

ORA-3113's, 600's and 7445's Oh My!



ORACLE[®]

Introduction & Overview



- What do these errors mean?
- Troubleshooting Steps
- Key information in trace files
- Best practices for working with Oracle Support
- Q & A

ORA-3113

“end-of-file on communication channel”



Translation: the connection to the server was lost

- frequently accompanied by:
 - ORA-1041 "internal error. hostdef extension doesn't exist"
 - ORA-3114 "not connected to ORACLE"
 - ORA-1012 "not logged on"
 - ORA-1034 "Oracle not available"
- Symptom, not the cause
- Always check the alert.log for errors and bdump/udump for trace files
- MetaLink Note: 17613.1 "ORA-3113 on Unix..."

ORA-600

“internal error code, arguments: [...]”



Translation: we've entered a special error handling routine, not a normal ORA-xxx error

- First argument is important
- Additional arguments are usually data specific (e.g. dba, SCN, object ID, etc...) and are different for each first argument

ORA-600 Layers



ORA-600 errors are can be loosely grouped together to indicate the kernel layer in which the error was signaled (can change among releases):

ARGUMENT	LAYER
0000	Service Layer
[504]	"Trying to obtain a latch which is already held"
[729]	"UGA Space Leak"
2000	Cache Layer Component Base
[2103]	"Timeout on 'Control file' or 'Checkpoint Progress' Enqueue"
[3020]	"Stuck Recovery"

ORA-600 Layers (contd)



ARGUMENT

LAYER

4000 Transaction Layer

frequently occurs due to corruption encountered during undo or recovery

[4511] "Row locked by inactive ITL"

[4519] "Block Corruption Detected - Cache type wrong"

6000 Data Layer

8000 Access Layer

9000 Parallel Server

10000 Control Layer

12000 User/Oracle Interface Layer

[12333] "Fatal Two-Task Protocol Violation"

[12700] "Index entry Points to Missing ROWID"

ORA-600 Layers (contd)



ARGUMENT	LAYER
14000	System-dependent "Layer" (port specific)
15000	Security Layer
[15212]	"Found a sharable cursor but the binds do not match"
17000	Generic "Layer"
	frequently occurs due to heap corruptions (virtually impossible to resolve without a reproducible test case)
[17112]	"Internal Heap Error"
[17114]	"KGH Bad magic number in header"
[17182]	"Heap chunk header BAD MAGIC NUMBER"
18000	K2 (2-phase commit)
19000	Object Layer



ARGUMENT

LAYER

21000

Replication Layer

23000

OLTP Layer

[25012] "Relative to Absolute File Number
Conversion Error"

Starting with 8.0.x, ORA-600 arguments can also
contain words

[ktsscni1] "Cannot locate SEG\$ entry to be
converted"

ORA-7445

“exception encountered core dump”



Translation: the process performed an illegal operation and was terminated by the OS

- First argument is sometimes useful, but only if it's an Oracle function call
- Not all operating systems record an ORA-7445
 - Linux: alert.log lists “errors in file xxxxx” & trace file contains “Segmentation fault” or “Exception signal”
 - NT/2000/XP : no entry in alert.log; Dr. Watson error; or <sid>CORE.LOG file created in bdump or %ORACLE_HOME%\RDBMS\TRACE
 - NetWare: no entry in alert.log;abend sometimes occurs

Troubleshooting



When does the error occur?

- Starting a program (e.g. svrmgrl, sqlplus, imp, exp, etc...)
- Starting up the database
- Connecting to the database
- Performing an operation (e.g. query, DML, etc...)
- Shutting down the database

Starting a program



- Usually an ORA-7445, not an ORA-600
- Most common causes:
 - Incorrect environment settings (e.g. NLS_LANG, TWO_TASK, ORACLE_HOME)
 - Incorrectly linked executable
- Check current dir for core files
- Check default location for core files
\$ORACLE_HOME/rdbms/log
- Trace the OS process (e.g. truss, tusc, etc...)

