

DBPLUS  
Performance Monitor for Oracle  
description of changes in version 2023.2

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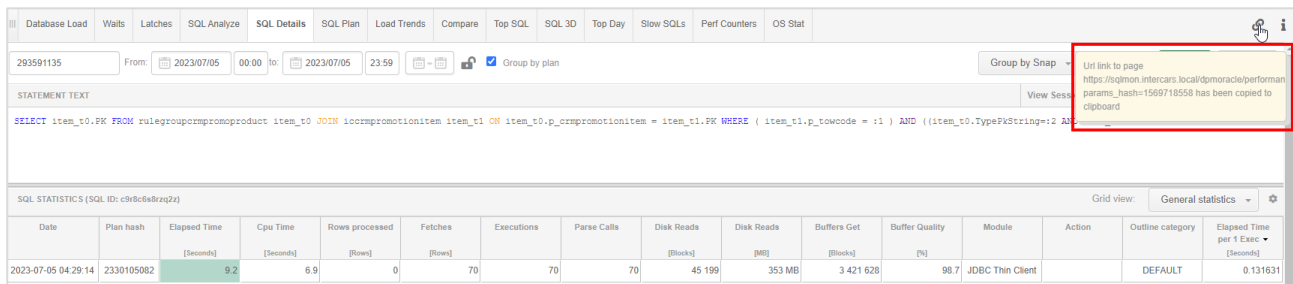
The following is a list of changes to DBPLUS Performance Monitor for monitoring Oracle databases.

## New features in version 202 3.2

### 1. Ability to copy links to application pages

In the latest version, we have added the functionality of copying links to a given application page. A user will be able to send a link to a given application page along with its contents as part of data analysis in the DBPLUS Performance Monitor application. This makes it possible to quickly transfer between users the analysis performed in the Performance Monitor application.

The ability to copy links is available from the instance's performance details by clicking on the link icon in the upper right corner of the screen.



When the button is clicked, the link is automatically added to the clipboard. The link contains a coded configuration, which is only available to read from the Performance Monitor application.

In order to open the page using the link, the user must have access to the application and the database instance to which the submitted link applies. Example url form:

[https://hostname/dpmoracle/performance\\_sql\\_details.aspx?params\\_hash=1321027467](https://hostname/dpmoracle/performance_sql_details.aspx?params_hash=1321027467)

### Improve saving of settings on application pages

In addition, the mechanism for remembering settings on application pages while working with the tool has been improved. Remembering the last settings on the pages of the application allows you to go and return to subsequent pages in the application without any problems. Upon return, the user's last settings are remembered and displayed as they were during the previous entry.

When you return to the Dashboard screen, the memorization is cleared.

### 2. Oracle Alert Log support

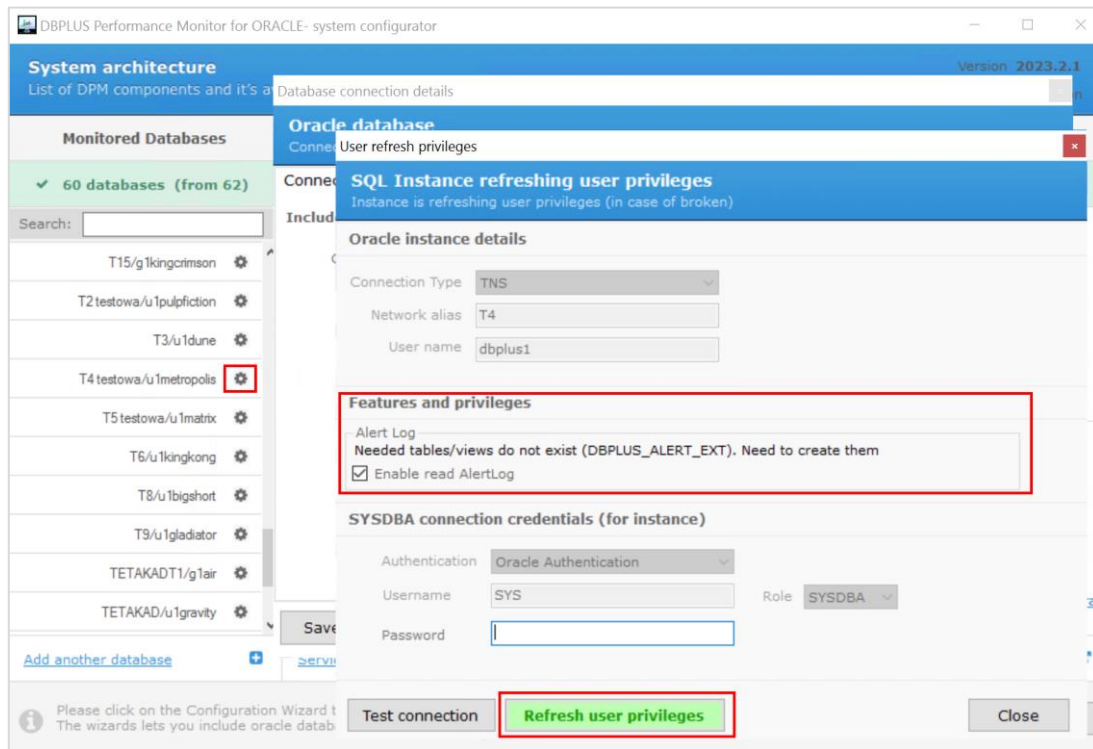
In the latest version of the application, a view containing Oracle database logs has been added to monitoring. The information is available at the database details level in the **Logs** menu under the **Oracle Alert Log** tab.

