Sql Id:	Enter hash value or sq	(id Username:	Enter username	Sid:					Refresh		
5						Hide additional filters								
Perform	nance Waits	Waits	selected to filtering	Machine:										
Search by name cursor pin S	Search by name Duffer busy Walts buffer deadlock cursor pin S control file heartbeat													
cursor: pin S wait on X		control file heart	beat ential read	Module;										
db file async I/O sub db file parallel write	omit	db file parallel re	ad											
db file scattered read	d	•)										
Sessions Sort	Undo													
Logdate	Sid	Serial#	Hash Value	User	Active Time [Seconds]	Schema	OS User	Machine	Program	Module	Wait	Blocking session		
2018-11-23 04:59:15	21410	47505	234068008	FKRYNICK_INTER	1	FKRYNICK_INTER	rkwie	INTER\TS15E	samolot.exe	samolot.exe	buffer busy waits	0		
2018-11-23 05:00:20	2830	15843	2104281773	INTER	3	INTER	oracle	u3gaja	oracle@u3gaja (J033)		buffer busy waits	0		
2018-11-23 05:00:20	3319	22803	1216626633	CRM	101	CRM	crm	INTER\CRMSQL31	sqlservr.exe	sqlservr.exe	db file parallel read	0		
2018-11-23 05:01:24	1026	48407	2717635498	SYNCRON	C	SYNCRON	mluka	DEVEL-RUNTIME	dbfexp.exe	dbfexp.exe	buffer busy waits	0		
2018-11-23 05:03:31	3319	22803	1216626633	CRM	290	CRM	crm	INTER\CRMSQL31	sqlservr.exe	sqlservr.exe	db file parallel read	0		
2018-11-23 05:04:33	4961	11065	1180465985	DMACHURA_INTER	2	DMACHURA_INTER	dmachur	INTER\TS48			buffer busy waits	0		
2018-11-23 05:04:33	31941	14713	1586261291	MLATKA_INTER	1	MLATKA_INTER	mlatk-	INTER\TS42			buffer busy waits	0		

1.6 Information on scheduled work and scheduled monitoring shutdowns

The new version of the application allows users to schedule dates and times when work should be executed as well as planning when to disable the monitoring system.

Disabling monitoring as well as recording scheduled work is available in the main menu of the Servers monitor tab:

- Schedules outages (disabling the database with monitoring)
- Scheduled works

1.6.3 Disabling the monitoring database

After entering the tab, we can view information about scheduled monitoring shutdowns. On the website, only the exclusions for the current day as well as those scheduled in the future are visible by default. The information can be viewed for all databases as well as for a specific database. To add a new entry, click the [Add new outage] button.

Scheduled outages											
Date from: 2018/11/26 to:	Filter	by database All databases *			Refresh						
DATABASES OUTAGES SCHEDULE Add new											
Q Outages information and its schedules are ref	eshed wi	thin 15 minutes.			×						
Database	Enabled	Period	Outage days	Outage hours	Reason						
FK08T		From 2018-11-24 to 2018-11-28	Every Sat, Sun	between 17:00 - 17:20	Outage module testing						
FK08T	×	From 2018-11-26 to 2018-11-26	Every Mon	between 14:40 - 15:00	testowe wyłączenie monitoringu						

After clicking, we choose which database should be turned off, and then choose whether the shutdown should be:

- single or recurring,
- last one or many days,
- is expected to occur on a specific day of the week.

After selection, we add information about the reason for the exclusion and accept configurations. After the correctly entered configuration, the new entry will be visible in the table. It must be remembered that the information about the shutdown will appear on the chart when the new / next snapshot is generated.