Starting up the Database



Startup the database manually to determine at what phase the error occurs

- Startup Nomount
 - usually ORA-7445's
 - Environment variables
 - Kernel settings
 - Init.ora parameters
 - NT/2000/XP
 - corrupted services
 - Registry entries

Starting up the Database (contd)



- Alter database mount;
 - Permissions
 - Environment settings
 - Corrupted files and/or filesystems

Starting up the Database (contd)



- Alter database open;
 - Recovery? Who generated the trace file?
 - Corrupted online redo log, data file, or file system
Note: 28814.1 "Handling Oracle Block Corruptions in Oracle7/8/8i"
 - Startup trigger problems (8.1.5+)
(`_SYSTEM_TRIG_ENABLED=FALSE`)
 - Possible data dictionary corruption
 - event="10061 trace name context forever, level 10"
disable temp segment cleanup
 - event="10269 trace name context forever, level 10"
disable obj\$ cleanup
 - event="10052 trace name context forever, level 1"
disable coalescing free space

Do not leave these events set indefinitely! Take full db export ASAP!

Starting up the Database (contd)



- If the db was not cleanly shutdown before, leave the previous events set. Shutdown the db and add the following events
 - event="10046 trace name context forever, level 12"
SQL trace with binds and waits
 - event="10015 trace name context forever, level 1"
trace redo applied
 - event="10228 trace name context forever, level 1"
trace transactional rollback
- Ensure that **MAX_DUMP_FILE_SIZE** is set adequately and that there's ample **ORACLE** disk space.

Connecting to the Database



- Incorrect environment settings (e.g. NLS settings)
- Type of connection?
 - Net8:
 - Local / bequeath? MTS or dedicated? Using the listener? Remember, sessions connecting via the listener inherit the environment settings of the listener!
 - May need to enable Net8 tracing
 - ODBC: does standard Net8 connection work?
 - Other
- All OS users or only non-Oracle users?
- All database users?
- Is any type of auditing or logon trigger enabled?

Performing an Operation



- Eliminate as many layers as possible, ideally executing the statement manually in sqlplus.
- How long does it take to return the error?
 - Immediately: does explaining the query fail?
 - After a while: could be corrupt data. Does Analyze... Validate Structure Cascade fail?
- What else was going on at the time?
- Can you reproduce the error at will?

Shutting Down the Database



- Did the database finish closing and dismounting?
- What type of shutdown?

Steps to Take



- Check the alert.log for other errors
- Check for trace files
- Use the ORA-600 Lookup tool on MetaLink to lookup the first argument of ORA-600 errors and search on the stack trace for ORA-600 and ORA-7445 errors.
Note: 153788.1 “ORA-600 Lookup”
- Obtain the stack trace from core file if a trace file wasn’t generated. It is virtually impossible to troubleshoot an ORA-7445 without a stack trace.
Note: 1812.1 “TECH: Getting a Stack Trace from a CORE file”

ORA-600 Lookup Tool



The screenshot shows a Netscape browser window displaying the Oracle MetaLink website. The page features a search bar with the text "ora-600 lookup" and buttons for "Search" and "Advanced". Below the search bar, there are two dropdown menus for user feedback: "Did this article help solve your problem?" and "Would you recommend this document to others?". The main content area is titled "ORA-600 Argument Lookup" and contains a form titled "ORA-600 Form". The form includes a "Select Database Version:" dropdown menu, an "Enter First Argument of ORA-600:" text input field containing the value "13013", and a "Lookup" button. Below the input field is a large text area labeled "Paste Call Stack here:". At the bottom of the form, there are "Search Call Stack" and "Reset Form" buttons. The Oracle logo and "MetaLink" branding are visible at the top of the page.

ORA-600 Lookup Tool (contd)



The screenshot shows a Netscape browser window titled "Metalink 2.0 - Netscape". The page header features the Oracle logo and "MetaLink" branding. A search bar contains the text "ora-600 lookup". Below the search bar, there are two dropdown menus for user feedback and a "Submit" button. The main content area is titled "ORA-600 Argument Lookup" and contains a table with columns for "Argument Name" and "Description". A JavaScript error dialog box is overlaid on the table, displaying a yellow warning icon and the message: "Description for this argument is not available. Your request has been logged." The dialog box has an "OK" button. The browser's taskbar at the bottom shows several open windows and the system clock at 11:22 PM.

