

探究 – Metalink、BBED、DSI 与学习方法谈

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Agenda

- **How to Use Metalink Efficiently**
- **How to Use BBED to Modify Database Block**
- **How to Deep into Oracle by Learning DSI**

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- Database 11g Release 2 Certification Highlights [Oracle Server - Enterprise Edition]
- Ora-4031 Errors using Full Outer Joins [Oracle Server - Enterprise Edition]
- ASM Instance Reports ORA-00600 [15435] And ORA-04031 Errors [Oracle Server - Enterprise Edition]
- ORA-600[kcbgtr_1a] While Running Streams Replication With a Large Number Of Tables [Oracle Server - Enterprise Edition]
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- "Low value specified for sga_target" reported in the Alert Log [Oracle Server - Enterprise Edition]
- ORA-63994: Oracle Database Products Consume A Lot Of Memory May encounter ora-4030

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Database, FMW, EM Grid Control, and OCS Software Error Correction Support Policy [ID 209768.1]

RAC: Frequently Asked Questions [ID 220970.1]

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24/03/2009

Bug 3312079 - ENH: Add support for EL8EBCDIC423R to JDBC

■■■■■■■

[ID 3312079.8]

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Bug 2850227 - JDBC treats some illegal UTF-8 data as valid

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Bug 3258738 - ENH: Add charset EL8EBCDIC423R

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Bug 3254475 - OERI[h_mk_cr_1] possible during SGA shrink

■■■■■■■

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Bug 3253534 - OERI[krvsek: bad index xdat] in Streams with > 32 columns and a LOB

■■■■■■■

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Bug 3041833 - DBMS_XMLDOM fails with ORA-31182 if document has > 64k handles

■■■■■■■

[ID 3041833.8]

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How to Troubleshoot Grid Infrastructure Startup Issues [ID 1050908.1]





















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In this Document

- [Goal](#)
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- [Start up sequence:](#)
- [Cluster status](#)
- [Case 1: OHASD.BIN does not start](#)
- [Case 2: OHASD Agents does not start](#)
- [Case 3: CSSD.BIN does not start](#)
- [Case 4: CRS.D.BIN does not start](#)
- [Case 5: Various other daemons does not start](#)
- [Case 6: CRS.D Agents does not start](#)
- [Network and Naming Resolution Verification](#)
- [Log File Location, Ownership and Permission](#)
- [Network Socket File Location, Ownership and Permission](#)
- [Diagnostic file collection](#)

My Oracle Support Community

Recent communities content (subscribed)

Subject	Updated By
<p> why the tablespace is created with no logging and it still generates logs in 11g??</p> <p>Posted on March 9, 2010 9:49 PM in Database Administration by User51916 , Last updated on March 9, 2010 9:49 PM , 0 Replies, 1 Views</p>	<p>User51916 </p>
<p> Re: how to make DB auto startup and auto shut down?</p> <p>Posted on March 9, 2010 8:44 PM in Database Administration by Prezes , Last updated on March 9, 2010 8:44 PM , 0 Replies, 0 Views</p>	<p>Prezes </p>
<p> Re: Corrupt database object in SYSAUX - best recovery option. Object = SYS.WRI\$_ADV_MESSAGE_GROUPS</p> <p>Posted on March 9, 2010 8:18 PM in Database Administration by VenkatB , Last updated on March 9, 2010 8:18 PM , 0 Replies, 0 Views</p>	<p>VenkatB </p>
<p> Re: find out oracle user</p> <p>Posted on March 9, 2010 7:47 PM in Scalability RAC by VenkatB , Last updated on March 9, 2010 7:47 PM , 0 Replies, 0 Views</p>	<p>VenkatB </p>
<p> Corrupt database object in SYSAUX - best recovery option. Object = SYS.WRI\$_ADV_MESSAGE_GROUPS</p> <p>Posted on March 9, 2010 7:40 PM in Database Administration by NeilP , Last updated on March 9, 2010 7:40 PM , 1 Replies, 20 Views</p>	<p>VenkatB </p>
<p> Re: How can I know the sys_context of other sessions?</p> <p>Posted on March 9, 2010 7:29 PM in Database Administration by Gregory , Last updated on March 9, 2010 7:29 PM , 0 Replies, 0 Views</p>	<p>Gregory </p>
<p> Re: too much trw file</p> <p>Posted on March 9, 2010 7:19 PM in Scalability RAC by VenkatB , Last updated on March 9, 2010 7:19 PM , 0 Replies, 0 Views</p>	<p>VenkatB </p>
<p> Re: Oracle OLAP -- how to reverse dimension order of cube variable and still be able to use EIF import/export</p> <p>Posted on March 9, 2010 7:16 PM in Database Data/Warehousing by LajosV - Moderator , Last updated on March 9, 2010 7:16 PM , 0 Replies, 0 Views</p>	<p>LajosV - Moderator </p>
<p> Re: Request for Mobile Database Workbench improvements</p> <p>Posted on March 9, 2010 7:11 PM in Oracle Lite by VRic , Last updated on March 9, 2010 7:11 PM , 0 Replies, 0 Views</p>	<p>VRic </p>
<p> Re: how to make DB auto startup and auto shut down?</p> <p>Posted on March 9, 2010 7:10 PM in Database Administration by rustam , Last updated on March 9, 2010 7:10 PM , 0 Replies, 0 Views</p>	<p>rustam </p>

