

Abstract

A guided tour through promon

Every OpenEdge database comes with a monitoring tool called promon. With this tool you can learn myriad things about your database, how it is being used, and the level of activity it is being asked to deliver. In this talk, we will examine what promon can do for you with its over 50 screens. We will tell you what things are important and what you should be looking for. After this talk, you will be well equipped to troubleshoot, understand what normal and abnormal workloads look like, and much more.

EMEAPUG CHALLENGE

10TH - 12TH OCTOBER 2018

CROKE PARK STADIUM, DUBLIN

A Guided Tour Of promon
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Notices

- ★ Please ask questions as we go – the only stupid questions are the ones you do not ask!
- ★ promon has many, many screens. in one hour we do not have time to look at every one

promon is a database monitoring tool
it comes with the OpenEdge database

promon is a database monitoring tool
has a character terminal interface
monitors a single database at a time
tells you:

- current status

- past activity (recent or from database start)

- there are hundreds of screens

- (well, for small values of hundreds anyway)

3 parts:

Basic

R&D (Advanced)

debghb

m
1
100
q
6
q
R&D
5
1
9999
3
60
4
60
t
debghb
1
12
p
1
p
2
p
9
p
10

promon Basic

Database: /home/gus/atm7/database/atm

1. User Control
2. Locking and Waiting Statistics
3. Block Access
4. Record Locking Table
5. Activity
6. Shared Resources
7. Database Status
8. Shut Down Database
9. Currently Connected Tenants

- R&D. Advanced options
- T. 2PC Transactions Control
 - L. Resolve 2PC Limbo Transactions
 - C. 2PC Coordinator Information
- J. Resolve JTA Transactions
- M. Modify Defaults
- Q. Quit

Enter your selection:

- 1. Page size : 24
- 2. Clear screen for first page : Yes
- 3. Short pause after each page : 4
- 4. Long pause after last page : 8
- 5. Monitor sampling interval : 30 sec.
- 6. APW queue delay : 100 ms.
- 7. APW queue start : 1
- 8. APW scan delay : 1 sec.
- 9. APW scan count : 106

- A. APW write limit : 25
- B. BIW scan delay : 0
- C. Group commit delay : 10

- S. Sort user lists : by user number
- T. Tenant filter for user lists : None

- Q. Return to main menu

Enter your selection:

Locking and Waiting:

Type	Usr:Ten	Name	Domain	Record	Trans
Lock	99999	TOTAL...	0	1211219	256059
Wait	99999	TOTAL...	0	194	0
Lock	0	gus	0	0	0
Wait	0	gus	0	0	0
Lock	5	gus	0	0	0
Wait	5	gus	0	0	0
Lock	6	gus	0	0	0
Wait	6	gus	0	0	0
Lock	7	gus	-4	512301	256059
Wait	7	gus	-4	0	0
Lock	8	gus	-4	5023	0
Wait	8	gus	-4	4	0
Lock	9	gus	-4	4579	0
Wait	9	gus	-4	3	0
Lock	10	gus	-4	5406	0
Wait	10	gus	-4	2	0
Lock	11	gus	-4	4110	0
Wait	11	gus	-4	2	0
Lock	12	gus	-4	4392	0

RETURN - show remaining, U - continue uninterrupted, Q - quit: q

Record Locking Table: by user number for all tenants

Usr:Ten	Name	Domain	Chain #	Rowid	T
7	gus	-4	REC	777	769
8	gus	-4	REC	182	100692
8	gus	-4	REC	1321	548946
8	gus	-4	REC	1485	1476
8	gus	-4	REC	1704	787199623
9	gus	-4	REC	1418	1409
10	gus	-4	REC	1489	1480
10	gus	-4	REC	1635	914438147
11	gus	-4	REC	1490	1481
12	gus	-4	REC	1296	1287
13	gus	-4	REC	1036	932346370
13	gus	-4	REC	1484	1475
14	gus	-4	REC	47	100557
14	gus	-4	REC	434	1293249
14	gus	-4	REC	865	882212242
14	gus	-4	REC	1488	1479
15	gus	-4	REC	300	102543
15	gus	-4	REC	825	678425
15	gus	-4	REC	1417	1408