ORA-600 Lookup Tool (contd)



The screenshot shows the Oracle MetaLink website interface. The search bar contains "ora-600 lookup". The main content area displays the "ORA-600 Argument Lookup" tool. The tool has a table with columns for argument names, values, and error codes. A JavaScript error dialog is overlaid on the table, displaying a warning icon and the text "Parsed call stack: ksedmp+ksfdmp+kgeriv+kgesiv+kse6+updexe+opie".

Argument	Value	Error Code
kse		1BAFCB8 ?
kse6		000BF60 ?
kgesiv+007c	b1	kgeriv
		1 ? 3989C1E4 ? 2011
kse6+005c	b1	kgesiv
		11A49670 ? 0 ?
		2011BCF0 ? 4 ? 2011
updexe+1004	b1	kse6
		11A49670 ? 2000BF60
opie+206c	b1	updexe
		32D5 ? 0 ? 1389 ? 0
		0 ? 801758 ? 0 ?
		11A48754 ?

ORA-600 Lookup Tool (contd)



The screenshot shows the Oracle MetaLink website interface. The search results are displayed in a table format, listing various ORA-600 bugs. The search criteria are: *Advanced Search on: ORA-600 [13013] updexe* and *Only Bug option selected*. The results are ordered by score in descending order.

Entry	Title	Type	Score	Status	Platform	Doc ID	Modified Date	Product
1.	ORA-600[2032], ORA-600[13013]ERRORS WITH MULTIPLE CORE DUMPS	BUG	53%	Vendor OS Problem, to Filer	Digital Unix	1693143	18-APR-2001	Oracle Server - Enterprise Edition V7
2.	ORA-600 WHEN UPDATING A TABLE THAT HAS INDEX	BUG	39%	Closed, Duplicate Bug	Digital Unix	391014	19-NOV-1998	Oracle Server - Enterprise Edition V7
3.	ORA-600 [13013] RUNNING UPDATE THAT USES BITMAP AND NORMAL INDEX	BUG	35%	Q/A To Development	IBM RS/6000 AIX	1726833	18-JUL-2001	Oracle Server - Enterprise Edition V7
4.	ORA-600[13013]	BUG	35%	Closed, Could Not Reproduce	Sun Solaris V2 Sparc	723658	26-APR-2000	Oracle Server - Enterprise Edition V7
5.	UPDATING A LONG COLUMN USING WHERE CLAUSES CAUSES ORA-600	BUG	30%	To Filer for Review	Sun SunOS 4.X	232051	18-APR-1995	Oracle Server - Enterprise Edition V7
6.	ORA-00600 [13013], [5001], [29400201], FOLLOWED BY PMON CRASH	BUG	26%	Suspended, Req'd Info not Avail	Generic	1699850	29-MAY-2001	Oracle Server - Enterprise Edition V7
7.	UPDATING JOINED VIEW FAILS WITH ORA-600[13013]	BUG	26%	Q/A To Development	HP/UX HP 98XX series	1507392	04-MAR-2001	Oracle Server - Enterprise Edition V7

ORA-600 Lookup Tool (contd)



ORACLE MetaLink *Example of ORA-600 Lookup on [729]*

ora-600 lookup Search Advanced

Did this article help solve your problem?: Select Would you recommend this document to others?: Select Submit Help

Doc ID: Note.31056.1
Subject: ORA-600 [729] "UGA Space Leak"
Type: REFERENCE
Status: PUBLISHED

Content Type: TEXT/PLAIN
Creation Date: 31-DEC-1996
Last Revision Date: 06-NOV-2001

Note: For additional ORA-600 related information please read [\[NOTE:146580.1\]](#)

PURPOSE:
This article discusses the internal error "ORA-600 [729]", what it means and possible actions. The information here is only applicable to the versions listed and is provided only for guidance.

