Sathish Yellanki
Institute of Software Solutions

Announcing A New Batch

OF

Oracle Performance And Tuning

With In-Depth Coverage on
SQL Tuning And PL/SQL Tuning With Issue Based Approach, Including AWR, Statspack, Enterprise Manager etc...

Date : 21st May 2018 | **Time : 11.00 AM**

If You Are Looking For Good Positions And Scaling in The Career of Databases With Oracle, This Course is Ideal For You, All The Aspirants Aiming With Experience in Their Resume Can Avail This Course

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```
SQL> cl scr

SQL> SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2  FROM Emp E, Dept D
  3  WHERE E.Deptno = D.Deptno;

    DEPTNO DNAME          LOC
---------- -------------- -------------
        20 RESEARCH       DALLAS
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO

SQL> SET AUTOTRACE ON EXPLAIN
SQL> SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2  FROM Emp E, Dept D
  3  WHERE E.Deptno = D.Deptno;

    DEPTNO DNAME          LOC
---------- -------------- -------------
        20 RESEARCH       DALLAS
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO


Execution Plan
----------------------------------------------------------
Plan hash value: 2962452962

---------------------------------------------------------------------------
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time     |
---------------------------------------------------------------------------
|   0 | SELECT STATEMENT   |      |    14 |   602 |     8  (25)| 00:00:01 |
|   1 |  HASH UNIQUE       |      |    14 |   602 |     8  (25)| 00:00:01 |
|*  2 |   HASH JOIN        |      |    14 |   602 |     7  (15)| 00:00:01 |
|   3 |    TABLE ACCESS FULL| DEPT |    4 |   120 |     3   (0)| 00:00:01 |
|   4 |    TABLE ACCESS FULL| EMP  |   14 |   182 |     3   (0)| 00:00:01 |
---------------------------------------------------------------------------
```

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```
Predicate Information (identified by operation id):
---------------------------------------------------

   2 - access("E"."DEPTNO"="D"."DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1   SELECT D.Deptno, D.Dname, D.Loc
  2   FROM Emp E, Dept D
  3   WHERE E.Deptno = D.Deptno
  4*  GROUP BY D.Deptno, D.Dname, D.Loc
SQL> /

    DEPTNO DNAME          LOC
---------- -------------- -------------
        20 RESEARCH       DALLAS
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO


Execution Plan
----------------------------------------------------------
Plan hash value: 2006461124

--------------------------------------------------------------------------
---
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
--------------------------------------------------------------------------
---
|   0 | SELECT STATEMENT    |      |   14 |  602 |    8  (25)|
00:00:01 |
|   1 |  HASH GROUP BY      |      |   14 |  602 |    8  (25)|
00:00:01 |
|*  2 |   HASH JOIN         |      |   14 |  602 |    7  (15)|
00:00:01 |
|   3 |    TABLE ACCESS FULL| DEPT |    4 |  120 |    3   (0)|
00:00:01 |
|   4 |    TABLE ACCESS FULL| EMP  |   14 |  182 |    3   (0)|
00:00:01 |
```

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```
--------------------------------------------------------------------------
---

Predicate Information (identified by operation id):
---------------------------------------------------

   2 - access("E"."DEPTNO"="D"."DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1   SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2   FROM Dept D
  3   WHERE  D.Deptno IN
  4    (
  5    SELECT Deptno
  6    FROM Dept
  7*   )
SQL> ED
Wrote file afiedt.buf

  1   SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2   FROM Dept D
  3   WHERE  D.Deptno IN
  4    (
  5    SELECT Deptno
  6    FROM Emp
  7*   )
SQL> /

    DEPTNO DNAME          LOC
---------- -------------- -------------
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO
        20 RESEARCH       DALLAS


Execution Plan
-----------------------------------------------------------
Plan hash value: 1754319153


--------------------------------------------------------------------------
--
```