DUTAGE DEFINITION	
Database	FK08T +
Enabled	
Period setting	
Use begin date	2018/11/24
Use end date	2018/11/28
Days patern and hours range	
Outage day(s)	Mon Tue Wed Thu Fri 🗹 Sat 🗹 Sun
Use range by hours for specified day(s)	☑ 17:00 - 17:20
Outage reason and description	
Outage module testing	

Information about monitoring service being shut down is visible on the Dashboard screen:

in the case of Television mode - a yellow mark next to the database and a description of "Monitoring Outage"

DBPIUS Better performance	DBPIUS Better performance for ORACLE												
Dashboard	Oracle dashboard monitor	Seconds to next refresh: 13	Full Screen	ALL DATABASES +	Q. Search instance	Toggle view:							
Database Analysis													
 Servers monitor 	• dbplus@XE	REPOSITORY											
Configuration	a ⁴	å											
🔘 Help	econdece	a a a a a a a a a a a a a a a a a a a											
Version: 2018.4.2	0 09:25:45 09:27:15 09:29:45	and are and and											
	Server Cpu 🗮 🛛 18	Monitoring Outage 😃 🛛 N/A											
	Waits Q 0	Waits Q 0											
		Server Cpu 📃 🛛											

> in the case of Icons view

In this view, the base is also marked in yellow, which means a break in monitoring. As well as the base in which monitoring has been disabled, it is not included in the number of active databases.

Servers	2 Databases	1 Active Databases
VYSICAL SERVERS Performing well Wa	rning • Overloaded • Not available	
RACLE INSTANCES • Performing well • Wa	rning 🔹 Overloaded 🔹 Not available 🚽 Moni	itoring in outage Q. Search instance



➢ in case of Grid view

Oracle da	ishboard monitor							Secor	ids to next refresh: 7	ALL DATAB	ASES - Toggle	view:
SUMMARY FOR A	SUMMARY FOR ALL DATABASES											
	1 Servers	2 Databases		1 Active Datab	8565	Sumr	nary of Waits		Summary of IO Wa	its •	Summary	f Lock Waits
ORACLE INSTANC	ES Q, Search instance											
Database Type	Machine	Database	Active	CPU Usage [%]	Waits [s/1s]	IO Waits [s/1s]	Locks [s/1s]	Latches [si1s]	Alerts	Sessions	Transactions	Total space [GB]
NOT SPECIFIED	DESKTOP-HR1BE66	XE_2	2	6 🖷	0.00 👄	0.00 😐	0.00 🗢	0.00 •	(1		5.9
NOT SPECIFIED												

Information about turning off the monitoring is visible in the graph of current CPU utilization for a given database in the form of yellow vertical bars.



Information about disabling is also visible on the Database Load chart. In case the database is excluded from monitoring, yellow vertical bars appear in the graph. At the moment of disabling, information on statistics is not collected.



1.6.4 Planning work and implementations

After entering the tab, we can view information about the upcoming scheduled work. On the website, only works for the current day as well as those scheduled in the future are visible by default. The information can be viewed for all databases as well as for a specific database. The functionality is created to present information about scheduled work that may affect the performance of the database. To add a new entry, click the [Add new work or tag] button.

Scheduled works & timeline tags										
Date from: 💼 2019/11/26 It: 💼 Filter by database -										
PLAINED WORKS & TIMELINE TAGS SCHEDULE Add new v										
Q Planned works, timeline tags are visible on Database load, Lo	ad Trends charts for specified databases		×							
Database	Timeline	Work title	Details & Description							
FK08T	2018-11-26 10:56	Wgranie poprawek	Praca testowa							
FK08T	2018-11-26:13:20	wgranie poprawek 2	Praca testowa							



After clicking, we choose for which database the planned work should be registered, and then we choose whether the shutdown should be:

• single or long period

After selecting the range, we add information in the "tag title" field (visible later in the chart), and add detailed information about the planned work, then we accept the configuration. After the correctly entered configuration, the new entry will be visible in the table. It must be remembered that the information about the planned work will appear on the chart when the new / next snapshot is generated.

WORK / TIMELINE TAG DEFINITION		
Database	No database selected 👻	
Timeline setting		
Use period range		
Date	2018/11/26 15:14	
Work / tag description		
Enter tag title		
Enter work/tag detail information		
		/
	OK Cancel	

Information about scheduled work is shown in the Database Load chart in the form of points (single events) or bars in the case of long-term work. After hovering over the point / bar, the information about the scope and the topic of the planned work will be displayed. If work is planned in the future, information about the work will be visible as a point on the right side of the chart.