Immediately after the update, monitoring is not available. When you enter the tab, you will get a message.



To start monitoring, create a dedicated table based on the **X\$DBGALERTEXT** system view with read permissions for the monitoring user.

To do this, from the Configuration Wizard, go to the settings for the database in question and select **Refresh user privileges**. On the dedicated screen, select **Enable read AlertLog** and click Refresh user privileges. Refresh privileges requires the **SYS** user data to be entered. The administrator data is not saved anywhere, it is only needed to create the table and assign permissions.



Once the table is created, the information containing Oracle logs will be monitored by the Performance Monitor application and available in the **Oracle alert Log** tab.

Instance id	Error Instance	Date & Time	Included	Message text	Organization	Component id	Host id	Host Address	Module id
1	0	2023-07-05 13:32:36	<input checked="" type="checkbox"/>	Thread 1 advanced to log sequence 1613 (LGWR switch)	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 13:32:36	<input checked="" type="checkbox"/>	Current log# 1 seq# 1613 mem# 0: C:\ORACLE\APP\ORACLE\FAST_RECOVERY_AREA\XE\ONLINELOG\O1_MF_1_HZS6N...	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 13:32:33	<input checked="" type="checkbox"/>	Thread 1 cannot allocate new log, sequence 1613	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 13:32:33	<input checked="" type="checkbox"/>	Private strand flush not complete	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 13:32:33	<input checked="" type="checkbox"/>	Current log# 2 seq# 1612 mem# 0: C:\ORACLE\APP\ORACLE\FAST_RECOVERY_AREA\XE\ONLINELOG\O1_MF_2_HZS6N...	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 12:54:29	<input checked="" type="checkbox"/>	Time drift detected. Please check VKTM trace file for more details	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 11:55:55	<input checked="" type="checkbox"/>	Thread 1 advanced to log sequence 1612 (LGWR switch)	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 11:55:55	<input checked="" type="checkbox"/>	Current log# 2 seq# 1612 mem# 0: C:\ORACLE\APP\ORACLE\FAST_RECOVERY_AREA\XE\ONLINELOG\O1_MF_2_HZS6N...	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 10:05:28	<input checked="" type="checkbox"/>	Thread 1 advanced to log sequence 1611 (LGWR switch)	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 10:05:28	<input checked="" type="checkbox"/>	Current log# 1 seq# 1611 mem# 0: C:\ORACLE\APP\ORACLE\FAST_RECOVERY_AREA\XE\ONLINELOG\O1_MF_1_HZS6N...	oracle	rdtms	DESKTOP-HR...	...	
1	0	2023-07-05 09:26:23	<input type="checkbox"/>	ORA-60013: invalid MAXSIZE storage option value	oracle	rdtms	DESKTOP-HR...	...	SQL Developer
1	0	2023-07-05 09:24:45	<input checked="" type="checkbox"/>	ORA-12315: database link type is invalid for the ALTER DATABASE statement	oracle	rdtms	DESKTOP-HR...	...	SQL Developer
1	0	2023-07-05 08:42:23	<input checked="" type="checkbox"/>	Time drift detected. Please check VKTM trace file for more details	oracle	rdtms	DESKTOP-HR...	...	

In addition, if Oracle ORA errors occur in the log, a dedicated message will be displayed in the form of a Log Alerts alert. The alerts can be seen on the Dashboard screen, Database Load and of course in Anomaly Monitor under Non Performance Alerts.

**Details**

**Oracle Alert Log problem**  
Details: Oracle ORA error messages detected. Go to the Menu Logs > Oracle AlertLog tab to verify details.