```
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time     |
----------------------------------------------------------------------------
|   0 | SELECT STATEMENT   |      |     3 |   129 |     7  (15)| 00:00:01 |
|*  1 |  HASH JOIN SEMI    |      |     3 |   129 |     7  (15)| 00:00:01 |
|   2 |   TABLE ACCESS FULL| DEPT |     4 |   120 |     3   (0)| 00:00:01 |
|   3 |   TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01 |
----------------------------------------------------------------------------

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("D"."DEPTNO"="DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1  SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2  FROM Dept D
  3  WHERE  D.Deptno IN
  4   (
  5   SELECT Deptno
  6   FROM Emp E
  7   WHERE E.Deptno = D.Deptno
  8*  )
SQL> /

    DEPTNO DNAME          LOC
---------- -------------- -------------
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO
        20 RESEARCH       DALLAS


Execution Plan
----------------------------------------------------------
Plan hash value: 1754319153
```

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```
---------------------------------------------------------------------
--
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
---------------------------------------------------------------------
--
|   0 | SELECT STATEMENT   |      |     3 |   129 |     7  (15)| 00:00:01
|
|*  1 |   HASH JOIN SEMI   |      |     3 |   129 |     7  (15)| 00:00:01
|
|   2 |    TABLE ACCESS FULL| DEPT |     4 |   120 |     3   (0)| 00:00:01
|
|   3 |    TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01
|
---------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("D"."DEPTNO"="DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1   SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2   FROM Dept D
  3   WHERE EXISTS
  4    (
  5    SELECT Deptno
  6    FROM Emp E
  7    WHERE E.Deptno = D.Deptno
  8*  )
SQL> /

    DEPTNO DNAME          LOC
---------- -------------- -------------
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO
        20 RESEARCH       DALLAS
```

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```
Execution Plan
----------------------------------------------------------
Plan hash value: 1754319153

----------------------------------------------------------------------------
--
| Id  | Operation            | Name | Rows  | Bytes | Cost (%CPU)| Time
|
----------------------------------------------------------------------------
--
|   0 | SELECT STATEMENT     |      |     3 |   129 |     7  (15)| 00:00:01
|
|*  1 |   HASH JOIN SEMI     |      |     3 |   129 |     7  (15)| 00:00:01
|
|   2 |    TABLE ACCESS FULL| DEPT |     4 |   120 |     3   (0)| 00:00:01
|
|   3 |    TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01
|
----------------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E"."DEPTNO"="D"."DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1   SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2   FROM Dept D
  3   WHERE EXISTS
  4    (
  5    SELECT *
  6    FROM Emp E
  7    WHERE E.Deptno = D.Deptno
  8*   )
SQL> /

    DEPTNO DNAME          LOC
---------- -------------- -------------
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO
```

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```
        20 RESEARCH          DALLAS


Execution Plan
------------------------------------------------------------
Plan hash value: 1754319153

--------------------------------------------------------------------------
--
| Id  | Operation           | Name | Rows  | Bytes | Cost (%CPU)| Time
|
--------------------------------------------------------------------------
--
|   0 | SELECT STATEMENT    |      |     3 |   129 |     7  (15)| 00:00:01
|
|*  1 |  HASH JOIN SEMI     |      |     3 |   129 |     7  (15)| 00:00:01
|
|   2 |   TABLE ACCESS FULL| DEPT |     4 |   120 |     3   (0)| 00:00:01
|
|   3 |   TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01
|
--------------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E"."DEPTNO"="D"."DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1  SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2  FROM Dept D
  3  WHERE EXISTS
  4  (
  5   SELECT 1
  6   FROM Emp E
  7   WHERE E.Deptno = D.Deptno
  8* )
SQL> /

    DEPTNO DNAME           LOC
```

```
---------- -------------- -------------
        10 ACCOUNTING     NEW YORK
        30 SALES          CHICAGO
        20 RESEARCH       DALLAS


Execution Plan
----------------------------------------------------------
Plan hash value: 1754319153

--------------------------------------------------------------------------
--
| Id  | Operation           | Name | Rows  | Bytes | Cost (%CPU)| Time
|
--------------------------------------------------------------------------
--
|   0 | SELECT STATEMENT    |      |     3 |   129 |     7  (15)| 00:00:01
|
|*  1 |  HASH JOIN SEMI     |      |     3 |   129 |     7  (15)| 00:00:01
|
|   2 |   TABLE ACCESS FULL| DEPT  |     4 |   120 |     3   (0)| 00:00:01
|
|   3 |   TABLE ACCESS FULL| EMP   |    14 |   182 |     3   (0)| 00:00:01
|
--------------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E"."DEPTNO"="D"."DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1  SELECT DISTINCT D.Deptno, D.Dname, D.Loc
  2  FROM Dept D
  3  WHERE NOT EXISTS
  4   (
  5   SELECT 1
  6   FROM Emp E
  7   WHERE E.Deptno = D.Deptno
  8*  )
```

