

# Enteros UpBeat DBAct™



Enteros DBAct™ is a comprehensive software toolkit for diagnosis, containment and remediation of database performance problems. Designed by DBAs for DBAs, it provides real-time diagnostic reports, performance snapshots, containment and productivity functionality. With DBAct, DBAs and operations engineers can significantly reduce and contain the production performance problems that severely impact business performance.



## **Gain real performance insights in real time**

Investigating a serious database performance problem with information even a few seconds old greatly increases the likelihood of missing the diagnosis. For such a dynamic situation only real-time information will suffice. DBAct employs real-time delta sampling technology to provide instantaneous snapshots of database performance whenever requested.

## **Remediate problems faster with less effort**

Identification and remediation of database performance problems involve repetitious, tedious, manual tasks, especially those conducted at the server-side command line. DBAct decreases both the number of repetitions and the frequency with which these tasks need to be performed. The combination makes order-of-magnitude improvements in remediation efficiency not only possible but within reach.

## **Empower operations staff**

Remediation best practice and the expertise acquired from many years of real-world problem diagnosis and remediation are embedded in each report and utility provided in DBAct. For less experienced operations staff, using DBAct is like having a world-class DBA guiding their efforts and pointing the way to successful remediation.

# Key Features

## Comprehensive diagnostic reports

Investigate common contributors to performance degradation with instant, detailed, diagnostic reports.

Examples include:

- Identification of top CPU-consuming sessions and machines
- Internal buffer busy waits contention and blocking sessions
- Fragmentation of shared pool and shared pool free space
- Resource manager performance and contention
- Latching
- Detailed transactional locking
- Internal DDL locking and contention
- Waits on segments and data blocks

```
-bash-2.05b# dbact rm
```

PLAN	CPU P1-8	SESS/PQ MAX	STATUS
SYSTEM_PLAN/SYS_GROUP	100/0/0/0/0/0/0/0	/	
SYSTEM_PLAN/OTHER_GROUPS	0/100/0/0/0/0/0/0	/	
SYSTEM_PLAN/LOW_GROUP	0/0/100/0/0/0/0/0	/	
INTERNAL_QUIESCE/SYS_GROUP	0/0/0/0/0/0/0/0	/	
INTERNAL_QUIESCE/OTHER_GROUPS	0/0/0/0/0/0/0/0	0/	
INTERNAL_PLAN/OTHER_GROUPS	0/0/0/0/0/0/0/0	/	

```
-bash-2.05b# dbact ddllock
```

WAITING_SID	HOLDING_SID	MACHINE	HOLDING_HASH	LOCK ADDRESS	Mode Held/Requested
12	14,48	linux1	3924600907/0	Lock 565D3518	Share/Exclusive

Who-Where(Client/SID,SER#/SQL/PrevSQL/Secs.)	Blk Table Name	Cmd(*:Actv)	Held/Req	Lock Type
CM_PROD-(35,64038/4532115671/0/3)	-/13/0/0	0-*	Excl/-	JQ-Job queue
CM_PROD-(35,64038/4532115671/0/3)	-/13/0/0	0-*	RowEx/-	TM-DML enqueue
CM_PROD-SJ\PRDAPP02 (174,34972/810539955/890539955/1)	< > -/33/0/0	0-*	Excl/-	TX-Transac tion enqueue
CM_PROD-SJ\PRDAPP02 (174,34972/810539955/820539955/1)	< > -/33/0/0	0-*	RowEx/-	TM-DML enqueue

## Real-time performance sampling and reporting

Get instantaneous snapshots of critical performance areas before, during and after remediation. Examples include :

- SQL consuming most Buffer Gets (CPU consumption)
- Top application servers waiting on problem wait event
- Top application servers generating provided performance metric
- Top database filesystems I/O performance
- Most frequently executing SQL
- Most frequently parsing SQL
- Top datafile I/O performance

```
-bash-2.05b# dbact hurexcs 5 20
```

