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Introduction

In versions of Oracle prior to Oracle8i the only way to stabilize an execution plan was to ensure that tables where analyzed frequently and that the relative ratios of rows in the tables involved stayed relatively stable. Neither of these options in pre-Oracle8i for stabilizing execution plans worked 100 percent of the time. In Oracle8i a new feature known as OUTLINEs has been added.

An outline allows the DBA to tune a SQL statement and then store the optimizer plan for the statement in what is known as an OUTLINE. From that point forward whenever an identical SQL statement to the one in the OUTLINE is used, it will use the optimizer instructions contained in the OUTLINE.

Setting Up for Use of Outlines

If you install using the DBCA (Database Creation Assistant) or through a manual script and run the catproc.sql script, then the OUTLINE option (in ENTEPRISE edition) is automatically installed.

The OUTLN schema is created automatically during installation of Oracle8i and Oracle9i. This schema is granted connect, resource, and execute any procedure privileges. The OUTLN schema acts as a place to centrally manage metadata associated with stored outlines.

Installing OUTLN Schema "After the Fact"

It is possible to install the OUTLN schema after the databse has been created. As was said above, this is not usually suggested. Make sure that the OUTLN schema has been dropped using the cascade option before running this script. You may want to review the C0800050.sql script for your release in case there have been updates since the script below was generated. This process should work for RDBMS release 8.1.5 or greater.

This script MUST be run as the user INTERNAL or SYS. This script was extracted from C0800050.sql. After running this script, the user will need to run

catalog.sql and catproc.sql. These scripts must be run as the user SYS or INTERNAL.

Script to Install OUTLN Schema

Here is the extracted script which can be used to rebuild or initially install the OUTLN schema if for some reason the OUTLN schema becomes unusable or was never installed.

```
set serveroutput on

DECLARE
  user_exists EXCEPTION;
  outln_user number;
  outln_tables number;
  extra_outln_tables number;
  DDL_CURSOR integer;
BEGIN
  select count(*) into outln_user from user$ where name='OUTLN';

  select count(*) into outln_tables from obj$ where name in
       ('OL$', 'OL$HINTS') and owner#=
       (select user# from user$ where name='OUTLN');

  select count(*) into extra_outln_tables from obj$ where name not in
       ('OL$', 'OL$HINTS') and type#=2 and owner#=
       (select user# from user$ where name='OUTLN');


  DDL_CURSOR := dbms_sql.open_cursor;
  IF outln_user = 0 THEN
       dbms_sql.parse(DDL_CURSOR, 'create user outln identified by outln',
                dbms_sql.native);
       dbms_sql.parse(DDL_CURSOR,
                 'grant connect, resource, execute any procedure to
outln',
                dbms_sql.native);
       dbms_sql.parse(DDL_CURSOR, 'create table outln.ol$ ( '||
         'ol_name           varchar2(30), ' ||
         'sql_text          long,  ' ||
         'textlen           number,  ' ||
         'signature         raw(16), ' ||
         'hash_value        number, ' ||
         'category          varchar2(30), ' ||
         'version           varchar2(64), ' ||
         'creator           varchar2(30), ' ||
         'timestamp         date,  ' ||
         'flags             number, ' ||
         'hintcount         number)', dbms_sql.native);
       dbms_sql.parse(DDL_CURSOR, 'create table outln.ol$hints ( '||
         'ol_name           varchar2(30),  '||
         'hint#             number,  '||
         'category          varchar2(30),  '||
         'hint_type         number,  '||
         'hint_text         varchar2(512), '||
         'stage#            number,  '||
```