In addition, from the Database Load level, we can manage deployments by clicking on the [Manage timeline] button.





1.7 Permission management in the DBPLUS Performance Monitor

In the new version of the application, the functionality of giving access to the DBPLUS Performance Monitor screens has been modified. In the new version, the PROFILE access object has been added, which allows assigning appropriate access to the profile and then granting rights by assigning the profile to the user. The way of granting access to each group of objects has also been modified.

Security - Management of application rights									
USER OBJECTS IN THE APPLICATION		Add new o	bject	DETAILS AND PRIVILEGES FOR SELECTED OBJECT					
Enter the object name to search				Object name	DESKT	OPIARTUR			
Name	Туре	Permissions							
ABBURTUR	USER	Own	III	Object Type					
ABB\GRUPA_USERS	GROUP	Own	III	Permissions Type	Use o	wn permissions +			
ADMIN	PROFILE	Inherited	ĪĪĪ						
ADMIN2	PROFILE	Inherited	III	+ C Functions r	rights	Databases access	E Custom privileges	UnSelect All Select	All
ADMIN3	PROFILE	Own	m			abasas			
DESKTOPVARTUR	USER	Own		e Deraut obje	ect privite	eges to functions for Air dat	auases		
			Dashboa Space m Paramet Space m Paramet Servers Lo, Sconfigur S	ard nonitor :ers ad trend monitor iplication gs hedules hedules inedules etaings atabase: eference eccurity ert setti	ds r n architecture s outages d works s is lists ings				

In order to create a new object, eg a profile (PROFILE), click on [Add new object], then select the object type "PROFILES" and give the name of the object.

NEW OBJECT			×
Object name	ADMIN		
Object Type	PROFILE +		
	Add new object	Cancel	

To assign permissions to a given object, select it from the list on the left side of the screen. After clicking on the object on the right side, the page with the access configuration will be displayed. First you need to choose whether the permissions will be:

- own (Use own permissions).
- inherited permissions form parents.

Object name	DESKTOP\ARTUR
Object Type	USER 👻
Permissions Type	Use own permissions

1.7.1 Own permissions

If you choose (own permissions), you have three tabs to configure permissions:

- Function rights,
- Databases access,
- Custom privileges

Functional settings allow you to give rights to pages or functionality in the application at the global level for a given user / group or profile for all databases. You can override these rights by granting custom permissions for a specific database. Custom permissions can only be changed for the Database Analysis module. Custom



permission is superordinate to a given database in relation to functional rights. If you assign custom permissions, the (permissions overwritten) message will be displayed next to the database name.

+ 0 0 + Ft	inctions rights	Databases ac	cess 🗉	Custom privile	ges
Q	Function privileg	jes for Database Ana	alysis modu	le overwrite main 1	function rights
Privilege	s for selected data	base XE_2 (permis	ssions overv	vritten) 👻	
	Database Ana Perform I/O Stal Space n Memory Session Se Backups Locks Locks Locks Cas Parame Logs Reports Per No Plan Ex Anomal	alysis iance ts nonitor / s essions Kill sessions ession Resources s Il sessions ters erformance report ot used indexes plorer y monitor			

In addition, you can restrict access to specific databases. To do this, in the Database access tab, select the appropriate check boxes for a given database or select ALL_DATABASES. If certain bases are restricted, this will also limit the Custom privileges tab.

tions rights	Databases access	Custom privileges						
Object access to databases								
Database								
ALL DATABASES								
XE on host DESKTOP-HR1BE66								
XE_2 on host DESKTOP-HR1BE66								
	tions rights ect access to o Database ALL DATABAS XE on host DE XE_2 on host	tions rights Databases access ect access to databases Database ALL DATABASES XE on host DESKTOP-HR1BE66 XE_2 on host DESKTOP-HR1BE66						

1.7.2 Inherited permisions form parents

If you choose inherited rights, you can specify which profile or profiles to use for a given user or user group. Each profile contains a list of objects and access to which. Granting permissions to multiple profiles for the user will result in the entitlement for a given user being the sum of rights for selected profiles.