ERROR:
ORA-600 [729] [a] [b] [c] [d] [e]

VERSIONS:
versions 7.X to 8.X

DESCRIPTION:
A space leak has been detected in the User Global Area (UGA).
There is NO data corruption as a result of this error.
It is an internal memory housekeeping problem.

ARGUMENTS:
arg [a] This is the number of bytes leaked

MetaLink: Internal Errors Section



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MetaLink

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ora-600 lookup [Search] [Advanced]

Bookmarks | Go to End

Help

Database Administration - Oracle Internal Errors

Use this self-service area to browse our Knowledge Base for support articles including technical bulletins, alerts, and scripts. Also included here are reference materials such as product manuals, "read me" documents, installation guides, release notes, and white papers. This Self-Service Center contains the same information that is used by Oracle analysts to research technical issues.

[Documentation](#) | [Scripts](#) | [White Papers](#)

Product-specific documentation including user, administrator, and error message manuals as well as other concept and reference materials. | Scripts you can download and modify for your own use. These may include scripts for maintenance, performance, information gathering, and other purposes. | Essays about products, features, and technology; these are written by Oracle subject matter experts.

[Release Notes/ReadMe](#) | [Platform Information](#)

Supplemental documents that describe new release features, functionality, and installation tips. | Operating system specific commands, diagnostic utilities, performance monitoring, tuning aids/utilities, and operating system configuration and parameter technical information.

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Alerts

[Introduction to Internal Errors](#)
[Top Internal Errors](#)

Alerts

- [ORA-600 \[1114\] / ORA-600 \[KSMGUARD2\] on 8.1.7.1.x with Large Number of Sessions](#) 153041.1
- [RESIZE or AUTOEXTEND can "Over-size" Datafiles and Corrupt the Dictionary](#) 112011.1
- [ORA-04045 and ORA-600 \[4882\] on startup after applying 8.1.6.1.x patch](#) 109595.1
- [Database may crash after upgrade to 8.1.6 \(or higher\) - ORA-600 \[kcoap\]_blkchk or ORA-600 \[kcbzpb_2\]](#) 06117.1
- [Parallel Query will Fail after 4 Million operations - ORA-600 \[kkgrab2\] or ORA-600 \[9999\]](#) 66450.1
- [ONLINE Index Rebuild or IOT Table Move can Produce Corrupt Index](#) 125149.1

*Top Tech Docs (formerly Technical Libraries)
Data Server (hyperlink or scroll down)*

Trace File Anatomy



- Header
- Timestamp and error message
- Current SQL (if available)
- PL/SQL Call Stack
- Call Stack
- Memory Dump
- Process State Dump
- Cursor Dump

Trace File: Header



```
/bugmnt/tar13325555.600/udump/ora_84732_vpd.trc
Oracle8i Enterprise Edition Release 8.1.6.3.0 - Production
With the Partitioning option
JServer Release 8.1.6.3.0 - Production
ORACLE_HOME = /bugmnt/tar13325555.600/816           not listed on all platforms
System name: AIX
Node name:   rtcaix1
Release: 3
Version: 4Machine:   000462754C00
Instance name: VPD
Redo thread mounted by this instance: 1
Oracle process number: 10
Unix process pid: 84732, image: oracle@rtcaix1 (TNS V1-V3)
```

Trace File:

Timestamp, Error Message, Current SQL & PL/SQL Call Stack



```
*** SESSION ID:(7.456) 2001-04-06 09:25:22.313
```

```
*** 2001-04-06 09:25:22.313
```

```
kshedmp: internal or fatal error
```

```
ORA-00600: internal error code, arguments: [13013], [5001], [2890],  
[8394584], [8], [8410443], [0], []
```

Current SQL statement for this session:

```
UPDATE ACCOUNTING.TRANSACTION SET DW_SECURITY=CONCAT(DW_SECURITY, :b1)  
WHERE ACCOUNTING.TRANSACTION.REPORT_FY = '2001' AND ACCOUNT_NUM  
BETWEEN :b2 AND :b3
```