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```
SQL> /

    DEPTNO DNAME         LOC
---------- ------------- -------------
        40 OPERATIONS    BOSTON


Execution Plan
----------------------------------------------------------
Plan hash value: 474461924

--------------------------------------------------------------------
--
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
--------------------------------------------------------------------
--
|   0 | SELECT STATEMENT   |      |     4 |   172 |     7  (15)| 00:00:01
|
|*  1 |  HASH JOIN ANTI     |      |     4 |   172 |     7  (15)| 00:00:01
|
|   2 |   TABLE ACCESS FULL| DEPT |     4 |   120 |     3   (0)| 00:00:01
|
|   3 |   TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01
|
--------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E"."DEPTNO"="D"."DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> cl scr

SQL> SELECT E.Ename
  2  FROM Emp E
  3  WHERE EXISTS
  4   (
  5   SELECT *
  6   FROM Emp E1
  7   WHERE E1.Empno = E.Mgr
  8   );
```

```
ENAME
----------
BLAKE
CLARK
JONES
MARTIN
ALLEN
TURNER
JAMES
WARD
FORD
SMITH
SCOTT
ADAMS
MILLER

13 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 3956160932

---------------------------------------------------------------------------
-
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
---------------------------------------------------------------------------
-
|   0 | SELECT STATEMENT   |      |    13 |   260 |     3   (0)| 00:00:01
|
|*  1 |  TABLE ACCESS FULL| EMP  |    13 |   260 |     3   (0)| 00:00:01
|
---------------------------------------------------------------------------
-

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - filter("E"."MGR" IS NOT NULL)

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> SELECT Ename FROM Emp WHERE MGR IS NOT NULL;
```

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```
ENAME
----------
BLAKE
CLARK
JONES
MARTIN
ALLEN
TURNER
JAMES
WARD
FORD
SMITH
SCOTT
ADAMS
MILLER

13 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 3956160932

-------------------------------------------------------------------------
-
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
-------------------------------------------------------------------------
-
|   0 | SELECT STATEMENT   |      |    13 |   260 |     3   (0)| 00:00:01
|
|*  1 |   TABLE ACCESS FULL| EMP  |    13 |   260 |     3   (0)| 00:00:01
|
-------------------------------------------------------------------------
-

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - filter("MGR" IS NOT NULL)

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
```

```
Wrote file afiedt.buf

  1  SELECT Ename
  2  FROM Emp
  3  WHERE MGR IN
  4   (
  5   SELECT Empno
  6   FROM Emp
  7*  )
SQL> /

ENAME
----------
BLAKE
CLARK
JONES
MARTIN
ALLEN
TURNER
JAMES
WARD
FORD
SMITH
SCOTT
ADAMS
MILLER

13 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 3956160932


--------------------------------------------------------------------------
-
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
--------------------------------------------------------------------------
-
|  0 | SELECT STATEMENT   |      |   13 |   260 |    3   (0)| 00:00:01
|
|*  1 |   TABLE ACCESS FULL| EMP  |   13 |   260 |    3   (0)| 00:00:01
|
--------------------------------------------------------------------------
-
```

