



**Database Rx Performance Portal for Daily Review
Client Services Summary**

April 23, 2009

The **Database Rx Performance Portal** is the proprietary tool that the DBA Pro team consultants use for mining data from our repository of database metrics gathered by our resident agent. Many portal screens are also available to customer staff members. We maintain a substantial history of metric data on each database, allowing for the identification of larger trends and for capacity planning. We do not seek to impress with flashy graphics and colored dials. We are focused on substance, simplicity, and keeping databases running and running well.

As part of the DBA Pro service we install our Database Rx® agent which checks the database every few minutes for connectivity and to assure its basic functions. Every hour the agent does a more thorough check, gathering a significant amount of metadata about the database and sending it to our server for analysis. The analysis engine on our server checks over 100 different areas, including free space in tablespaces, segment statistics, log archiving status, system resources approaching parameter limits, resource-intensive queries, broken or failed jobs, users with inappropriate defaults, and many more. Custom metrics can be defined that are specific to your environment. If any of the tests performed result in values outside desired thresholds (for instance, less than 10% free space in a tablespace) we are alerted by email or pager, depending on the severity of the alert.

DatabaseRx
Performance Portal

Powered By: DatabaseSpecialists

Select instance: DBRx production Launch report: Instance Status

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Instance Status

Active Alerts and Events for DBRx production as of 04-23-2009 13:00

Functional Area	Severity 1	Severity 2	Severity 3	Severity 4	Severity 5	Total
Total						0

Past Alerts and Events for DBRx production - 04-20-2009 13:00 through 04-23-2009 13:00

Date	Severity	Brief Description	Acknowledgement
04-21-2009 01:00	3	Tablespaces approaching space limits	
04-21-2009 22:00	4	Monitored tables with stale statistics	

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Done Internet 100%

Customers who opt for the **Daily Review** service level will receive an up-to-the-minute report every morning on the state of their databases. Our goal is to summarize events of the past 24 hours (or 72 hours on Monday) and highlight areas that need specific attention. Here is a sample of a daily review:

```
Our daily review of your Oracle instances has found the following:

Instance PROD

In response to recent performance issues, we've increased the database
buffer cache size and stopped an optimizer stats gathering cron job that
seemed somewhat redundant. Terry's analysis over the weekend indicated that
Oracle automatic stats gathering is doing at least as well as the former
cron job. The buffer cache increase was in the neighborhood of 400MB, from
1.8Gb to 2.2GB. These two changes appear to have made a modestly positive
impact, although it's a bit early to say for sure.

Of potentially greater importance is getting a handle on resource-intensive
SQL, so whenever you get a chance, please forward some bind variables we
can use to test the statement mentioned on Friday.

Also, the DATA tablespace was alerting for free space so we've added four
more datafiles.

- Gary
```

Our **proactive maintenance** business model seeks to stay on top of emerging situations and head them off before they become serious issues. Our goal, therefore, is to provide a daily review that looks like this:

```
Our daily review of your Oracle instances has found the following:

Instance PROD

No new issues to report at this time.

- Gary
```

Of course, emergencies will happen and keeping databases up and available is job #1 for us. Should a "Severity 1" or "Severity 2" alert occur, our team of expert DBAs will be paged (during business hours or 24/7, depending on the service you sign up for) and respond in short order. Customer staff may also be paged if they choose. The same goes for lesser severity alerts that are typically emailed. Any number of customer staff members may receive alerts from our monitoring system which is often customized to a customer's specific needs. Here is a sample of the portal page that allows a Database Specialists DBA or customer staff member manage how alerts are handled.

DatabaseRx
Performance Portal

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Instance Settings (Administrator Options)

Use this page to edit administrative settings for the DBRx production instance. You can grant access to this instance to other Database Rx users, disable Database Rx from monitoring certain aspects of your instance, and customize thresholds so that Database Rx will know when it is appropriate to raise an alert.

Database Rx Users With Access To DBRx production

Database Rx Username	Real Name	Access Level	Email Notification	Pager Notification
gsadler	Gary Sadler	Administrator	All alerts	Sev. 1-2 alerts <input type="checkbox"/> 8am-7pm M - F only
ifernand	Iggy Fernandez	Administrator	All alerts	Sev. 1-2 alerts <input type="checkbox"/> 8am-6pm M - F only
ijones	Ian Jones	Administrator	Never	Never <input type="checkbox"/> 8am-6pm M - F only
rheadrick	Rich Headrick	Administrator	All alerts	Sev. 1-2 alerts <input type="checkbox"/> 7am-5pm M - F only
tsutton	Terry Sutton	Administrator	All alerts	Sev. 1-2 alerts <input type="checkbox"/> 8am-6pm M - F only
dwolff	David Wolff	Read only	Never	Sev. 1-2 alerts <input type="checkbox"/> 8am-8am M - F only
guest	Guest User	Read only	Never	Never <input type="checkbox"/> 8am-6pm M - F only
<input type="text"/>		Read only	Never	Never <input type="checkbox"/> Limited hours
<input type="text"/>		Read only	Never	Never <input type="checkbox"/> Limited hours
<input type="text"/>		Read only	Never	Never <input type="checkbox"/> Limited hours

Performance of an Oracle database can be greatly impacted through the careful handling of an experienced Oracle specialist. Our team has many years of experience dealing with a variety of performance tuning challenges. There are many tools brought to bear on every project, but one such tool is the Performance Portal. That is why establishing and maintaining a relationship with a trusted partner is critical. Our long-term customers share the benefit of historical data collected on their databases which help identify trend changes. Here are some samples of portal pages that we and the customer might use:

Instance Activity - Windows Internet Explorer

https://dbrx.dbspecialists.com/pls/dbrx/view_repc

Instance Activity

DatabaseRx

Performance Portal

Powered By: DatabaseSpecialists

Select instance: DBRx production Launch report: Instance Activity

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Instance Activity

Customize Refresh

Physical Reads on DBRx production

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Time Interval			Physical Reads		
Start	End	Duration	Per Second	Per Transaction	Total
04-23-2009 12:00	04-23-2009 13:00	60 minutes (3600 seconds)	33	76	117,930
04-23-2009 11:00	04-23-2009 12:00	60 minutes (3600 seconds)	167	371	601,875
04-23-2009 10:00	04-23-2009 11:00	60 minutes (3600 seconds)	37	79	132,391
04-23-2009 09:00	04-23-2009 10:00	60 minutes (3600 seconds)	45	102	160,936
04-23-2009 08:00	04-23-2009 09:00	60 minutes (3600 seconds)	90	203	324,550
04-23-2009 07:00	04-23-2009 08:00	60 minutes (3600 seconds)	25	60	91,516

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Performance Summary - Windows Internet Explorer

https://dbrx.dbspecialists.com/pls/dbrx/view_repc

Performance Summary

Top 5 Wait Events (entire instance)

[View detail](#)

Wait Event	Waits	Timeouts	Average Seconds Per Wait	Total Seconds Waited	Percent Of All Non-idle Event Wait Time
db file sequential read	2,894,599	0	0.003	7,936.67	93.31
db file scattered read	41,615	0	0.011	466.14	5.48
log file parallel write	73,373	0	0.001	56.04	0.66
log file sync	12,508	0	0.001	14.59	0.17
control file parallel write	29,664	0	0.000	13.85	0.16

Top 5 Wait Events (background sessions only)

[View detail](#)

Wait Event	Waits	Timeouts	Average Seconds Per Wait	Total Seconds Waited	Percent Of All Non-idle Event Wait Time
log file parallel write	73,373	0	0.001	56.04	52.50
db file sequential read	21,102	0	0.001	22.09	20.70
control file parallel write	29,664	0	0.000	13.86	12.98
Log archive I/O	2,332	0	0.002	4.69	4.39
log file sequential read	2,288	0	0.002	4.11	3.85

Top 5 Resource Intensive SQL (ranked by total buffer gets)

[View detail](#)

SQL ID	Address and Child Number	Buffer Gets	Executions	Gets Per Execution	Percent Of All Gets On Instance	Parsing User ID	CPU Seconds
SQL Statement							
cm0qzbm4c8rj	00000000807324F8 / 0	1,099,577	525,253	2.09	0.64	56	15.13
SELECT LOWER (OMIT_VALUE) OMIT_VALUE FROM ANALYSIS_INSTANCE_OMIT_LISTS WHERE INSTANCE_ID = :B2 AND OMIT_LIST_ID = :B1							
36j9zuuz8ntzx	00000000806EB328 / 0	740,698	46,973	15.77	0.43	56	17.82

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Statement Detail - Windows Internet Explorer

https://dbrx.dbspecialists.com/pls/dbrx/view_repc

Execution Plan

ID	Parent	Operation
0		SELECT STATEMENT Optimizer=ALL_ROWS (Cost=9)
1	0	SORT (ORDER BY) (Cost=9 Card=2 Bytes=762)
2	1	NESTED LOOPS (Cost=8 Card=2 Bytes=762)
3	2	NESTED LOOPS (Cost=6 Card=2 Bytes=38)
4	3	INDEX (RANGE SCAN) OF "ANALYSIS_RESULTS_PK" (Cost=3 Card=2 Bytes=22)
5	3	TABLE ACCESS (BY INDEX ROWID) OF "ANALYSIS_COMMON_RESULTS" (Cost=2 Card=1 Bytes=)
6	5	INDEX (UNIQUE SCAN) OF "ANALYSIS_COMMON_RESULTS_PK" (Cost=1 Card=1 Bytes=)
7	2	TABLE ACCESS (BY INDEX ROWID) OF "ANALYSIS_TESTS" (Cost=1 Card=1 Bytes=362)
8	7	INDEX (UNIQUE SCAN) OF "ANALYSIS_TESTS_PK" (Cost=0 Card=1 Bytes=)

Available Versions

Address	Child Number	Parsing User ID	Optimizer Mode	Data Points
00000000806EA1A8	0	56	ALL_ROWS	11

Statement Statistics

	04-20-2009 23:00:01	04-23-2009 13:00:01	Difference	Per Execution During Time Interval
SQL ID	3j60jbayq9z3u	Same		
Hash value	3177512058	Same		
Address	00000000806EA1A8	Same		
Child Number	0	Same		
Executions	48,776	54,002	5,226	1
Buffer gets	566,942	656,848	89,906	17
Disk reads	312	341	29	0
Rows processed	35,069	38,251	3,182	1
CPU time (seconds)	10.259	12.477	2.217695	0.000424
Elapsed time (seconds)	10.895	13.168	2.272827	0.000435
Sorts	48,776	54,002	5,226	1
Loads	1	Same	0	0
Invalidations	0	Same	0	0
Parse calls	2	Same	0	0
Sharable memory	31175	6863		
Persistent memory	9704	Same		

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