RETURN - show remaining, U - continue uninterrupted, Q - quit: q

Rowid	Table:Part	Lock	Flags	Tran	State	Tran ID
769	8	SHR	D	None	FWD	0
100692	4	EXCL		Active	FWD	12616314
548946	3	EXCL		Active	FWD	12616314
1476	9	SHR	D	Active	FWD	12350682
787199623	1	EXCL		Active	FWD	12616314
1409	9	SHR	D	None	FWD	12350736
1480	9	SHR	D	Begin	FWD	12350686
914438147	1	EXCL		Begin	FWD	12620988
1481	9	SHR	D	None	FWD	12350687
1287	9	SHR	D	Active	FWD	12350698
932346370	1	EXCL		Begin	FWD	12619357
1475	9	SHR	D	None	FWD	12350681
100557	4	EXCL		Active	FWD	12615938
1293249	3	EXCL		Active	FWD	12615938
882212242	1	EXCL		Active	FWD	12615938
1479	9	SHR	D	None	FWD	12350685
102543	4	EXCL		Active	FWD	12620350
678425	3	EXCL		Active	FWD	12620350
1408	9	SHR	D	None	FWD	12350735

Q - quit: q

Database Status:

Database version number: 4269
Database state: Open (1)
Database damaged flags: None (0)
Integrity flags: None (1536)
Database block size (bytes): 4096
Total number of database blocks: 26180684
Database blocks high water mark: 26180272
Free blocks below highwater mark: 145
Record blocks with free space: 3
Before image block size (bytes): 16384
Before image cluster size (kb): 16384
After image block size (bytes): 8192
Last transaction number: 12633622
Highest file number defined: 0
Database created (multi-volume): 05/11/17 08:09
Most recent database open: 10/08/18 14:40
Previous database open: 10/08/18 14:40
Local schema cache time stamp: 05/16/17 12:46
Most recent .bi file open: 10/08/18 14:40

RETURN - show remaining, U - continue uninterrupted, Q - quit: q

usr	pid	time	of	login	user	id	Type	tty
5	4793	Mon Oct	8	14:40:38 2018	gus		APW	batch
6	4792	Mon Oct	8	14:40:38 2018	gus		BIW	batch
7	4888	Mon Oct	8	14:41:10 2018	gus		BAT	batch
8	5041	Mon Oct	8	14:42:16 2018	gus		BAT	batch
9	5045	Mon Oct	8	14:42:16 2018	gus		BAT	batch
10	5037	Mon Oct	8	14:42:16 2018	gus		BAT	batch
11	5039	Mon Oct	8	14:42:16 2018	gus		BAT	batch
12	5059	Mon Oct	8	14:42:16 2018	gus		BAT	batch
13	5061	Mon Oct	8	14:42:16 2018	gus		BAT	batch
14	5063	Mon Oct	8	14:42:16 2018	gus		BAT	batch
15	5065	Mon Oct	8	14:42:16 2018	gus		BAT	batch
16	5047	Mon Oct	8	14:42:16 2018	gus		BAT	batch
17	5053	Mon Oct	8	14:42:16 2018	gus		BAT	batch
18	5055	Mon Oct	8	14:42:16 2018	gus		BAT	batch

RETURN - show remaining, Q - quit: q

- 1 Disconnect a User
- 2 Unconditional Shutdown
- 3 Emergency Shutdown (Kill All)
- x Exit

Enter choice> 3

promon R&D

10/08/18

15:28:26

OpenEdge Release 11 Monitor (R&D)

Main (Top) Menu

1. Status Displays ...
2. Activity Displays ...
3. Other Displays ...
4. Administrative Functions ...
5. Adjust Monitor Options