--
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```
Predicate Information (identified by operation id):
---------------------------------------------------

   1 - filter("MGR" IS NOT NULL)

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> cl scr

SQL> ED
Wrote file afiedt.buf

  1   SELECT E.Ename
  2   FROM Emp E
  3   WHERE NOT EXISTS
  4   (
  5    SELECT *
  6    FROM Emp E1
  7    WHERE E1.Empno = E.Mgr
  8*  )
SQL> /

ENAME
----------
KING


Execution Plan
----------------------------------------------------------
Plan hash value: 3956160932

--------------------------------------------------------------------
-
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
--------------------------------------------------------------------
-
|  0 | SELECT STATEMENT   |      |    1 |   20 |    3   (0)| 00:00:01
|
|*  1 |  TABLE ACCESS FULL| EMP  |    1 |   20 |    3   (0)| 00:00:01
|
--------------------------------------------------------------------
-

Predicate Information (identified by operation id):
```

……….

```
----------------------------------------------------

   1 - filter("E"."MGR" IS NULL)

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1  SELECT E.Ename
  2  FROM Emp E
  3  WHERE EXISTS
  4   (
  5   SELECT *
  6   FROM Emp E1
  7   WHERE E1.MGR = E.Empno
  8*  )
SQL> /

ENAME
----------
KING
BLAKE
JONES
FORD
SCOTT
CLARK

6 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 977554918

----------------------------------------------------------------------------
--
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
----------------------------------------------------------------------------
--
|   0 | SELECT STATEMENT   |      |     6 |   198 |     7  (15)| 00:00:01
|
|*  1 |   HASH JOIN SEMI    |      |     6 |   198 |     7  (15)| 00:00:01
|

----------------------------------------------------------------------------
```

```
|   2 |    TABLE ACCESS FULL| EMP  |    14 |   280 |    3   (0)| 00:00:01
|
|   3 |    TABLE ACCESS FULL| EMP  |    14 |   182 |    3   (0)| 00:00:01
|
--------------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E1"."MGR"="E"."EMPNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1   SELECT E.Ename
  2   FROM Emp E
  3   WHERE NOT EXISTS
  4    (
  5    SELECT *
  6    FROM Emp E1
  7    WHERE E1.MGR = E.Empno
  8*   )
SQL> /

ENAME
----------
TURNER
WARD
MARTIN
ALLEN
MILLER
SMITH
ADAMS
JAMES

8 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 3353202012
```

```
----------------------------------------------------------------------
--
| Id | Operation           | Name | Rows  | Bytes | Cost (%CPU)| Time
|
----------------------------------------------------------------------
--
|   0 | SELECT STATEMENT    |      |   14 |   462 |    7  (15)| 00:00:01
|
|*  1 |  HASH JOIN ANTI     |      |   14 |   462 |    7  (15)| 00:00:01
|
|   2 |   TABLE ACCESS FULL| EMP  |   14 |   280 |    3   (0)| 00:00:01
|
|   3 |   TABLE ACCESS FULL| EMP  |   14 |   182 |    3   (0)| 00:00:01
|
----------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E1"."MGR"="E"."EMPNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1   SELECT E.Ename, Sal, Comm
  2   FROM Emp E
  3   WHERE EXISTS
  4    (
  5    SELECT *
  6    FROM Emp E1
  7    WHERE E1.Comm = E.Comm
  8*   )
SQL> /