----- PL/SQL Call Stack -----

object handle	line number	object name
38f2da28	34	package body ACCOUNTING.BIG_RANGES
39063490	1	anonymous block

Trace File: Call Stack*



```
----- Call Stack Trace -----
calling          call      entry      argument values in hex
location         type      point      (? means dubious value)
-----
_ksedmp+a8       CALLrel   _ksedst+0
_ksfdmp+e        CALLrel   _ksedmp+0
_kgeriv+95       CALLreg   00000000
_kgesiv+49       CALLrel   _kgeriv+0
_ksesic0+3c      CALLrel   _kgesiv+0
_kkogfp+300      CALLrel   _ksesic0+0
_kkooqb+7f2      CALLrel   _kkogfp+0
_kkoqbc+646      CALLrel   _kkooqb+0
_apakkoqb+e5     CALLrel   _kkoqbc+0
_apaqbd+142      CALLrel   _apakkoqb+0
_apadr+40        CALLrel   _apaqbd+0
_opitca+8cc      CALLrel   _apadr+0
```

** Call stack is not from same trace file as previous slides*

Trace File: Memory Dump



```
----- Argument/Register Address Dump -----
```

```
Argument/Register addr=11bafcb8.
```

```
Dump of memory from 0x11BAFC78 to 0x11BAFDB8
```

```
11BAFC70          2F526567 69737465          [/Registe]
11BAFC80 72206164 64723D25 6C782E20 20004942 [r addr=%lx.  .IB]
11BAFC90 0A0A2D2D 2D2D2D20 456E6420 6F662043 [..----- End of C]
11BAFCA0 616C6C20 53746163 6B205472 61636520 [all Stack Trace ]
```

Trace File: Process State Dump



PROCESS STATE

Process global information:

process: 380d9ec4, call: 38175b8c, xact: 3840c858, curses: 38104044, usrses: 38104044

SO: 380d9ec4, type: 1, owner: 0, flag: INIT/-/-/0x00
(process) Oracle pid=10, calls cur/top: 38175b8c/38175e5c, flag: (0) -
int error: 0, call error: 0, sess error: 0, txn error 0

(post info) last post received: 0 0 0
last post received-location: No post
last process to post me: none
last post sent: 0 0 13
last post sent-location: ksasnd
last process posted by me: 380d8cdc 1 2

(latch info) wait_event=0 bits=0

Process Group: DEFAULT, pseudo proc: 380fd620
O/S info: user: rsupport, term: pts/3, ospid: 84732
OSD pid info: 84732

SO: 38104044, type: 3, owner: 380d9ec4, flag: INIT/-/-/0x00
(session) trans: 3840c858, creator: 380d9ec4, flag: (41) USR/- BSY/-/-/-/-/
DID: 0001-000A-00000003, short-term DID: 0000-0000-00000000
txn branch: 0

oct: 6, prv: 0, **user:** 18/ACCOUNTING
O/S info: user: rsupport, term: pts/3, ospid: 22588, machine: rtcaix1
program: sqlplus@rtcaix1 (TNS V1-V3)

application name: 01@ u1.sql, **hash value**=2435717920
last wait for 'db file scattered read' blocking sess=0x0 seq=2099 wait_time=-2
file#=2, block#=5693, blocks=9

Trace File: Cursor Dump



***** Cursor Dump *****

Current cursor: 4, pgadep: 1

pgactx: 38e86170 ctxcbk: 38e86844 ctxqbc: 38e862f8 ctxrws: 3989c1e4

Cursor Dump:

Cursor 1 (2013e314): CURBOUND curiob: 20140d70

<< *snip*>>

Cursor 4 (2013e380): CURBOUND curiob: 2014f494

curflg: c5 curpar: 0 curusr: 12 curses 38104044

cursor name:

