



www.*DanHotka.com*
Quarterly Newsletter

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Dan Hotka is a Training Specialist who has over 30 years in the computer industry and over 24 years of experience with Oracle products. He is an internationally recognized Oracle expert with Oracle experience dating back to the Oracle V4.0 days. Dan's latest book is the [SQL Developer Handbook](#) by Oracle Press. He is also the author of [Oracle9i Development By Example](#) and [Oracle8i from Scratch](#) by Que and has co-authored 7 other popular books including the [Database Oracle10g Linux Administration](#) by Oracle Press. He is frequently published in Oracle trade journals, and regularly speaks at Oracle conferences and user groups around the world.

Public Training Offerings

Watch for Dan in your area with these courses. Contact Dan for course details and enrollment. Check www.DanHotka.com, click on Onsite Training for course outlines, or, just ask Dan.

Nov 10 - 14, 2008 Oracle PL/SQL Programming
(Ames, Iowa)

December 1 - 3, 2008 Oracle SQL Performance and
Tuning (Minneapolis)

December 4, 2008 TOAD Tips and Techniques
(Minneapolis)

December 16 - 18, 2008 Advanced PL/SQL
Programming (Minneapolis)

Fall in the Midwest will be here soon. It has been an enjoyable summer with a mix of work in and around some vacation time.

- This newsletter will cover the second part of my Oracle Trace topic, covering the contents I find of value in the trace file.
- I have found some useful utilities that display the Microsoft license key values...useful when a computer is purchased on Ebay perhaps and one does not have the keys if the OS were to need reinstalling.
- The book review is on [Oracle PL/SQL: Expert Techniques for Developers and Database Administrators](#) by Lakshman Bulusu.

Thank you for your feedback. Let me know what you think of the 2-column format of this newsletter. I made this change at the recommendation of a reader!

This newsletter, along with all prior newsletters, are available at www.DanHotka.com.

What's in this issue?

User Group Information:

- See Dan at KCOUG and RMOUG!
- See page 3 for Dates and Submitted Papers.
- I have several new presentations for User Groups – See New Presentations. A complete list of topics is at www.danhotka.com

Some 'Green' Tips

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Oracle Trace file contents. Page 3

Product Review

ORSYP – A job-scheduling tool. See page 5.

Book Review

Oracle PL/SQL: Expert Techniques for Developers and Database Administrators

Check out this useful book by Lakshman Bulusu on page 6.

Free Downloads

Useful information page 7.

Educational Offerings

- My Training Pricing Model – up to 15 attendees for 1 low price!
- On-site at your company or in your city via user group participation...see Educational Offerings on Page 2.

Featured Presentation

- Why is my Oracle10g Database slower than my Oracle9i Database? Popular presentation last given at Collaborate 08. Details on page 6.

The Back Page:

- WWII Duks

Puzzler...

A PC in the 80's was deemed to be IBM compatible if it ran what program?

Go to www.DanHotka.com for the answer!

User Group Information

See Dan at these events:

KCOUG November 5 (Kansas City)

Submitted Papers

All the Free Stuff from Oracle Corp

Why is my 10g Database Slower than my 9i Database?

Discoverer Tips and Techniques

www.kcoug.org

RMOUG February 11 - 12, 2009 (Denver)

Submitted Papers

Why is my 10g Database Slower than my 9i Database?

All the Free Stuff from Oracle Corp

Discoverer Tips and Techniques

Analytics Tips and Techniques

www.rmoug.org

I am available to speak at your user group. A complete listing of available topics is on my website.

Let me know what you would like and I can fill your timeslot.

Educational Offerings

Remember that my portable computer lab make these courses very easy to teach at your site. The cost of this lab is included in my 1-fee pricing model (see below).

2008 has been a year of PL/SQL and SQL Performance Tuning. I have been doing training for 5 years now (where does the time go...) and have noticed definite patterns of training.