ENAME          SAL        COMM
---------- ---------- ----------
MARTIN         1250       1400
ALLEN          1600        300
TURNER         1500          0
WARD           1250        500
```

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```
Execution Plan
----------------------------------------------------------
Plan hash value: 977554918

----------------------------------------------------------------------------
| Id  | Operation           | Name | Rows  | Bytes | Cost (%CPU)| Time     |
----------------------------------------------------------------------------
|   0 | SELECT STATEMENT    |      |     4 |   184 |     7  (15)| 00:00:01 |
|*  1 |   HASH JOIN SEMI    |      |     4 |   184 |     7  (15)| 00:00:01 |
|   2 |    TABLE ACCESS FULL| EMP  |    14 |   462 |     3   (0)| 00:00:01 |
|   3 |    TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01 |
----------------------------------------------------------------------------

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E1"."COMM"="E"."COMM")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1   SELECT E.Ename, Sal, Comm
  2   FROM Emp E
  3   WHERE NOT EXISTS
  4    (
  5     SELECT *
  6     FROM Emp E1
  7     WHERE E1.Comm = E.Comm
  8*   )
SQL> /

ENAME           SAL        COMM
---------- ---------- ----------
MILLER           1300
ADAMS            1100
```

```
SCOTT              3000
SMITH               800
FORD               3000
JAMES               950
JONES              2975
CLARK              2450
BLAKE              2850
KING               5000

10 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 3353202012

---------------------------------------------------------------------------
--
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
---------------------------------------------------------------------------
--
|   0 | SELECT STATEMENT   |      |    14 |   644 |     7  (15)| 00:00:01
|
|*  1 |  HASH JOIN ANTI    |      |    14 |   644 |     7  (15)| 00:00:01
|
|   2 |   TABLE ACCESS FULL| EMP  |    14 |   462 |     3   (0)| 00:00:01
|
|   3 |   TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01
|
---------------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E1"."COMM"="E"."COMM")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> ED
Wrote file afiedt.buf

  1  SELECT E.Ename, Sal, Comm
  2  FROM Emp E
```

```
   3   WHERE NOT EXISTS
   4   (
   5   SELECT 1
   6   FROM Emp E1
   7   WHERE E1.Comm = E.Comm
   8*  )
SQL> /

ENAME             SAL        COMM
---------- ---------- ----------
MILLER           1300
ADAMS            1100
SCOTT            3000
SMITH             800
FORD             3000
JAMES             950
JONES            2975
CLARK            2450
BLAKE            2850
KING             5000

10 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 3353202012

--------------------------------------------------------------------------
--
| Id  | Operation          | Name | Rows  | Bytes | Cost (%CPU)| Time
|
--------------------------------------------------------------------------
--
|   0 | SELECT STATEMENT   |      |    14 |   644 |     7  (15)| 00:00:01
|
|*  1 |   HASH JOIN ANTI    |      |    14 |   644 |     7  (15)| 00:00:01
|
|   2 |    TABLE ACCESS FULL| EMP  |    14 |   462 |     3   (0)| 00:00:01
|
|   3 |    TABLE ACCESS FULL| EMP  |    14 |   182 |     3   (0)| 00:00:01
|
--------------------------------------------------------------------------
--

Predicate Information (identified by operation id):
---------------------------------------------------
```

```
       1 - access("E1"."COMM"="E"."COMM")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> cl scr

SQL> SELECT
  2   E.Ename EmpName,
  3   E.Job EmpJob,
  4   D.Staff Staff
  5   FROM Emp E,
  6   (
  7    SELECT Deptno, COUNT(*) Staff
  8    FROM    Emp
  9    GROUP BY Deptno
 10   ) D
 11   WHERE E.Deptno = D.Deptno;

EMPNAME      EMPJOB          STAFF
---------- --------- ----------
WARD         SALESMAN            6
JAMES        CLERK               6
TURNER       SALESMAN            6
ALLEN        SALESMAN            6
MARTIN       SALESMAN            6
BLAKE        MANAGER             6
ADAMS        CLERK               5
SCOTT        ANALYST             5
SMITH        CLERK               5
FORD         ANALYST             5
JONES        MANAGER             5
MILLER       CLERK               3
CLARK        MANAGER             3
KING         PRESIDENT           3

14 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 2230095667

----------------------------------------------------------------------------
----
```

```
| Id  | Operation              | Name | Rows  | Bytes | Cost (%CPU)| Time |
----------------------------------------------------------------------
----
|   0 | SELECT STATEMENT       |      |   65 | 3380 |    8  (25)|
00:00:01 |
|*  1 |  HASH JOIN             |      |   65 | 3380 |    8  (25)|
00:00:01 |
|   2 |   TABLE ACCESS FULL  | EMP  |   14 |  364 |    3   (0)|
00:00:01 |
|   3 |   VIEW                 |      |   14 |  364 |    4  (25)|
00:00:01 |
|   4 |    HASH GROUP BY       |      |   14 |  182 |    4  (25)|
00:00:01 |
|   5 |     TABLE ACCESS FULL| EMP  |   14 |  182 |    3   (0)|
00:00:01 |
----------------------------------------------------------------------
----

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E"."DEPTNO"="D"."DEPTNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> SELECT
  2   E.Ename EmpName,
  3   DE.Staff EmpDeptCount,
  4   M.Ename MGRName,
  5   DM.Staff MGRDeptCount
  6   FROM Emp E,
  7    (
  8    SELECT Deptno, COUNT(*) Staff
  9    FROM    Emp
 10    GROUP BY Deptno
 11    ) DE, Emp M,
 12            (
 13             SELECT Deptno, COUNT(*) Staff
 14             FROM    Emp
 15             GROUP BY Deptno
 16             ) DM
 17   WHERE E.Deptno = DE.Deptno
 18   AND E.MGR = M.Empno
 19   AND M.Deptno = DM.Deptno;
```