UPDATE ACCOUNTING.TRANSACTION SET DW_SECURITY=CONCAT(DW_SECURITY, :b1) WHERE
ACCOUNTING.TRANSACTION.REPORT_FY = '2001' AND ACCOUNT_NUM BETWEEN :b2 AND
:b3

child pin: 384eabd8, child lock: 384e9be8, parent lock: 384e9c60

xscflg: 1104e4, parent handle: 3945d3c0, xscfl2: 5120000

nxt: 15.0x0000040c nxt: 14.0x0000064c nxt: 13.0x00001f7c nxt: 12.0x0000048c

nxt: 11.0x000004cc nxt: 10.0x00000758 nxt: 9.0x00001f7c nxt: 8.0x00000034

nxt: 7.0x00001f7c nxt: 6.0x00000034 nxt: 5.0x00001f7c nxt: 4.0x00000034

nxt: 3.0x00001f7c nxt: 2.0x000004e4 nxt: 1.0x00000600

Cursor frame allocation dump:

frm: ----- Comment ----- Size Seg Off

whp size: 164664/177296

Dump of CURRENT WORK HEAP:

Trace File: Cursor Dump (contd)



*UPDATE ACCOUNTING.TRANSACTION SET DW_SECURITY=CONCAT(DW_SECURITY,:b1) WHERE
ACCOUNTING.TRANSACTION.REPORT_FY = '2001' AND ACCOUNT_NUM BETWEEN :b2 AND :b3*

bind 0: dty=1 mxl=32(04) mal=00 scl=00 pre=00 oacflg=13 oacfl2=1 size=32 offset=0
bfp=20144364 bln=32 avl=04 flg=09
value="SAD6"

bind 1: dty=1 mxl=32(07) mal=00 scl=00 pre=00 oacflg=13 oacfl2=1 size=32 offset=0
bfp=20144380 bln=32 avl=07 flg=09
value="R038108"

bind 2: dty=1 mxl=32(09) mal=00 scl=00 pre=00 oacflg=13 oacfl2=1 size=32 offset=0
bfp=201443ac bln=32 avl=09 flg=09
value="R03810999"

<sid>CORE.LOG file



- Generated only on Windows platforms
- One file per SID. Entries are appended so remember to check the timestamp to get the correct entry!
- Anatomy
 - Process information & Timestamp
 - Memory Map
 - Registers
 - Instruction Disassembly
 - Call Stack Trace
 - Raw Stack Dump (not in earlier versions)

<sid>CORE.LOG file (contd)



Oracle8i Release 8.1.7.2.1 - Production

Process Id: 0x00000520 Thread Id : 0x00000458 Time : Thu Jan 03 20:09:47

Excp. Code: 0xc0000005 Excp. Type: ACCESS_VIO Flags: 0x00000000

```
----- Memory Map of process -----
Start Addr-End Addr  Type      Size      ModuleName
0x00230000-0x00236fff Image     0000028672 D:\ORACLE\ORA81\BIN\ORANMS.DLL
0x00240000-0x00250fff Image     0000069632 D:\ORACLE\ORA81\BIN\ORANMSP.DLL
```

<< snip >>

```
0x78140000-0x78159fff Image     0000106496 C:\WINNT\SYSTEM32\MSV1_0.DLL
```

----- End of memory map -----

```
----- Registers -----
eip = 006a8aba esp = 0deecdcc ebp = 0deecdcc edi = 00007849 esi = 00000092
eax = 00000000 ebx = 00000026 ecx = 0df60107 edx = 00000000
ecs = 0000001b eds = 00000023 ees = 00000023 ess = 00000023
egs = 00000000 efs = 0000003b
eflags = 00010246
```

