DAL: VTAM and Teradata Database Error Messages

Article Created: 7 January 1993

TOPIC ---

I am evaluating DAL 1.3.5 for VTAM using the Teradata database. While using
the DAL tester on the Macintosh, I received the following error messages:

1) Using the COUNT function. COUNT (DISTINCT column-name) works properly
   but does not work for COUNT (column-name). I get the error "invalid
   operand of count function".

2) When creating WHERE clauses with a column of data type DATE. "date =
   xxx" works.   "date BETWEEN" or "date IN" get the error message "invalid
   date/time literal".

3) "Some token expected" error message returned when there is an SQL
   statement with the HAVING clause.

Why am I getting these error messages?

DISCUSSION ---

We have tested against the Teradata DBMS using both its interactive facility
(bteq) and DAL. We found the following:

1) Although Teradata supports the COUNT (column name) function, DB2 does
   not. DAL was designed with DB2 and the 1986 ANSI Level-1 standard as
   its standard. Therefore DAL does not support all of the functions that
   individual DBMSs may support in their own query tools or programs.

   DAL attempts to verify that SQL commands are valid based on the above
   criteria BEFORE sending a query to the DBMS. (This is because DAL has
   to repackage queries to be DBMS-specific.)

   In summary, DAL does not support the COUNT (column name) function
   because DB2 does not. DB2 supports the COUNT (DISTINCT column name)
   function and therefore so does DAL.

2) Different DBMSs have different "standard date formats". DAL has a
   "standard" format also. In order to do EQUAL, BETWEEN or IN queries

using a date field, you (or an application) must first set the DAL
standard date format ($datefmt) to match the DBMS' standard if they are
different. The DAL standard date format is MM/DD/YYYY.

The Teradata DBMS standard is not the same as DAL; the date format would
be set by the following command to match Teradata's format:

    set $datefmt = 'yymmdd';

This will allow DAL to translate the dates properly, resulting in a
valid return of data.

3) "Some token expected" is almost always a clue to a typographical error
   or SQL command error. Since DAL handles the HAVING clause for Teradata
   properly, we assume that you had a typo or incorrect statement.

   The following statement was processed properly by DAL to the Teradata in
   both release 1.3 and 1.3.5:

```
        select cust_state, sum(receivable)
          from eng.customer
         group by cust_state
        having cust_state > 'IL'
         order by cust_state;
```
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Keywords: <None>

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19960215 11:05:19.00

Tech Info Library Article Number: 11235