



Rare & Dear, Inc.

“How to Avoid Database Disasters”

presented by

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Overview

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- ❖ **5 Scenarios**
- ❖ **10 Oracle Configuration Problems**
- ❖ **5 Application Problems**
- ❖ **5 Management Pitfalls**



Introductions

Rare & Dear, Inc.

□ *Rare & Dear Team Members*

- Ned Dana OCP DBA
- Susan Stayton Business Analyst
- Catherine Geraghty OCP DBA
- Pauli Salmu Senior Consultant
- Tom Kagehiro OCP DBA (on assignment)
- Jason Fox Executive Consultant



Experience

Rare & Dear, Inc.

- Average 22 years in IT
- Average 11 years Oracle Experience
- 16 Industry Sectors
- 3 Oracle Certified Professional DBAs



Scenario #1 - Backup

***All data at risk due to bug in Oracle,
untested backup/restore, and bad luck.***

Lessons:

- ❖ Be sure you have “good” backups.
- ❖ Watch out for **AUTOEXTEND**.
- ❖ Move off early releases of Oracle.
- ❖ Don't try this fix at home!



Scenario #2 - Backup

Loss of data due to operator error ... and failure to backup after problem discovered

Lessons:

- ❖ Don't do cold backups of a hot system.
- ❖ Make a cold backup of the database immediately after a serious crash
- ❖ Examine backup procedures periodically and actually test a restore.
- ❖ Treat your database with respect.



Scenario #3 - Application Development

- *Performance problem caused by interface design.*
- *Inexperienced programmers for mission critical work.*

Lessons:

- ❖ On a high traffic website, the DB is the focus of activity.
- ❖ Use Oracle's advanced features.
- ❖ Get help early.
- ❖ Inexperienced DBA's can actually make matters worse.
- ❖ Don't call the Boy Scouts when you need the Marines.



Scenario #4 - Tuning of 3rd party app

3rd party application poorly tuned not well ported to Oracle

Lessons:

- ❖ Be careful using temporary tables accessed by many users.
- ❖ Diagnosing performance problems requires finding out what is going on inside Oracle.



Scenario #5 - Tuning of 3rd party app. Poor vendor support.

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3rd party application poorly tuned. Oracle support overpriced & controlled by Vendor.

Lessons

- ❖ Check out the terms, conditions, and costs of vendor-supplied support.
- ❖ Get derivative rights to code.
- ❖ Batch or DSS need different setup than OLTP.



Ten Oracle Configuration Problems

1. RAID-5.
2. Temporary tablespace set as Permanent.
3. Data files with AUTOEXTEND ON and extent size of 1.
4. `SYSTEM/MANAGER` and `SYS/CHANGE_ON_INSTALL`
5. Tables not analyzed.
6. Oracle Block Size too small.
7. Buffer Cache too small.
8. Shared Pool too small.
9. Redo Log buffer and files too small.
10. Sort Area too small for large operations.
11. Rollback segments too small or too large.



Five Common Application problems

1. Poor indexing: too few, too many, the wrong ones.
2. Inefficient SQL. Repeating operations.
3. No bind variables or arrays.
4. Too many COMMIT's or ROLLBACK's.
5. Users log on as application owner, Passwords obvious, and Dangerous Privileges given to application owner.



Common pitfalls for management

1. Using inexperienced personnel ... and without expert support.
2. Expecting novices to become proficient in a few months.
3. Waiting until a crisis before getting **HELP**.
4. Cutting corners on critical systems.
5. Expecting to pay less to clean up a mess than it cost to make the mess.



Wrap-up

- ❖ Many applications running on Oracle are poorly tuned.
- ❖ Most database administration can be done remotely.
- ❖ Working with Oracle is a bit like working with heavy machinery.



Ohana DBA

Rare & Dear, Inc.

- ❖ Rare & Dear offers outsourced DBA services.
- ❖ Better database administration remotely for less than it costs to have a DBA on staff.
- ❖ Mentoring and support program.



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