🔲 Profi	Profiles assigment						
💡 Per	Q Permissions to inherited from assigned profiles						
Access	Profile Name						
	ADMIN						
	ADMIN2						
	ADMIN3						

Attention! In order to enable the functionality of limited access to the application, you must change the settings at the level of the DBPLUS Configuration Wizard> Applications settings> Applications Options> Configure. As well as change the status of the SECURITY parameter to ON

Dashboard	Settings Dashboard Icon settings	Dashboard Tv Parameters								
Database Analysis	Q List of configuration parameters. P	lease click on the edit button to change par	ameter value.	×						
Space monitor	APPLICATION PARAMETERS	APPLICATION PARAMETERS								
Parameters	Parameter	Value	Description							
1 Reports	SECURITY	ON -	Application can work in SECURITY mode set to ON or to OFF; it means that application uses (or doesn' use) user authentication. Setting the SECURITY to on, it requires at least one user created.							
 Servers monitor 	SECORIT									
Configuration Settings Databases	DASHBOARD_ANIMATE_PARAMETERS ON		Setting is valid for DPM disbloard displayed in television mode. Based on it each og server icon can toggleizinimate automatically its parameters like (server cpu, wals, sessions, etc.)	Edit						
References lists Security Alert settings	LOCKING_SNAPSHOT_FREQUENCY 300		The interval time in seconds between each snapshot of locks made by DBPLUS CATCHER service. The parameter can be setup separately for each instance. In a case of frequent locks, please consider lower value for LOCKING_SNAPSHOT_FREDUENCY in a case of rarely occured locks, please use bigger value for it.	Edit						

Below screen with the DBPLUS Configuration Wizard

It's rec instanc Please In appl enter ti	commended to use the ses monitoring purpos do not use account w ication security tab p he application url) or want to change the p	e same user type/account es. ith administrator privilege: ease specify if application in secure mode (for users rotocol, you have to do it c	for DBPLUSORACLECAT s. should be available in a who authenicate) lirectly in IIS manager.	CHER service, IIS applicati	on and oracle v user who
Application	pool settings (App	PoolDPM)	an to be the second		
Website set	Login type Username Password tings (DBPLUS We	LocalSystem	~		
Protocol	http	~	Binding property	Default	~
Port	80		Host name		
	Application path	C:\Program Files (x86)\[DBPLUS.Or Sel	ect application folder]
Application	security	Use windows authenti	cation in access to appli	cation	
Save config	guration Test	settings			Close



1.8 General improvements

1.8.1 Addition of Hash value query from the SQL Plan level

In the new version of the application, the ability to add the query identifier has been added while viewing information about the Query Plan.

The selection of the query plan is possible by clicking the [Plus] button in the Hash Value column (selecting Group by query).