Enter a number, <return>, P, T, or X (? for help): 1

promon R&D help screen

- return Display the next page of the current display if there is one, or else return to the previous menu.
- A Activate auto repeat mode. The current display then restarts after the number of seconds specified by the current display pause time. Stop after the number of times specified by the auto repeat count or when you press control-c.
- L Load activity counters from start of session.
- P Return to the previous menu.
- R Repeat the current display.
- S Sample activity counters for the number of seconds specified by the sampling interval. The current display then restarts. The data shown include only activity which occurred during the sample interval.
- T Return to the top level (main) menu.
- U Update activity counters. The current display then restarts. The data shown include changes which occurred since the initial set of data was collected.
- Z Zero the activity counters so updates show changes from now.

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15:28:40

OpenEdge Release 11 Monitor (R&D)
Status Displays Menu

1. Database
2. Backup
3. Servers
4. Processes/Clients ...
5. Files
6. Lock Table
7. Buffer Cache
8. Logging Summary
9. BI Log
10. AI Log
11. Two-Phase Commit
12. Startup Parameters
13. Shared Resources
14. Shared Memory Segments
15. AI Extents
16. Database Service Manager
17. Servers By Broker
18. Client Database-Request Statement Cache ...
19. Schema Locks & Wait Queue
20. Broker Startup Parameters

Enter a number, <return>, P, T, or X (? for help):

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15:28:44

OpenEdge Release 11 Monitor (R&D)
Activity Displays Menu

1. Summary
2. Servers
3. Buffer Cache
4. Page Writers
5. BI Log
6. AI Log
7. Lock Table
8. I/O Operations by Type
9. I/O Operations by File
10. Space Allocation
11. Index
12. Record
13. Other

Enter a number, <return>, P, T, or X (? for help):

11/27/15
09:42:26

Activity: Summary

11/27/15 09:32 to 11/27/15 09:42 (10 min 0 sec)

Event	Total	Per Sec	Event	Total	Per
Commits	3078	5.1	DB Reads	19	
Undos	0	0.0	DB Writes	692	
Record Reads	7839655	13066.1	BI Reads	6	
Record Updates	13932	23.2	BI Writes	6383	
Record Creates	1613	2.7	AI Writes	0	
Record Deletes	27	0.0	Checkpoints	1	
Record Locks	92365	153.9	Flushed at chkpt	0	
Record Waits	0	0.0	Active trans	13	

Rec Lock Waits	0 %	BI Buf Waits	0 %	AI Buf Waits	0 %
Writes by APW	97 %	Writes by BIW	96 %	Writes by AIW	0 %
DB Size:	25 GB	BI Size:	7936 MB	AI Size:	0 MB
Empty blocks:	214	Free blocks:	3715	RM chain:	5
Buffer Hits	99 %	Primary Hits	99 %	Alternate Hits	0 %

342 Servers, 88 Users (10 Local, 78 Remote, 56 Batch), 6 Apws

10/08/18

Activity: Buffer Cache

15:28:48

10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per S
Database Buffer Pool			
Logical reads	13313007	278224	4637
Logical writes	5014400	104794	1746
O/S reads	1958798	40936	682
O/S writes	643858	13456	224
Checkpoints	41	1	0
Marked to checkpoint	621934	12998	216
Flushed at checkpoint	87618	1831	30
Writes deferred	4364766	91218	1520
LRU skips	2645351	55284	921
LRU writes	10160	212	3
APW enqueues	572776	11970	199
Database buffer pool hit ratio:	87 %		

10/08/18
15:28:56

Activity: Page Writers
10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per
Total DB writes	643858	13456	224
APW DB writes	546215	11415	190
scan writes	16187	338	5
apw queue writes	465829	9735	162
ckp queue writes	64199	1342	22
scan cycles	1	0	0
buffers scanned	69538	1453	24
bufs checkpointed	529575	11067	184
Checkpoints	41	1	0
Marked at checkpoint	621934	12998	216
Flushed at checkpoint	87618	1831	30