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http://yellankisathish.com/

```
EMPNAME      EMPDEPTCOUNT MGRNAME    MGRDEPTCOUNT
---------- ------------ ---------- ------------
BLAKE                 6 KING                  3
WARD                  6 BLAKE                 6
JAMES                 6 BLAKE                 6
TURNER                6 BLAKE                 6
ALLEN                 6 BLAKE                 6
MARTIN                6 BLAKE                 6
JONES                 5 KING                  3
SCOTT                 5 JONES                 5
FORD                  5 JONES                 5
SMITH                 5 FORD                  5
ADAMS                 5 SCOTT                 5
CLARK                 3 KING                  3
MILLER                3 CLARK                 3

13 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 1512957497

-----------------------------------------------------------------------
-----
| Id  | Operation            | Name | Rows  | Bytes | Cost (%CPU)| Time
|
-----------------------------------------------------------------------
-----
|   0 | SELECT STATEMENT     |      |    65 |  7670 |    16  (25)|
00:00:01 |
|*  1 |  HASH JOIN           |      |    65 |  7670 |    16  (25)|
00:00:01 |
|*  2 |   HASH JOIN          |      |    14 |  1288 |    11  (19)|
00:00:01 |
|*  3 |    HASH JOIN         |      |    14 |   924 |     7  (15)|
00:00:01 |
|   4 |     TABLE ACCESS FULL | EMP  |    14 |   462 |     3   (0)|
00:00:01 |
|   5 |     TABLE ACCESS FULL | EMP  |    14 |   462 |     3   (0)|
00:00:01 |
|   6 |     VIEW             |      |    14 |   364 |     4  (25)|
00:00:01 |
|   7 |      HASH GROUP BY    |      |    14 |   182 |     4  (25)|
00:00:01 |
```

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```
|   8 |       TABLE ACCESS FULL| EMP   |     14 |   182 |    3   (0)|
00:00:01 |
|   9 |    VIEW               |       |     14 |   364 |    4  (25)|
00:00:01 |
|  10 |     HASH GROUP BY     |       |     14 |   182 |    4  (25)|
00:00:01 |
|  11 |      TABLE ACCESS FULL |  EMP  |     14 |   182 |    3   (0)|
00:00:01 |
-------------------------------------------------------------------------
-----