III Database Load Waits	Latches SQL Analyze	SQL Details SQL Plan Load 1	rends Compare Top S	QL SQL 3D Top Day	Slow SQLs Perf Counters	OS Stat			
Plan hash: 1862874641	From: 2018/11/12	00:00 to: 2018/11/19 23:	59 Group by query					Group by Day 👻	Online values Refresh
PLAN EXECUTION STATIST	ICS								
Date 🕶	Hash value	Elapsed Time [Seconds]	Cpu Time [Seconds]	Rows processed [Rows]	Fetches [Rows]	Executions	Disk Reads	Buffers Get [Blocks]	Elapsed Time per 1 Exec [Seconds]
2018-11-19	3150621122	16 152.0	7 927.9	13 706 881	1 379 440	14 124	56 203	753 210 124	1.1436
2018-11-18	3150621122	41311	2 189.2	17 487 941	1 751 055	3 792	102 549	222 731 559	1.0894
2018-11-17	3150621122	Query: 3150621122	2 604.7	15 965 076	1 599 255	4 550	106 200	261 980 323	1.1062
2018-11-16	3150621122	View sql details	6 579.6	17 918 650	1 799 024	11 700	143 198	648 408 872	1.1596 🗸
Explain plan Graph	Statements using plan	Add to query hash value list							
QUERIES SUMMARY STATI	STICS WHICH USES SPECIFIED E	EXECUTION PLAN							
Hash Value	Sql Id	Elapsed Time [Seconds]	Cpu Time [Seconds]	Rows processed	Fetches [Rows]	Executions	Disk Reads	Buffers Get [Blocks]	Elapsed Time per 1 Exec [Seconds]
3150621122	cugan5qxwpaf2	98 675.0	45 119.9	124 763 2	93 12 525 3	89 79 9	31 940 35	4 396 501 091	1.2345
STATEMENT TEXT FOR HA	SH VALUE: 3150621122								
<pre>/* load one-to-many g as action2_6_0_, act: actionaudi0unit_id error13_6_0_, actiona</pre>	<pre>bl.esp.pay24.domain.impl. lonaudi0action_name as as unit8_6_0_, actionaux audi0request_id as requ</pre>	.paymentTransaction.PaymentT action3_6_0_, actionaudi0 di0user_id as user9_6_0_, mest14_6_0_, actionaudi0st	ransactionImpl.action application_id as app actionaudi0user_role atus as status6_0_ fro	AuditData */ select act licat4_6_0_, actionaudi s_id as user10_6_0_, ac om ACT_AUD_DATA actions	ionaudi0pay_trx_id as 0country_id as country tionaudi0is_client as udi0_ where actionaudi0_	pay16_12_1_, actionaudi '5_6_0_, actionaudi0mo is11_6_0_, actionaudi0_ .pay_trx_id=:1 order by	0id as id1_, actionaudi dule_id as module6_6_0_, .error_code as error12_6_ actionaudi0action_date	0id as id6_0_, actionau actionaudi0system_id as 0_, actionaudi0error_me asc	di0action_date >system7_6_0_, ssage as

1.8.2 The ability to generate a Performance Report in hourly mode

In the new version of the application, we have made it possible to generate a Performance Report by providing specific hours for which the report should be generated. The report can be generated from the database level in the Reports menu.

1.8.3 The ability to export Performance Counters statistics

In the new version of the application, the ability to export performance statistics has been added. The functionality is available from the Perf Counters tab under Database Analysis. Export is possible by changing the chart preview to the tabular form [**Switch to grid**].



Export is performed for statistics previously selected from the table, choosing one from he following Grid options:

Export grid or Export grid with formatted data.

				be	BPLU	JS		
Date from: 2018/11/27 to: 2018/11/27					Group by Snap 👒	Refresh		
HISTORY					Toggle view: 🖼 🗖	Clear selection		
PERFORMANCE COUNTERS STATISTICS DURING SPECIFIED PERI	OD TIME							
\bigcirc Search performance counter by any value in below table								
	Name			Class				
ADG parselock X get attempts			User			-		
ADG parselock X get successes			User					
Batched IO (bound) vector count			Batched IO					
Batched IO (full) vector count			Batched IO					
Batched IO (space) vector count			Batched IO					
Batched IO block miss count			Batched IO					
Batched IO buffer defrag count			Batched IO					
Batched IO double miss count			Batched IO					
Batched IO same unit count			Batched IO					
Batched IO single block count			Batched IO					
SELECTED COUNTERS DETAILS WITHIN SPECIFIED PERIOD			o 11 - 110			Ţ		
Logdate ADG par	rselock X get attempts/User	Batched IO (space) vector count/Batched IO	Batched IO same unit count/Batched IO	Batched IO buffer defrag count/Batched IO	Batched IO double miss count/Bate	ched IO		
2018-11-27 00:03:37	0	0	205 614	3 718		3 209		
2018-11-27 00:18:50	0	0	159 869	3 273		993		
2018-11-27 00:34:01	0	0	519 359	5 021		3 005		
2018-11-27 00:49:14	0	0	10 102	599		1 075		
2018-11-27 01:04:26	0	12 830	Grid option	2 112		24 473		
2018-11-27 01:19:38	0	0	Export grid	1 211		5 344		
2018-11-27 01:34:51	0	0	Export grid with formattee	i data 631		7 863		
2018-11-27 01:50:03	0	0	322 606	2 322		13 419		