HASH_VALUE	EXECUTIONS_START	EXECUTIONS_END	Per Period-Per Sec.	SQL_TEXT
336764478	31	34	3/0,6	select /*+ index(idl_char# i_idl_char1) */ piece#.length,piece from idl_char# v
986338823	31	34	3/0,6	select /*+ index(idl_ub1# i_idl_ub11) */ piece#.length,piece from idl_ub1# when
386388955	31	34	3/0,6	select /*+ index(idl_ub2# i_idl_ub21) */ piece#.length,piece from idl_ub2# when
2954231783	31	34	3/0,6	select /*+ index(idl_sb4# i_idl_sb41) */ piece#.length,piece from idl_sb4# when
1198893840	52	54	2/0,4	select order#.columns,types from access# where d_obj#=1
2703824309	237	239	2/0,4	select obj#.type#.ctime,atime,stime,status,dataobj#.flags,oid#, spare1, spare2 f
340778183	18	20	2/0,4	select audit#.options from procedure# where obj#=1
4080861370	52	54	2/0,4	select owner#.name,namespace,remoteowner.linkname,p_tinestamp_p_obj#. d_owner#.
1316169839	98459	98460	1/0,2	select job#.nw12(last_date, 1, 0) from sys.job# where (((1 <= next_date) and (n
2326965345	New SQL	1	1/0,2	select HASH_VALUE, sum(executions) executions, substr(SQL_TEXT,1,80) SQL fro
1700220278	New SQL	1	1/0,2	BEGIN dbms_lock.sleep(5); END;
1693927332	98460	98461	1/0,2	select count(*) from sys.job# where (next_date > sysdate) and (next_date < (sysd

### Containment command library

Streamline tedious containment exercises with commands that automate the sequence of steps that must be taken to achieve containment. Choose a command from the built-in library that covers the most common contributors to database performance degradation. The library includes containment commands for:

- remediation of blocking DDL locks contentions
- remediation of blocking transactional locks contentions, including cross-RAC node situations
- remediation of blocking enqueues
- remediation of accumulation of top CPU-consuming sessions and machines
- elimination of sessions and application servers causing full table scans on long tables
- elimination of long-running transactions

```
-bash-2.05b# dbact killfts  
alter system disconnect session '13,19304' immediate -- linux1, PS9, 4103144933 ;
```

```
-bash-2.05b# dbact killblock  
alter system disconnect session '8,3790' immediate -- linux1, 0/1035149405 ;
```

### Low-level tracing

Perform low level tracing by machine, process ID or session ID, Module/ Program, and SQL.

```
-bash-2.05b# dbact pidtrace 23741 on  
Oracle pid: 14, Unix process pid: 23741, image: oracle@linux1 (TNS V1-V3)  
Statement processed.
```

### DBA function library

Apply a rich library of functions to problem investigation and resolution. Accelerate time to resolution with functions that get process ID and session ID using associations, decode DBA number, and set machine time.

```
-bash-2.05b# dbact dba2info 0x01800026  
  
-----  
DBA_FILE DBA_BLOCK  
-----  
6          38  
  
-----  
DATAFILE  
-----  
/export/home/oracle/products/920/oradata/DB0/undotbs02.dbf  
  
-----  
SEGMENT_NAME  
-----  
_SYSMU20#
```

### Information navigators

Put performance view and database dictionary information at your fingertips. Navigate efficiently between summary level and detail level reports. Reduce the need for repetitive SQL command typing during stressful problem containment and remediation.

# DBAct Summary

## Summary of Benefits

- Get real performance insights in real time
- Remediate problems faster with less effort
- Empower operations staff

## Summary of Features

- Comprehensive diagnostic reports
- Real-time performance sampling and reporting
- Containment command library
- Low-level tracing
- DBA function library
- Information navigators

## Supported Infrastructure

- Server Operating Systems
- Windows 2000/XP
- Windows 2003 Server
- Linux
- Sun Solaris
- HP/UX
- AIX

## Databases

Oracle 8i, 9i, 10g, 11g

## Integral Part of Enterprise Production Performance Management (EPPM) Platform

High Load Capture is an integral part of Enteros's innovative EPPM platform that supports performance problem management across the enterprise over all stages of the performance problem lifecycle. The complete EPPM platform includes **Grid2Go™** for proactive, fine-grain, multi-application performance problem identification; **DBAct™** for real-time performance problem remediation of databases; **Performance Explorer-i™** for rapid, graphical root cause, change impact and scalability analysis of databases; **High Load Capture™** for rapid, graphical root cause and scalability analysis of multi-tiered applications; and **Load2Test™** for performance validation with integrated load testing and load test root cause analysis.

## About Enteros

Enteros helps our customers reduce and mitigate the risk of business-impacting outages and degradations caused by enterprise performance issues. We have the only comprehensive software platform focused entirely on Enterprise Production Performance Management and proven to increase the availability of business-critical systems at companies like eBay, Yahoo, and Adobe. In business since 2004, Enteros is privately held. Our headquarters are located in Santa Clara, CA, with offices in Boston, Israel, and Ukraine.

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