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("E"."DEPTNO"="DE"."DEPTNO")
   2 - access("M"."DEPTNO"="DM"."DEPTNO")
   3 - access("E"."MGR"="M"."EMPNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> WITH Staff AS
  2   (
  3    SELECT Deptno, COUNT(*) Staff
  4    FROM    Emp
  5    GROUP BY Deptno
  6   )
  7   SELECT
  8   E.Ename EmpName,
  9   DE.Staff EmpDeptCount,
 10   M.Ename MGRName,
 11   DM.Staff MGRDeptCount
 12   FROM Emp E, Staff DE, Emp M, Staff DM
 13   WHERE  E.Deptno = DE.Deptno
 14   AND E.MGR = M.Empno
 15   AND M.Deptno = DM.Deptno;


EMPNAME    EMPDEPTCOUNT MGRNAME    MGRDEPTCOUNT
---------- ------------ ---------- ------------
WARD                  6 BLAKE                 6
JAMES                 6 BLAKE                 6
TURNER                6 BLAKE                 6
ALLEN                 6 BLAKE                 6
MARTIN                6 BLAKE                 6
SCOTT                 5 JONES                 5
FORD                  5 JONES                 5
```

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```
SMITH                 5 FORD                  5
ADAMS                 5 SCOTT                  5
CLARK                 3 KING                   3
MILLER                3 CLARK                  3
JONES                 5 KING                   3
BLAKE                 6 KING                   3

13 rows selected.


Execution Plan
----------------------------------------------------------
Plan hash value: 1160508563

--------------------------------------------------------------------
-------------------------------
| Id  | Operation                   | Name                   | Rows  |
Bytes | Cost (%CPU)| Time     |
--------------------------------------------------------------------
-------------------------------
|   0 | SELECT STATEMENT            |                        |   357 |
42126 |   16  (19)| 00:00:01 |
|   1 |  TEMP TABLE TRANSFORMATION  |                        |       |
      |           |          |
|   2 |   LOAD AS SELECT            | SYS_TEMP_0FD9D6601_23C5CC |    |
      |           |          |
|   3 |    HASH GROUP BY            |                        |    14 |
182 |    4  (25)| 00:00:01 |
|   4 |     TABLE ACCESS FULL       | EMP                    |    14 |
182 |    3   (0)| 00:00:01 |
|*  5 |    HASH JOIN                |                        |   357 |
42126 |   12  (17)| 00:00:01 |
|*  6 |     HASH JOIN               |                        |    65 |
5980 |    9  (12)| 00:00:01 |
|*  7 |      HASH JOIN              |                        |    14 |
924 |    7  (15)| 00:00:01 |
|   8 |       TABLE ACCESS FULL     | EMP                    |    14 |
462 |    3   (0)| 00:00:01 |
|   9 |       TABLE ACCESS FULL     | EMP                    |    14 |
462 |    3   (0)| 00:00:01 |
|  10 |      VIEW                   |                        |    14 |
364 |    2   (0)| 00:00:01 |
|  11 |       TABLE ACCESS FULL     | SYS_TEMP_0FD9D6601_23C5CC |  14 |
182 |    2   (0)| 00:00:01 |
|  12 |     VIEW                    |                        |    14 |
364 |    2   (0)| 00:00:01 |
```

--

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………

```
| 13 |      TABLE ACCESS FULL       | SYS_TEMP_0FD9D6601_23C5CC |    14 |
182 |    2   (0)| 00:00:01 |
--------------------------------------------------------------------------
--------------------------------

Predicate Information (identified by operation id):
---------------------------------------------------

   5 - access("M"."DEPTNO"="DM"."DEPTNO")
   6 - access("E"."DEPTNO"="DE"."DEPTNO")
   7 - access("E"."MGR"="M"."EMPNO")

Note
-----
   - dynamic sampling used for this statement (level=2)

SQL> SPOOL OFF
```

Spool File For Oracle Students Trained by Mr.Sathish Yellanki

....

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