Number of APWs: 1

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18

Activity: BI Log

15:29:00

10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per S
Total BI writes	43035	899	14.
BIW BI writes	42150	881	14.
Records written	7476081	156240	2604.
Bytes written	675861K	14463575	241059.
Total BI Reads	129	3	0.
Records read	0	0	0.
Bytes read	0	0	0.
Clusters closed	41	1	0.
Busy buffer waits	20824	435	7.
Empty buffer waits	17685	370	6.
Log force waits	0	0	0.
Log force writes	0	0	0.
Partial writes	691	14	0.
Input buffer hits	0	0	0.
Output buffer hits	0	0	0.
Mod buffer hits	0	0	0.
B0 buffer hits	0	0	0.

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18
15:29:07

Activity: Lock Table
10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per Sec
Requests:			
Share	25329	529	8.82
Intent Share	0	0	0.00
Exclusive	6039506	126217	2103.62
Intent Exclusive	14	0	0.00
Share Intent Excl	0	0	0.00
Upgrade	458	10	0.16
Record Get Lock	1244628	26011	433.52
Table Lock	6773	142	2.36
Record Lock	4813458	100595	1676.58

Grants:			
Share	24876	520	8.66
Intent Share	0	0	0.00
Exclusive	6039264	126212	2103.54
Intent Exclusive	14	0	0.00
Share Intent Excl	0	0	0.00
Upgrade	458	10	0.16
Record Get Lock	1244626	26011	433.52
Table Lock	6773	142	2.36
Record Lock	4812878	100583	1676.38

Enter <return> for more, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18
15:29:21

Activity: I/O Operations by Type
10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per Sec
Database reads	1958243	40925	682.08
Index blocks	900363	18816	313.61
Data blocks	1057880	22108	368.47
BI reads	129	3	0.04
AI reads	0	0	0.00
Total reads	1958703	40934	682.24
Database writes	643858	13456	224.26
Index blocks	35763	747	12.46
Data blocks	608095	12708	211.81
BI writes	43035	899	14.99
AI writes	0	0	0.00
Total writes	687073	14359	239.31

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18
15:29:29

Activity: I/O Operations by File
10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per Sec
/bi/atm.b1			
Reads	129	3	0.04
Writes	43035	899	14.99
Extends	0	0	0.00

Enter <return> for more, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18
15:29:49

Activity: Space Allocation
10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per Sec
Database extends	0	0	0.00
Take free block	1414	30	0.49
Return free block	1641	34	0.57
Alloc rm space	587568	12279	204.66
Alloc from rm	587568	12279	204.66
Alloc from free	0	0	0.00
Bytes allocated	45046896	941419	15690.32
rm blocks examined	592857	12390	206.50
Remove from rm	12231	256	4.26
Add to rm, front	0	0	0.00
Add to rm, back	13388	280	4.66
Move rm front to back	30	1	0.01
Remove locked rm entry	587295	12274	204.56

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18

Activity: Index

15:29:53

10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per Sec
Find index entry	2675279	55910	931.8
Create index entry	588702	12303	205.0
Delete index entry	644559	13470	224.5
Remove locked entry	642197	13421	223.6
Split block	1414	30	0.4
Free block	1641	34	0.5

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18

Activity: Record

15:29:58

10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per Sec
Read record	3337651	69752	1162.5
Update record	587710	12282	204.7
Create record	587204	12272	204.5
Delete record	642831	13434	223.9
Fragments read	3352292	70058	1167.6
Fragments created	1060218	22157	369.2
Fragments deleted	1115742	23317	388.6
Fragments updated	115085	2405	40.0
Bytes read	374393K	8012086	133534.7
Bytes created	100445K	2149553	35825.8
Bytes deleted	104115K	2228084	37134.7
Bytes updated	13866266	289786	4829.7

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18
15:30:06

OpenEdge Release 11 Monitor (R&D)
Main (Top) Menu

1. Status Displays ...
2. Activity Displays ...
3. Other Displays ...
4. Administrative Functions ...
5. Adjust Monitor Options

