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Newsletter

*DBA Online – On the front line of database administration
 DBA Online powers Oracle DBA*

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DBA Online SIG Seminar in March 2006

American DBAOnline has successfully held another Special Interest Group (SIG) seminar in MetLife conference room in Edison, New Jersey on Saturday, March 4, 2006. This SIG seminar focused on Oracle *Database Performance & Tuning*. It is composed of two sessions, technical presentation and panel discussion. More than 80 Oracle professionals from tri-state area attended SIG. The SIG was hosted by Dr. Wei Tang, EVP of DBAOnline. Two experts from Oracle Corporation and two DBAOnline committee members serve as the panelists of the SIG. With their extensive Oracle implementation experience, four panelists gave their wonderful presentations to share their knowledge and real world experience in different environment with the members. During discussion, many questions were answered and discussed by the panelists and other



member.

The SIG start with our president Mr. David Wang’s opening remarks and one minute performance tip (see blow). By using this tip, he was able to tune a poor performance database ten times faster.

The presentation started with Mr. John Gao, Senior principal consultant of Oracle Corporation with topic of “*from ‘Firefighter’*”

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to Architect “. John used four real life cases to present his over 17 years unique experiences working on information management systems, data warehouse and ERP/CRM System implementation, parallel server and Real Application Cluster implementation, system capacity plan, performance tuning and testing, system high availability design and implementation. His experiences told us that as a good DBA, you are not just a firefighter to solve problem when it happens. You need to proactively prevent and solved the problem before it happens and need to involve in the business process as an architect. You need to have more advanced thinking and stay on the edge of the new technologies. With this thought in mind and action in work, John was able to reduce the problem tickets from 300/year to 50/year in less than three years and tuned the sluggish system into sound fast system many times.



The next presentation was made by Mr. Jeff Zheng, Senior DBA of Caxton, a hedge fund company, with topic of “*Hints In The Performance Tuning*”. Jeff has 6 years extensive Oracle DBA and developer experiences on tuning the terabyte size database for the business intelligent application. Jeff has worked many years as application developer prior to his tenure as an Oracle DBA. His presentation focus on how to use nested loop, merge join and hash joins, which he called as powerful “*three axes*”, to improve the performance of a SQL application. His presentation brought us into another level of understanding of hints in a SQL.



The presentation continued by Mr. Steven Liu, Senior Principle Consultant of Oracle Corporation, with topic of “*Summary Management In Data Warehouse*”. Steven has over ten years of IT experiences and specializes in data warehouse & business intelligence. Steven has implemented many oracle data warehouses across several industries including banking, financial service, manufacture, retail, telecommunication, travel, and pharmaceutical. As a system architect and DBA managing multi-terabytes customer analytics data warehouse, he has extensive experiences on a 10g database, 10G application server, 10G grid control and 10G warehouse builder platform. Steven’s presentation focused on how to utilize the materialized view to improve the reporting performance and simplify the ETL process. Steven’s presentation showed us that database tuning can not only be done in the database level, but also be done in by modeling level for implementing new database technologies.

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The closing presentation was given by Daniel Hu, Certified Senior DBA and VP of DBAOnline with topical of “**Oracle 10g RAC - Upgrade performance issue**”. Daniel has over 10 years experience on relational database technologies as well as other components of the Oracle technology stack. He presented many hand-on experience and tricks on upgrading the system from 8i to 9i RAC and 10g RAC. He truly shared a valuable knowledge gained from his hard work.

The panel discussion session was another excitement in this SIG. After a question was raised, not only our speakers answered it and explained it in detail, but also many of our members shared their knowledge and experience in their real work. The interaction between the panelists and audience made the SIG a true platform for the technical skill and knowledge exchange. Our members also enjoyed the break time for the social networking. During the session, Mr. Howard Wang from MetLife gave us a brief seminar regarding financial planning and received a warm welcome.

Today, every IT professionals include DBAs and other application developers are facing a big challenge ever, the faster changing technology, the internet and the outsourcing. We need to work together, help each other to secure our jobs and make our future brighter. A very important mission of DBAOnline SIG session is to provide a platform to everyone for technical skill exchange and personal networking. Let’s work together to archive this goal. Our next SIG will be **Database Performance & Tuning-2**. We encourage our members to standup to be a panelist to share your experience. Please email to wtang88@yahoo.com if you like to be one of the next panelists.

