ORA-01461 With MERGE INTO Statement And Clob Column (Doc ID 1620109.1)

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APPLIES TO:

JDBC - Version 11.2.0.3.0 and later
Information in this document applies to any platform.

SYMPTOMS

JDBC 11.2.0.3 and 12.1.0.1

ORA-1461 error occurs when executing merge statements with a NCLOB column as a target and a bind variable value which is longer than 4000 bytes:

```
merge into TEST_MERGE2 D using (select ? as ID, ? as VALUE from DUAL) S on (D.ID = S.ID) when
matched then update set D.VALUE = S.VALUE when not matched then insert (D.ID, D.VALUE) values
(S.ID, S.VALUE)
```

Only if String length > 4000 bytes.

If instead of MERGE a separate statement is used for INSERT or UPDATE (based on situation) then the error is not reported.

CHANGES

CAUSE

The cause of the issue is binding a varchar2 to a select list item, which means the datatype is defined by the bind type, and a varchar2 cannot exceed 4K in a select list item.
In the insert and update the binding values are part of the statement, as result a string is binded with a clob.
In the merge the binding is done to a select from dual which is not going to work.

The failing merge is:

```
merge into TEST_MERGE2 D using (select ? as ID, ? as VALUE from DUAL) S on (D.ID = S.ID) when
matched then update set D.VALUE = S.VALUE when not matched then insert (D.ID, D.VALUE) values
(S.ID, S.VALUE)
```

In this case, the statement with problem is this:

```
select ? as ID, ? as VALUE from DUAL
```

No clobs anywhere. Only binding a varchar2 to a select list item is done here, which means the datatype is set by the bind type and a varchar2 cannot exceed 4K in a select list item.

In the insert and update the string bind is in the VALUES/SET clause:

```
insert into TEST_MERGE (ID, VALUE) values ( ? , ? )
update TEST_MERGE set VALUE = ? where ID = ?
```

as result the datatype is determined by the column whose value is provided in the bind, and it is not possible to bind a varchar2 greater than 4K for auto conversion to a clob.

Taking the update case, it will fail with the same error if it is done similar to the merge:

```
declare
  L_VALUE varchar2(4001);
  L_ID NUMBER;
begin
  L_ID := '1';
  L_VALUE := '';
  for I in 1..4001 loop
  L_VALUE := L_VALUE||'!';
end loop;

update TEST_MERGE2 set VALUE = (select L_VALUE from dual) where ID = L_ID;
end;
/
```

```
ERROR at line 1:
ORA-01461: can bind a LONG value only for insert into a LONG column
ORA-06512: at line 11
```

SOLUTION

- Do not bind String value greater than 4K.
  or
- Change the code logic to check the length of the data and, if greater than 4K, bind as a temp clob instead of as a string.

REFERENCES

BUG:18105084 - ORA-1461 WHEN USING MERGE STATEMENT
    Didn't find what you are looking for?