Make Good Use of SR

- While the oracle's engineers do not necessarily help you solve the problem, but they have a large resource pool !
- Their responses can often give you a good inspiration.
- Due to the extensive use of flash, the new version of the Metalink may lead to some of your SR can not be opened normally, if you encounter such a situation, you can log to supporthtml.oracle.com

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- How to Use Metalink Efficiently
- **How to Use BBED to Modify Database Block**
- How to Deep into Oracle by Learning DSI

My experience on using BBED

- BBED stands for **B**lock **B**rowser and **E**Ditor.
- BBED里的map和print
- **BBED**只是一款工具，类似于**ultraEdit**，单纯的会用**BBED**来修改数据没有任何意义！关键是要知道为什么要这么改！
- 在充分了解**Block**格式和**Oracle**的各种机制的基础上广泛使用**BBED**，用它来帮你构造测试案例，用它来帮你验证测试结果，用它来帮你深入理解**Oracle**！

BBED on Unix/Linux

- Before the BBED can be used, it must be linked.
- http://orafaq.com/papers/dissassembling_the_data_block.pdf

BBED on Windows

- **BBED.EXE** that shipped with Oracle 8.1.6, which was the last time the Windows version was included in the RDBMS software installation.
- Although 9.2.0.1, 10.2.0.1 does not contain BBED.EXE, 9.2.0.6 does!
- You can use that executable against later versions of Oracle. **But be careful about zero block.** Plus one when you count the block number by using `dbms_rowid.rowid_block_number`.
- 9i和10g的datafile header block在结构kcvfhckp之前的位置和內容都是一样的，但从kcvfhckp开始之后的位置就全部不一样了，注意，这里只是位置不一样，各结构的长度和內容还是一样的。9i里结构kcvfhckp的offset是140，而在10g/11g里kcvfhckp的offset是484，也就是说oracle在10g/11g里把结构kcvfhckp挪到了datafile header block的最末端。

Before BBED Demo

- **Offline normal (tablespace)**
 - Checkpoints data blocks of tablespace
 - Updates file headers and control file
- **Offline temporary (tablespace)**
 - Checkpoints data blocks of 'good' datafiles of tablespace
 - Updates file headers(maybe) and control file
- **Offline immediate (tablespace or data file)**
 - Only update control file
 - Data files require recovery

Before BBED Demo (Continue)

- 当一个datafile处于online fuzzy状态的时候，其kcvfhsta为0x04，其对应的control文件里上述datafile所在的状态是0x0e；
- 当一个datafile处于由shutdown immediate而导致的offline状态的时候，其kcvfhsta为0x00，其对应的control文件里上述datafile所在的状态是0x0e；
- 当一个datafile处于offline normal状态的时候，其kcvfhsta为0x00，其对应的control文件里上述datafile所在的状态是0x80；
- 当一个datafile处于offline immediate状态的时候，其kcvfhsta为0x04，其对应的control文件里上述datafile所在的状态是0x10；
- 当一个datafile处于read only状态的时候，其kcvfhsta为0x00，其对应的control文件里上述datafile所在的状态是0x86；

BBED Demo

- **Demo1**

kcvfhhdr.kccfhcsq — Controlfile sequence number

kcvfhckp.kvcpscscn — Checkpoint SCN

kcvfhckp.kvccptim — Datafile checkpoint timestamp

kcvfhcpc — Datafile checkpoint count, number of checkpoints attempted to this file

kcvfhrts — Recoverd timestamp

kcvfhccc — Controlfile checkpoint count, saved copy of the control file record of the checkpoint count

BBED Demo (Continue)

- **Demo2:**

```
alter database create datafile '/dras20/astca/testscn_02.dbf' as  
'/dras20/astca/testscn_02.dbf';
```

kcvfhhdr.kccfhcsq — Controlfile sequence number

kcvfhckp.kvcpscn — Checkpoint SCN

kcvfhckp.kvcptim — Datafile checkpoint timestamp

**kcvfhcpc — Datafile checkpoint count, number of checkpoints
attempted to this file**

kcvfhrts — Recoverd timestamp

**kcvfhccc — Controlfile checkpoint count, saved copy of the
control file record of the checkpoint count**

Question of BBED Demo

- 在Demo1里，当我改完datafile 139的datafile header block并重建control file后，为什么在open resetlogs的时候oracle依然会提示我：

ORA-01194: file 139 needs more recovery to be consistent?

在Demo2里，我用了一模一样的方法改了datafile 139的datafile header block并重建了control file，此时为什么在open resetlogs的时候就能顺利open，oracle再也不提示上述错误了？

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My experience on using DSI

- DSI stands for **Data Server Internals**
- **DSI**应该在你具有一定的基础后才开始看，早看反而无益！
- 建议大家一定要去看**DSI**，**DSI**真的不难！在看**DSI**的基础上配合着用**BBED**，用它们来帮你构造测试案例，用它们来帮你验证测试结果，**用它们来帮你深入理解Oracle！**

My experience on using DSI (Continue)

- **DSI303 — Advanced Backup, Restore and Recovery Techniques**
- **DSI401 — Dumps Crashes and Corruptions**
- **DSI402 — Space and Transaction Management**
- **DSI402e — Data types and block structures**
- **DSI403e — Recovery Architecture Components**
- **DSI404e — Query Optimizer**
- **DSI405 — Performance Tuning**

How to Deep into Oracle

良好心态 + 循序渐进

Thanks !