Thanks all of you for your long time support of DBAOnline. Thanks to our four speakers who spend a lot of time and effort to prepare and shared their knowledge and expertise. Thanks to our host, Dr. Wei Tang and our committee members for organizing this SIG. Special thanks to Howard Wang and Sarah Qian, the Metlife financial planning specialists for the support by providing the conference room.

DBA Online Committee



SIG Survey Summary Report

For Database Performance & Tuning SIG on March 4, 2006

1. The members who answered the survey are over all very satisfied with the SIG 94%. It is very high rating considering our audiences are mostly experienced DBAs serving major companies in the tri-state area. It means that the SIG provide valuable information for them and the way the information has been presented to the members.
2. The SIG got an over all rating 93% on meeting member's expectation. Again it is a very high score, the SIG provided a platform for member to learn and exchange their knowledge. But we will continue to improve on the topic and format of SIG to meet member's expectation better.
3. The SIG got an over all rating 88% on if SIG will help member's job, this score is considered reasonable high. DBAOnline certainly want to focus on it and make seminars help our member's job more. But, this is something that members can help us to identify your needs by filling out our survey.
4. SIG is welcomed among people who answered the survey; we got 95% score, which is the highest score among all the questions, on attendance to the next SIG. Thanks to all members! It is a great complement to DBAOnline committee members and speakers.
5. There are 10 answer sheets listed about 8 different topics that members would like to hear in the coming SIG. Topics listed are very important to lead us host another successful SIG, your interest is our number one priority. They will be considered for the coming SIG.
6. There were some members willing to contribute to the SIG as a panelist. We are very graceful to their willingness. Member's participant is vital to DBAOnline's growth. We encourage more members stand up to share their knowledge and experiences.

Acknowledgement:

We appreciate those members who returned the survey. Your feedback is very important to DBAOnline's future seminars. Special thanks to Mr. Qi Wang for preparing survey and his 10-year old son, Humphrey, for his endeavor to collect statistics of survey and calculate the results in Excel.

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David Wang's One Minutes Tip

SQL Hint → HASH_SJ

Use HASH_SJ hint when you have a high volume outer query, and a correlated single table sub-query with equals joins back to the outer query. Check Explain Plan to ensure that it shows HASH JOIN (SEMI). The HASH_SJ hint is specified from within the sub-query, not in the main SQL statement.

The following example made the SQL running 10 times faster for a real case:

```
Select *  
From ...  
Where id in (select /*+ hash_sj */  
            ... );
```

Hash Join vs. Nested Loop Join

- If you only need to access a few rows to satisfy the conditions in your SQL, nested loop will be much faster than hash join. If you need to access 10 million rows then hash join can be much faster
- if the tables have millions of rows and you need to join at least 20 percent of the data, then hash join easily beats nested loops.

The rule of thumb:

- If you need to filter tables before join, use hash or sort/merge. If not, use nested loops.
- Hash joins and sort/merge joins are very efficient when you join big tables, both in number of rows and columns and have some conditions restricting the number of rows/columns in the output.
- In case of hash or sort/merge, filtering is done before join. In case of nested loops, filtering is done after the loops. You can clearly see it in explained plans.

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Oracle is an Official sponsor of DBA Online

In early March 2006, Oracle Corporation announced their sponsorship to American DBAOnline with annual financial support. Oracle Corporation is now the official sponsor of DBAOnline and will continue support DBAOnline for years to come. This is the milestone of DBAOnline as its contribution to Oracle professionals is widely recognized by Oracle Corporation and American IT professional mainstream.

We would like to thank all of our members for your continuing participation and support for DBAOnline and making DBAOnline your technology exchange base. Furthermore, we would also like to thank our committee members for the hard work, the sleepless nights, the pain and the joy. Special thanks to Dr. John Zhong, VP of the DBAOnline, for his continuous effort to make Oracle Corporation recognizing DBAOnline's contribution to many Oracle professionals.