2023-07-05 09:24:45 ORA-12315: database link type is invalid for the ALTER DATABASE statement

The user also has the ability to manage for which ORA errors should be displayed in the Performance Monitor application. For this purpose, a dedicated configuration has been created in the **Configuration > Alert Settings** menu of the **Non Performance Alerts** tab.

The screenshot shows the 'Non Performance Alerts' configuration page. The main area is titled 'DEFINITION OF INCLUDING/REJECTING ORA NUMBERS ALERT LOG' and contains a table with the following data:

id	Level	Category	Type	Action	Number ORA items	Number ORA to	Description	Frequency
2	Global	Alert Log	Based on Alert Log	Exclude	200	299	Example numbers to exclude	15 min
1	Global	Alert Log	Based on Alert Log	Include	0	50000	All ORA numbers included	15 min

On the right side, there are configuration options for the selected action (id: 1):

- Level: Global
- Category: Alert Log
- Type: Based on Alert Log
- Action: Include
- Range of ORA numbers: from-to: 0 to 50000
- Description: All ORA numbers included
- Frequency: 15 min

Buttons for 'Save changes' and 'Delete this row' are visible at the bottom right.

On the site, the user can manage the configuration of alerts based on Oracle logs.

### 3. Improve monitoring of execution plans

An Oracle bug related to query plans has been handled in the latest version. The bug was related to a scenario when different execution plans were stored in system views for the same query plan ID. The problem was handled inside the Performance Monitor application.

The fix also applies to performance anomaly detection in Anomaly Monitor. When there is a change in the execution plan, the application compares the contents of the plan and reports the problem only if the plans on which the query runs differ.

### 4. Additional filtering capabilities

On some of the screens in **Top SQL**, **Sql 3D**, **Slow Sql**, additional filters have been added to limit the queries displayed to those run by the module data or containing actions. To filter the data, select **Show additional filters** and then complete the dedicated filter.

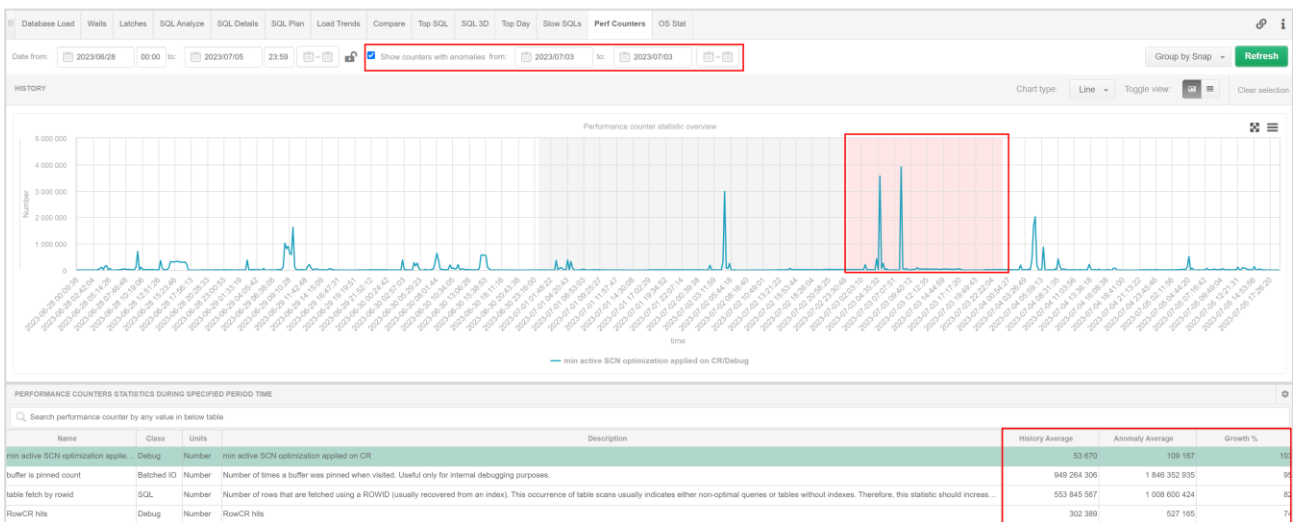
Query text	Hash Value	Sql Id	Plan Hash	Elapsed Time (seconds)	Cpu Time (seconds)	Time per 1 exec (seconds)	Sorts (rows)	Fetches (rows)	Executions	Disk reads (MB)	Buffer gets (blocks)	Module	Rows processed (rows)	Buffer quality (%)
INSERT INTO DBPLUS_TAB9 (SNAP_ID, SERVER...	2027342021	5vnh145wdok65	0	0.97	0.06	0.0039	0	0	249	0 MB	22 470	Sessions/Undo/Lock...	5 601	96.8
SELECT /*+RULE */ a.inst_id, a.sid, a.serial# a.sql_h...	2493728519	flnyehysafla7	530757277	0.46	0.03	0.0018	1 370	249	249	0	411	Sessions/Undo/Lock...	320	100.0
select /*+RULE */ t1 from dual where exists (select t1 fr...	1284254591	dpc1rcn958anz	501286428	0.24	0.05	0.0009	996	249	249	0	0	Sessions/Undo/Lock...	29	0
select inst_id, last_call_et, username, sq_hhash_val...	2844392438	b0w7rsqrsmyzq	644658511	0.22	0.02	0.0009	0	249	249	0	0	Sessions/Undo/Lock...	5 577	100.0
select /*+RULE */ laid_inst_id, l_type, l_id, l_inod...	3665194514	gyuwedmd7cuhk	490955278	0.18	0.02	0.0003	261	29	29	0	38	Sessions/Undo/Lock...	0	100.0
SELECT /*+RULE */ su.inst_id, LOGON_TIME.S.SID...	3303142506	2n5r2w3z5k3a	3385221913	0.14	0.03	0.0006	1 992	249	249	0	4 233	Sessions/Undo/Lock...	0	100.0
INSERT INTO DBPLUS_TAB23 (SERVER_ID, SNAP...	2711366923	h0zjz9Hsd5v	0	0.10	0.02	0.0006	0	0	157	0 MB	2	Sessions/Undo/Lock...	320	98.2
insert into dbplus_tab21 (server_id,dst1,snap_id,num...	689672221	5Bsd3erje40k	0	0.09	0	0.0004	0	0	249	0 MB	3 670	Sessions/Undo/Lock...	249	99.2
update dbplus_tab21 set num1 = num1, num2 = nu...	4192833027	l5vxs8vwm3k3	3448357992	0.04	0	0.0002	0	0	249	0	977	Sessions/Undo/Lock...	249	100.0