Enter a number, <return>, P, T, or X (? for help): 3

10/08/18
15:30:20

OpenEdge Release 11 Monitor (R&D)
Other Displays Menu

1. Performance Indicators
2. I/O Operations by Process
3. Lock Requests By User
4. Checkpoints
5. I/O Operations by User by Table
6. I/O Operations by User by Index
7. Total Locks per User

Enter a number, <return>, P, T, or X (? for help): 1

10/08/18

Activity: Performance Indicators

15:30:25

10/08/18 14:40 to 10/08/18 15:28 (47 min 51 sec)

	Total	Per Min	Per Sec
Commits	589582	12321	205.3
Undos	0	0	0.0
Index operations	3908540	81683	1361.3
Record operations	5155396	107741	1795.6
Total o/s i/o	2645776	55293	921.5
Total o/s reads	1958703	40934	682.2
Total o/s writes	687073	14359	239.3
Background o/s writes	589057	12310	205.1
Partial log writes	691	14	0.2
Database extends	0	0	0.0
Total waits	65880	1377	22.9
Lock waits	559	12	0.1
Resource waits	65321	1365	22.7
Latch timeouts	55413	1158	19.3

Buffer pool hit rate: 87 % Primary pool hit rate: 87 % Alternat

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18

I/O Operations by Process

15:30:28

Usr:Ten	Name	Domain	----- Access	Database Read	----- Write	---- Read	BI
0	gus	0	578	40	3	14	
5	gus	0	4	0	549369	0	
6	gus	0	4	0	0	0	4
7	gus	0	17	0	0	0	

Enter <return>, R, U, P, T, or X (? for help):

10/08/18
15:32:00

OpenEdge Release 11 Monitor (R&D)
Administrative Functions Menu

1. Check Active Transaction Status
2. Check Two-Phase Transactions
3. Resolve Limbo Transactions
4. Adjust Latch Options
5. Adjust Page Writer Options
6. Restricted Options
7. Server Options
8. Enable/Disable block level consistency check
9. Shutdown Database
10. Disconnect a tenant's users
11. Adjust Governor options

Enter a number, <return>, P, T, or X (? for help): 1

10/08/18
15:32:13

OpenEdge Release 11 Monitor (R&D)
Adjust Latch Options

1. Spins before timeout: 50000
2. Record Free Chain Search Depth Factor: 5
3. Enable LRU2 alternate buffer pool replacement policy
4. Adjust LRU force skips: 100
5. Adjust LRU2 force skips: 0

10/08/18
15:32:28

OpenEdge Release 11 Monitor (R&D)
Server Options

- 1. Server network message wait time: 2 seconds
- 2. Delay first prefetch message: Disabled
- 3. Prefetch message fill percentage: 0 %
- 4. Minimum records in prefetch message: 16
- 5. Suspension queue poll priority: 0
- 7. Terminate a server

Enter a number, P, T, or X (? for help): 1

10/08/18
15:33:39

OpenEdge Release 11 Monitor (R&D)
Adjust Monitor Options

1. Display page length : 24 lines
2. Clear screen for first page : Yes
3. Monitor sampling interval : 10 sec.
4. Pause between displays : 10 sec.
5. Pause between screens : 5 sec.
6. Number of auto repeats : 9999
7. Change working area : All areas
8. Sort user lists : by user number
9. Tenant filter for user lists : will display all tenant

Enter a number, P, T, or X (? for help):

promon debghb

a "secret" everyone knows about

10/08/18

15:28:26

OpenEdge Release 11 Monitor (R&D)

Main (Top) Menu

1. Status Displays ...
2. Activity Displays ...
3. Other Displays ...
4. Administrative Functions ...
5. Adjust Monitor Options

Enter a number, <return>, P, T, or X (? for help): debghb

10/08/18

15:28:26

OpenEdge Release 11 Monitor (R&D)

Main (Top) Menu

1. Status Displays ...
2. Activity Displays ...
3. Other Displays ...
4. Administrative Functions ...
5. Adjust Monitor Options