My PL/SQL offerings include both Intro to PL/SQL (a 2-day course) and Advanced PL/SQL (a 3-day course). Both courses cover using the Oracle PL/SQL Profiler and other PL/SQL tuning topics.

The focus of my SQL Performance Tuning course is to cover exactly how Oracle arrives at the explain plan, how Oracle uses/includes indexes in these plans, and tuning

using coding style that I find helps maintain the tuned SQL stay tuned.

I have adapted this course to 1-day, 2-days, and 3-day offerings. This course also illustrates various tuning tools such as Stats Pack, SQL Trace, and the PL/SQL profiler, as well as advanced topics that include SQL Profiling, finding SQL problems using the V\$ tables, and Oracle10g performance issues.

Training Pricing Model

I price my courses at a fixed rate for up to 15 attendees. This rate compares to the price that others charge for just 2 to 4 attendees. This course fee includes the use of my portable computer lab. There is a separate per attendee charge that covers the cost of the student guide and any additional books that might be associated with the course. This student fee is anywhere from \$50 to \$150, depending on the course.

Current Course Offerings

Give your technical staff that competitive edge with Oracle Workshops! These courses are designed to enhance your staff's skill set to perform their job better.

These workshops are designed to be held at your location. These courses use my portable computer lab. On-site instruction enables more people to be trained with the same training dollar.

The course utilizes a variety of current tools. Students will have the opportunity to learn more about SQL Developer, TOAD, TextPAD, as well as the Oracle tools like SQL*Plus, iSQL*Plus, and Dan's new Java-based SQL Tuner.

Oracle SQL Performance Tuning Tips and Techniques (1-day, 2-day, or 3-day offerings)

TOAD for IT Staff

SQL Developer for IT Staff

Oracle Analytics/Answers for End Users

Oracle Analytics for Administrators

Oracle Discoverer for End Users

Oracle Discoverer for Administrators

Introduction to Oracle (SQL)

Oracle Intro to PL/SQL

Oracle Advanced PL/SQL

Oracle Fundamentals

Oracle10g New Features for Developers

Introduction to UNIX/Linux

UNIX/Linux Shell Programming

Oracle/Unix Scripting Tips and Techniques

Oracle Trace Part 2

The Oracle Trace Facility was introduced in/around Oracle7. This useful tool collects SQL statements, their associated bind variables, and the wait events (work they caused Oracle), along with a variety of useful statistics...for an individual session, another session, or the entire database.

This is Part II on this series where I illustrate the contents of the Oracle Trace File. The Summer 2008 newsletter illustrated how to use the Oracle Trace Facility to capture SQL in a trace file.

It is important to note that the explain plan associated with the SQL statement in this trace file is indeed the explain plan that Oracle used when executing the SQL. Explain plans from tools such as SQL*Plus Autotrace, TOAD's and SQL Developer's Explain Plan button...populate the PLAN_TABLE using syntax such as 'Explain Plan for <SQL statement>;'...but isn't the actual explain plan used by Oracle when executing the SQL code.

This article will discuss the contents of the trace file and how to view these contents.

Viewing the Trace File contents

If you can recreate the problem, then the trace facility can capture the problem SQL.

Part I of this topic discussed how to create the trace file. I recommend that you FTP or copy it to your workstation for processing from there.

TKPROF is the command line tool used to interpret the contents of the trace file into something meaningful.

```
DOS> TKPROF
```