Note that the module and action information is not refreshed by the database for each query run. The information is saved for the first run of the query and stored in the database cache.

## 5. Finding anomalies in database performance statistics

In the latest version, we have added a mechanism for searching for anomalies in database statistics. The data is available at the details level of the monitored database in the **Perf Counters** tab.

The anomaly search mechanism can be started by selecting **Show counters with anomalies**. Then fill in the period in which the anomaly search mechanism will be activated. The search involves verifying the level of the performance indicator for which the values in the indicated period deviate from the trend for the last 30 days from the indicated search period.



The result of the search is a list of indicators for which trend anomalies were detected in the indicated period. In addition, the table presents columns showing:

- **History average** - the historical average value for a given indicator
- **Anomaly Average** - the average value of the indicator during the anomaly search period
- **Growth%** - the difference in percentage between the historical value and the compared value.

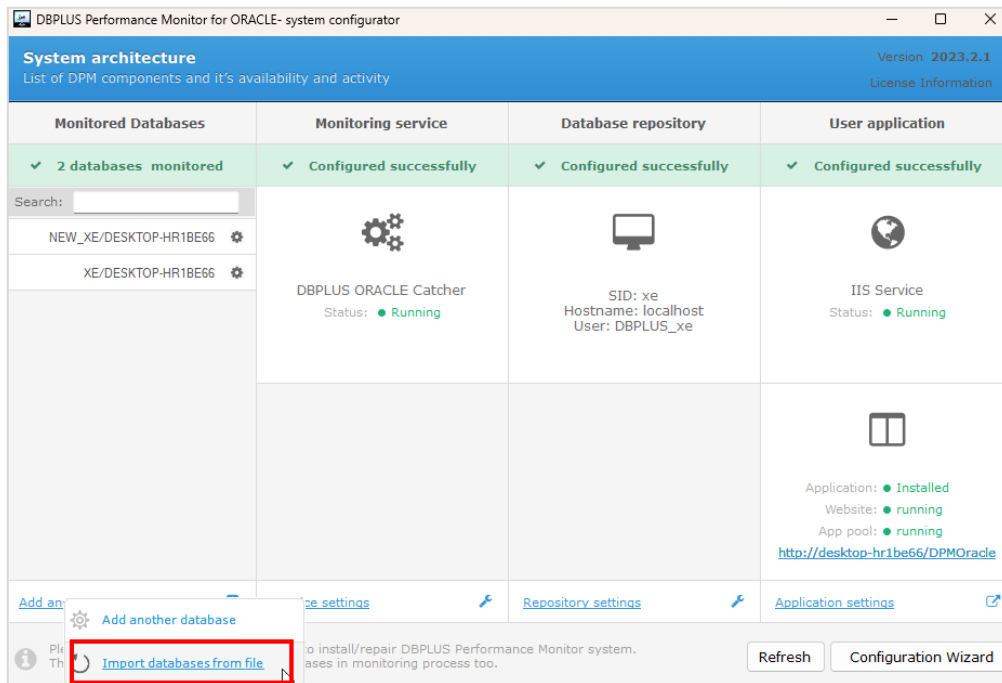
## 6. Improvements

### 6.1. Automatic refresh of data after checkbox selection

The logic associated with clicking a checkbox on application pages has been changed. In the latest version, clicking a checkbox or unchecking it refreshes the data on the page. The change will improve the operation and ergonomics of the application.

## 6.2. Improving the import of monitoring databases from a file

In the latest version, we have improved the process of importing monitoring databases using a flat file. The import is possible from the Configuration Wizard.



We begin the import of monitoring databases by completing the data for the connection in the file. The file is completed without a header, on the first line. Individual fields separated by a comma sign. There are 4 different types of configuration to choose from:

Connection via **TNS** to an **existing** DBPLUS user:

[USER,PASSWORD,NETWORK\_ALIAS].

Example configuration:

DBPLUS,password,XE

Connection via **TNS** to a **new** DBPLUS user. In this case, we additionally need to provide the administrator account data to create a monitoring user:

[USER,PASSWORD,NETWORK\_ALIAS,ADMIN\_ROLE,ADMIN\_USER,ADMIN\_PASSWORD].

Example configuration:

DBPLUS\_NEW,password,XE,SYSDBA,SYS,passwordSYS