Enter a number, <return>, P, T, or X (? for help): 6

10/08/18
15:38:45

OpenEdge Release 11 Monitor (R&D)
This menu is not here Menu

1. Cache Entries
2. Hash Chain
3. Page Writer Queue
4. Lru Chains
5. Locked Buffers
6. Buffer Locks
7. Buffer Use Counts
8. Resource Queues
9. TXE Lock Activity
10. Adjust TXE Options
11. Latch Counts
12. Latch Times
13. I/O Wait Time by Type
14. I/O by File
15. Buffer Lock Queue
16. Semaphores
17. Shutdown

Enter a number, <return>, P, T, or X (? for help):

10/08/18

Status: Cache Entries

15:38:26

Num	DBKEY	Area	Hash	T	S	Usect	Flags	U
1	415055680	9	10948	D		0	UL	
2	1409597	10	1354	I		0	L	
3	645358912	9	6503	D		0	UL	
4	32	6	7	M		0	F	
5	875223296	9	13490	D		0	UL	
6	2502574	10	15280	I		0	L	
7	795890112	9	17561	D		0	UL	
8	168204	10	3613	I		0	L	
9	274688	11	4303	D		0	L	
10	1592769	10	1636	I		0	L	
11	2784095	10	4177	I		0	L	
12	1227671	10	2318	I		0	L	
13	532032	11	8324	D		0	L	
14	2508817	10	3234	I		0	L	
15	382062	10	16292	I		0	L	
16	2432005	10	17867	I		0	L	

Enter <return> for more, R, P, T, or X (? for help): p

10/08/18

Activity: Resource Queues

15:39:23

10/08/18 14:40 to 10/08/18 15:38 (57 min 33 sec)

Queue	- Requests -		----- Waits -----		--- Wait	
	Total	/Sec	Total	/Sec	Pct	/Req
Shared Memory	0	0	0	0	0.00	0
Record Lock	5324697	1542	725	0	0.00	0
Schema Lock	0	0	0	0	0.00	0
Trans Commit	843365	244	0	0	0.00	0
DB Buf I Lock	1458458	422	12245	4	0.01	0
Record Get	1466680	425	0	0	0.00	0
DB Buf Read	2023088	586	0	0	0.00	0
DB Buf Write	659810	191	0	0	0.00	0
DB Buf Backup	0	0	0	0	0.00	0
DB Buf S Lock	16072320	4655	10279	3	0.00	0
DB Buf X Lock	2727952	790	27730	8	0.01	0
DB Buf Avail	0	0	2	0	0.00	0
DB Buf S Lock LRU2	0	0	0	0	0.00	0
DB Buf X Lock LRU2	0	0	0	0	0.00	0
DB Buf Write LRU2	0	0	0	0	0.00	0

Enter <return> for more, A, L, R, S, U, Z, P, T, or X (? for help):

10/08/18

Activity: Resource Queues

15:39:25

10/08/18 14:40 to 10/08/18 15:38 (57 min 33 sec)

Queue	- Requests -		----- Waits -----		--- Wait	
	Total	/Sec	Total	/Sec	Pct	/Req
BI Buf Read	150	0	0	0	0.00	0
BI Buf Write	50506	15	27289	8	0.54	0
AI Buf Read	0	0	0	0	0.00	0
AI Buf Write	0	0	0	0	0.00	0
TXE Share Lock	1816521	526	0	0	0.00	0
TXE Update Lock	1704802	494	99	0	0.00	0
TXE Commit Lock	604558	175	3872	1	0.01	0
TXE Excl Lock	0	0	0	0	0.00	0
Repl TEND Ack	0	0	0	0	0.00	0
DBSQ Send Lock	0	0	0	0	0.00	0
TDE Buffer	0	0	0	0	0.00	0
Statement Cache	0	0	0	0	0.00	0

Enter <return>, A, L, R, S, U, Z, P, T, or X (? for help):