...will return something like this

```

DB5> TKPROF
Usage: tkprof tracefile outfile [explain= ] [table= ]
       [print= ] [insert= ] [sys= ] [sort= ]
table=schema.tablename [schema.tablename] with 'explain=' option.
explain=user/password Connect to ORACLE and issue EXPLAIN PLAN.
print=integer List only the first 'integer' SQL statements.
aggregate=yes/no
insert=filename List SQL statements and data inside INSERT statements.
TKPROF does not list SQL statements run as user SYS.
record=filename Record non-recursive statements found in the trace file.
wait=yes/no Record summary for any wait events found in the trace file.
sort=option Set of zero or more of the following sort options:
print= number of times parse was called
pccpa cpa time parsing
pccle elapsed time parsing
pccdr number of disk reads during parse
pccbr number of buffers for consistent read during parse
pccra number of buffers for current read during parse
pccms number of misses in library cache during parse
pccex number of execute calls
pccexa cpa time spent executing
pccela elapsed time executing
pccdr number of disk reads during execute
pccbr number of buffers for consistent read during execute
pccra number of buffers for current read during execute
pccrs number of rows processed during execute
pccms number of library cache misses during execute
pccfc number of times fetch was called
pccfca cpa time spent fetching
pccfld elapsed time fetching
pccfdsk number of disk reads during fetch
pccfbr number of buffers for consistent read during fetch
pccfra number of buffers for current read during fetch
pccfrow number of rows fetched
pccfuid userid of user that parsed the cursor

```

The minimum syntax is: tkprof <trace file name> <output file name>. EXPLAIN = is obsolete, used to have to give a login to get explain plans. TABLE = is useful to show SQL that contains specific table references...I've never used TKPROF in this manner. SYS = NO will not display the recursive or dictionary SQL. I don't know what INSERT = is used for, I obviously have not had a need for this option.

If you do not use a 'SORT =' clause, the entire trace file will be processed in the order that the SQL was put into the trace file. I use SORT = and PRINT = 10 or so in combination to order by highest to lowest the various sort options above...and the PRINT = to just display the first 10 or 20 SQL statements. This method allows you to drill into the trace file and let TKPROF display the high I/O (fchdsk) or the highest rowcount (fchrow) or the longest running (exeela) SQL. You can use these in combination too but I usually don't.

The output of TKPROF is written to the output file.

Open the output file in your favorite editor to view the contents.

TOAD has a TKPROF interface. It is found on the Menu Item Database → Diagnose → TKProf Interface.



Notice in TOAD, the sort options are check boxes! TOAD can automatically open the output file for you as well.

Don't have TOAD? Ask me for JS Analyzer. I wrote this tool specifically for folks that didn't have TOAD to ease the pain of the command line TKPROF! JS Analyzer runs TKPROF for you and allows for sort options to be specified with check boxes as well.



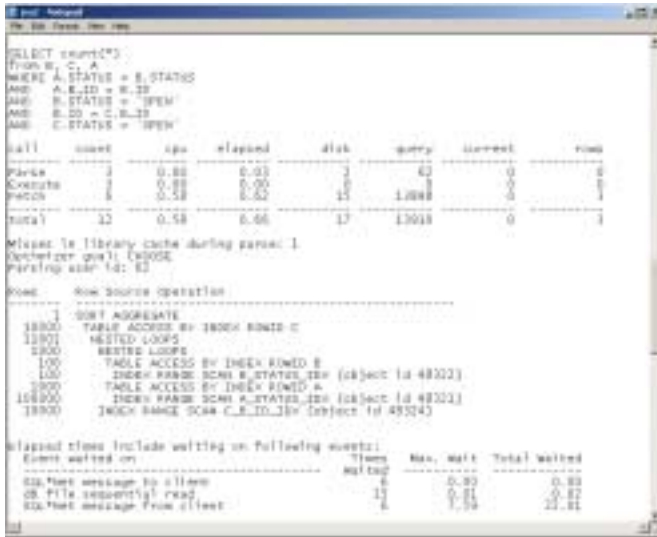
Interpreting the Trace File contents

Notice the TKPROF output above. The SQL statement appears then the statistics. Notice the cross-tabular nature of this grid...notice the sort options...it is the contents of the grid that the sort options applies to...putting the SQL into this order...descending...when the SORT = option is used.

If bind variables were collected and the SQL statement had bind variables...the bind variables and the related data would appear.