**Basic** type connection to an **existing** DBPLUS user:

[USER,PASSWORD,SID/SERVICE,HOSTNAME,TCCPORT,CONNECT\_BY\_SID/SERVICE].

Example configuration:

DBPLUS,password,XE,127.0.0.1,1521,SID

**Basic** type connection to a **new** DBPLUS user:

[USER,PASSWORD,SID/SERVICE,HOSTNAME,TCCPORT,CONNECT\_BY\_SID/SERVICE,ADMIN\_ROLE,ADMIN\_USER,ADMIN\_PASSWORD].

Example configuration:

DBPLUS,password,XE,127.0.0.1,1521,SID,SYSDBA,SYS,passwordSYS

After indicating the file to be imported, an automatic connection attempt will be made. After verification, the databases for which the verification was successful (**Marked For Import** column) and for which the import can be performed will be **marked**.

The import is done by clicking the Import button. Once done, the database import will automatically be added to the monitoring.

### 6.3. Improve query search for SQL Find functionality

The SQL Find functionality allows you to search for queries in the monitored database. One of the search options is to search the query by the entered phrase. In case the searched text contained special characters (e.g., such as '\_'') this resulted in returning an incorrect search result.

### 6.4. Adding All session series to session history

As part of the latest version, functionality has been added to collect information about the number of sessions connected to the database. Until now, this information was collected in the main thread (every 15 minutes), which was insufficient for some problems.

Information about the number of all sessions is visible in the **Sessions** menu under **Session/Sort/Undo history**. Session data is downloaded every 60 seconds (default value with the possibility to change it at the configuration level). Only information on the number of sessions is downloaded.

We can read the information in tabular form in the **All Sessions** column.

Logdate	Active User Sessions	All Sessions	Sessions using Sort	Sort Space Used [MB]	Sessions using Undo	Record Count in Undo	Undo Space Used [MB]
2023-07-05 10:44:56	47	1251	778	2 170 MB	9	45	0 MB
2023-07-05 10:43:22	38	1250	772	2 098 MB	12	91	0 MB
2023-07-05 10:43:54	25	1250	774	2 121 MB	11	104	0 MB
2023-07-05 10:44:25	38	1250	775	2 133 MB	16	25	0 MB
2023-07-05 10:40:46	57	1249	716	1 891 MB	20	178	0 MB
2023-07-05 10:41:18	33	1249	749	1 964 MB	16	56	0 MB
2023-07-05 10:41:49	32	1249	760	2 003 MB	18	47	0 MB
2023-07-05 10:42:20	37	1245	762	2 036 MB	21	163	0 MB



And on the **Active Sessions** chart after changing the presentation to a chart in the **Toggle View** option.