11/27/15

Activity: Resource Queues

09:42:26

11/27/15 09:32 to 11/27/15 09:42 (10 min 0 sec)

Queue	- Requests -		----- Waits -----		--- Wait	
	Total	/Sec	Total	/Sec	Pct	/Req
Shared Memory	0	0	0	0	0.00	0
Record Lock	92365	154	0	0	0.00	0
Schema Lock	0	0	0	0	0.00	0
Trans Commit	29	0	0	0	0.00	0
DB Buf I Lock	17582	29	0	0	0.00	0
Record Get	378999	632	0	0	0.00	0
DB Buf Read	19	0	0	0	0.00	0
DB Buf Write	692	1	0	0	0.00	0
DB Buf Backup	0	0	0	0	0.00	0
DB Buf S Lock	31862982	53105	3	0	0.00	0
DB Buf X Lock	33604	56	3	0	0.00	0
DB Buf Avail	0	0	0	0	0.00	0
DB Buf S Lock LRU2	0	0	0	0	0.00	0
DB Buf X Lock LRU2	0	0	0	0	0.00	0
DB Buf Write LRU2	0	0	0	0	0.00	0

BI Buf Read	6	0	0	0	0.00	0
BI Buf Write	6383	11	3	0	0.00	0
AI Buf Read	0	0	0	0	0.00	0
AI Buf Write	0	0	0	0	0.00	0
TXE Share Lock	28680	48	0	0	0.00	0
TXE Update Lock	4318	7	0	0	0.00	0
TXE Commit Lock	2708	5	5	0	0.00	0
TXE Excl Lock	0	0	0	0	0.00	0
Repl TEND Ack	0	0	0	0	0.00	0
DBSQ Send Lock	0	0	0	0	0.00	0
TDE Buffer	0	0	0	0	0.00	0
Statement Cache	0	0	0	0	0.00	0

11/27/15

Activity: Latch Counts

09:22:26

11/27/15 09:12 to 11/27/15 09:22 (10 min 0 sec)

Owner	----- Locks -----	----- Busy -----	----- Naps -----
	Total /Sec	/Sec Pct	/Sec
MTX --	196366 327	0 0.0	0
USR --	458 0	0 0.0	0
OM --	6681498 11135	0 0.0	0
BIB --	221977 369	0 0.0	0
SCH --	276 0	0 0.0	0
LKP --	6977 11	0 0.0	0
GST --	0 0	0 0.0	0
TXT --	47462 79	0 0.0	0
LKT --	283280 472	0 0.0	0
LKT --	474802 791	0 0.0	0
LKT --	271645 452	0 0.0	0
LKT --	340083 566	0 0.0	0
SEQ --	772 1	0 0.0	0
AIB --	198 0	0 0.0	0

TXQ	--	221406	369	0	0.0	0
EC	--	0	0	0	0.0	0
LKF	--	1224409	2040	0	0.0	0
BFP	--	0	0	0	0.0	0
BHT	--	45746968	76244	0	0.0	1
PWQ	--	0	0	0	0.0	0
CPQ	--	42331	70	0	0.0	0
LRU	--	919412	1532	0	0.0	0
LRU	--	0	0	0	0.0	0
BUF	--	19934887	33224	0	0.0	0
BUF	--	23671282	39452	0	0.0	0
BUF	--	18523800	30873	0	0.0	0
BUF	--	29727085	49545	0	0.0	1
INC	--	0	0	0	0.0	0
L29	--	0	0	0	0.0	0
L30	--	0	0	0	0.0	0
L31	--	0	0	0	0.0	0

10/08/18

Semaphores

15:40:57

User	Id	Num
0	229377	0
1	262146	0
2	229377	1
3	262146	1
4	229377	2
5	262146	2
6	229377	3
7	262146	3
8	229377	4
9	262146	4
10	229377	5
11	262146	5
12	229377	6
13	262146	6
14	229377	7
15	262146	7
16	229377	8

Enter <return> for more, R, P, T, or X (? for help): p

Here Endeth The Lesson

Answers



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