The explain plan listed IS the explain plan used when the SQL executed. When you press an explain plan button on many popular Oracle tools...it runs an explain plan because you asked for one...that is not the execution plan that will be used when the SQL executes.

This is a Level 12 SQL trace because it has wait events. I



use these wait events to match up with wait events from Stats Pack to help me find the offending SQL that caused certain wait events to occur. If using trace to find wait events, I would not use a SORT option at all then use the 'find' of the editor I used to open the output.

Summary:

The Oracle Trace Facility is useful to capture problem SQL for later review. If a problem can be recreated, or, a time can be specified when a particular issue occurs, then the Oracle Trace facility can be used to capture the problem SQL. TKPROF is used to put the trace file into meaningful text and there are SORT options that allow for various types of SQL to be listed first in the file. The trace file is also useful to find SQL that generate various Oracle wait events as well.

Some 'Green' Tips

How long does it take...

I found this information in the Park City RV Park newsletter...enjoy.

We've all seen litter scattered alongside a roadway. Do you know how long it will take to decompose to non-recognizable form?

- Styrophome: Never
- Aluminum: 80 – 100 Years
- Plastic Bags: 10 – 20 Years
- Plastic coated cartons: 5 Years
- Plastic containers: 50 – 80 Years
- Cigarette butts: 10 – 12 Years
- Leather shoes: 25 – 40 Years
- Vibram soles: 50 – 80 Years
- Wool Socks: 6 – 24 Months
- Orange peels: up to 6 Months
- Paper containers: 2 – 5 Months

Product Review

Tired of wondering if your Oracle eBusiness batch jobs ran? Need to tie them to external jobs like file transfers, database loads, and reports? Want one place to monitor all of your distributed batch jobs from? ORSYN's Dollar Universe is the enterprise batch job scheduler for you. It submits, monitors, and controls both concurrent program and request set jobs. And since Dollar Universe supports agents on the other Unix, Linux, Windows, AS400, etc machines in your environment, you can manage and monitor all of your jobs as part of an integrated enterprise-wide workflow no matter where they run or what the job dependencies are.

Dollar Universe is the workflow automation tool that brings intelligence to job scheduling. It's unique Peer-to-Peer architecture leverages the power of distributed computing by spreading job scheduling functions across the entire network, offering a highly available, reliable, scalable and cost-effective solution for your job scheduling needs.

Dollar Universe has detailed integrations with all of the major ERP packages including Oracle eBusiness Suite, JD Edwards, PeopleSoft, SAP, Siebel, Lawson, and Microsoft Dynamix. It's agents run on all of the Unix, Linux, and

Windows platforms along with AS400, and can integrate to mainframe schedulers for true cross platform support.

For more information, please email
Ray.Godsey@orsyp.com

Book Review

Oracle PL/SQL: Expert Techniques for Developers and Database Administrators

ISBN: 978-1-58450-554-9

By: Lakshman Bulusu

Publisher: Course Technology Cengage Learning.

I can tell by reading this book that Mr. Bulusu is an experienced PL/SQL programmer. He includes his knowledge in each of the topics and always provides scripts that illustrate his topics. The book includes a CD that contains all the scripts from the book.

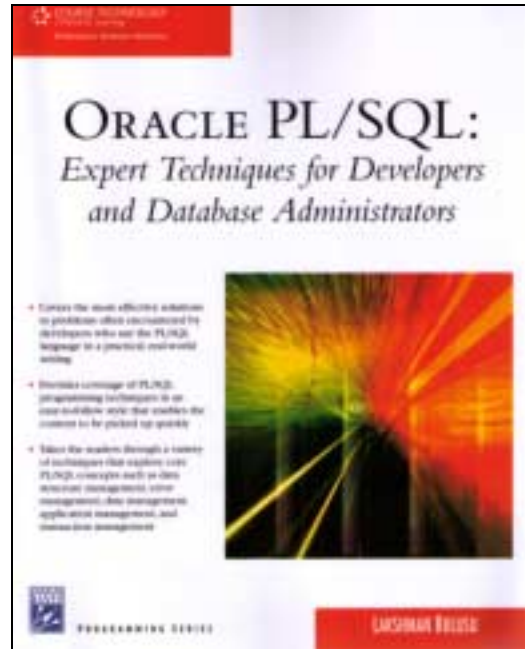
I liked the organization of this book. I think it would make a good reference guide for both the novice and experienced PL/SQL programmer.