----- End of Registers -----

----- Instruction Disassembly -----

----- End of Disassembly -----

<sid>CORE.LOG file (contd)



```
----- Call Stack Trace -----
Frameptr   RetAddr   Param#1   Param#2   Param#3   Param#4   Function Name
0x0deecdcc 0062b2ef 00000000 0df588be 0000009e 0df5a5ac  _kdkkbu+10a
0x0deedc38 006c39fe 0deedce8 0df585bc 00000003 00000004  _kdiulk+c8f
0x0deedc68 00875e5d 0deee104 0deedce8 0df585bc 00000004  _kcoubk+9e
0x0deee1f0 00874d22 00000002 00c00386 0df585b8 00000250  _ktundo+85d
0x0deee240 00872f72 0deee318 09a62014 00000004 0deee540  _ktubko+2d2
0x0deee4d8 00872180 0deee540 00000025 00000001 00000000  _kturrt+952
0x0deee5f0 00871692 00000005 00000000 00000001 00000000  _kturec+210
0x0deee6b0 00550e86 00000010 00000000 00000001 00175db0  _kturax+102
0x0deee7bc 0086fe7a 00000000 00000000 06990f20 013c04e8  _ktprbeg+116
0x0deef024 005ef099 013c04e8 00175fac 00175db0 00000000  _ktmmon+93a
0x0deef0c4 005f31d9 00178a48 00175db0 00175fac 00000000  _ksbrdp+1b9
0x0deefa78 004245fe 00000032 00000000 00000000 00e0902c  _opirip+239
0x0deefca8 0040be4e 00000032 00000000 00000000 00000000  _opidrv+54e
0x0deefcc0 00401157 0deefe2c 00000032 00000000 00000000  _sou2o+1e
0x0deefe38 00402bbc 00000003 0deeff78 7ffdcc00 0273d4bc  _opimai+157
0x0deeffb4 77e92ca8 0176c088 7ffdcc00 0273d4bc 0176c088  _BackgroundThreadSta
0x0deeffec 00000000 00402a90 0176c088 00000000 00000000  0x77e92ca8
----- End of Stack Trace -----
```

```
----- Raw Stack Dump -----
Address      Dump of bytes
0x0deecd00  ac a5 f5 0d 14 a0 03 0b - e8 85 f5 0d 38 dc ee 0d .....8...
0x0deecd10  ef b2 62 00 00 00 00 00 - be 88 f5 0d 9e 00 00 00 ..b.....

<< snip >>

0x0deed2b0  00 00 00 00 00 00 00 00 - 02 61 00 00 15 00 17 00 .....a.....
----- End of Raw Stack Dump -----
```

Working with Support



- Provide as much information as possible when logging an iTar
 - If the database crashed, what is the current status (up or down)?
 - When was the error first reported and how often is the error occurring (once, intermittently, daily, multiple times a day, etc...)?
 - What type of process is it and what was it doing (e.g. OLTP, batch job, log on, web server connection, etc...)?
 - What has changed in the environment since the error started occurring (e.g. OS patches, init.ora changes, application changes, data load, etc...)?
 - What have you already tried?

Working with Support (contd)



- Upload the following files when you log an iTar:
 - Alert.log (preferably the entire file, otherwise at least the last 5-7 day's worth)
 - Trace files, if multiple occurrences upload the first few files and the last few files (more is better!)
 - RDA output
 - Note: 139597.1 "Remote Diagnostic Agent (RDA) for Unix"
 - Note: 153091.1 "Remote Diagnostic Agent (RDA) for Windows"
 - **Please do not paste alert.log and trace file excerpts in the tar, except for the actual error message.**
 - **Do not upload the core files. The stack trace must be obtained using the executable that generated the file.**

Working with Support (contd)



- Apply the latest patchset
Standard policy is that bugs can be filed only against the latest patchset on **supported** releases.
- Provide a reproducible testcase (preferably a small one!) with complete instructions
 - For issues related to the CBO, the data is often not needed, just the objects and the stats
Note: 117203.1 "How to Use DBMS_STATS to Move Statistics to a Different Database"

Summary



After this presentation you should have a basic understanding of:

- ORA-3113, ORA-600 and ORA-7445 errors
- Troubleshooting steps
- Key information in trace files
- Best practices for working with support

Questions?



<http://metalink.oracle.com> - log an iTar or post a forum thread

<http://technet.oracle.com> - post a forum thread

Send RDA and ORA-600 Lookup Tool feedback to:
stlibmgr_us@oracle.com

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