This book contains chapters on:

- Intro to PL/SQL and Overview
- PL/SQL by Dissection
- New Features (10g and 11g)
- Data Structures
- Error Management
- Data Management
- Application Management
- Transaction Management
- Application Development Frameworks
- Applying in 3GL and Web
- Miscellaneous Techniques
- Tuning and Debugging
- Coding Standards

This is a good book for anyone working with PL/SQL.

Nice job Lakshman.



Featured Presentation

Why is my Oracle10g Database slower than my Oracle9i Database?

Have you migrated your business applications to Oracle10g from prior versions to have them suffer from unexplained performance issues? Do you notice that the explain plans have changed and indexes that were previously used in the prior database environment are now not being selected?

If so, then this is a must-see presentation. Dan will discuss a little-known Index statistic and the impact this has on new tablespace features now available in Oracle10g. Dan will even provide a script that will help identify if your database environment is suffering from this issue.

Free Downloads

Windows Key Finders

Do you have a PC purchased on E-Bay perhaps and you don't have the product key if you were to need to reinstall? I found these tools useful from a Google search on 'Windows Key Finders'.

WinKeyFinder 1.73 is available from www.downloads.com. This utility displays the product key for XP, ME, and Windows 2000.

There were several available on www.Anglefire.com. I did not try any of these...(text copied from Google Search)

Windows 95/98/Me

This one reveals your keys for both Windows 95 and 98/Me. Just double click after downloading to see your key. [Download Win9xProdKey](#)

Windows XP

This one reveals your Windows XP key.

[Download ViewKeyXP](#)

Windows 2000 and XP

Both of these work with Windows 2000 but "Keyfinder" by Jellybean actually works with all Windows systems and even Microsoft Office, except for Office 2000. "RockXP" works with Windows 2000 and XP only and can also reveal other passwords - such as your email passwords and more.

[Download Keyfinder](#)

[Download RockXP](#)

Oracle PL/SQL Profiler Paper and Script: Learn how to use this free PL/SQL profiler from Oracle Corp. The paper also covers using the PL/SQL Profiler from TOAD. Download this paper and script from www.DanHotka.com.

Email Dan at Dhotka@Earthlink.net for any of these items:

- **Oracle SQL Trace Start and Stop Scripts:** Use these scripts to start and stop the Oracle Trace.
- **JS Tuner:** This tool will assist you with enhanced explain plans and useful index info/hints/and SQL history at your fingertips.

- **JS Analyzer:** This tool makes running the character-mode TKProf and SQL*Plus interface Trace Analyzer a snap. No more typing long trace file names.

The Back Page

WWII Duks



These Dukw's were used in WWII and Winston Churchill claimed that this vehicle helped win the war for the allied forces. This vehicle played a key role in the D-Day invasion of France.

DUWK is the Army's acronym and it does have some meaning. The D means it was first used in 1942, U is that this is a general utility vehicle, K denotes all axle drive, W says that the vehicle has dual rear wheels.

The US government commissioned 21,500 of these to be built and the life expectancy was only 2 to 5 months! There are 2000 or so of these vehicles left today. They were assembled in Pontiac Michigan by 'Riveting Rosie', built by women!

I have been on several of these being used as city tours.



This is the second time I got to steer one on the water! This Dukw is part of the Seattle City tour called 'Ride the Ducks' (I also got to steer a Dukw on a Boston city tour years ago). The green Dukw pictured first is part of the 'Splash Tours' in Dublin, Ireland.