DBA

MERGE INTO

MERGE INTO IN ORACLE

The **MERGE** statement was introduced in Oracle 9i to conditionally insert or update data depending on its presence, a process also known as an "**upsert**". The **MERGE** statement **reduces table scans** and can perform the **operation in parallel** if required.

The code for MERGE INTO can be found in github and in gist.

In the code, basically, I have created two tables --namely hr_records and dept_records-- which depicts the records available in HR department and a certain department of a company.

I have assumed that dept_records table contains extra records not available in hr_records. Now, the records of extra employees has to be appended into hr_records.

Additionally, I have also assumed that the existing records in dept_records table shall be incremented by 10%.

In order words, We have to **UPDATE** the records existing in both the tables and **INSERT** the records not available in one table(i.e. hr_records).

```
MERGE INTO hr_records H
USING dept_records D
ON (H.emp_id = D.emp_id)
WHEN MATCHED THEN
UPDATE
SET H.salary = H.salary*1.1
WHEN NOT MATCHED THEN
INSERT (H.emp_id, H.name, H.address, H.salary) VALUES(D.emp_id, D.name, D.address, D.salary);
```

Fig : Merge into statement

PERFORMANCE:

Thanks to Oracle base, for verifying that STAND ALONE MERGE INTO statement can be very efficient than individual INSERT/UPDATE statements and row-wise MERGE INTO statements.

```
set serveroutput on;
DECLARE
    l_start number;
BEGIN
    l_start := DBMS_UTILITY.get_time;

    MERGE INTO hr_records H
    USING dept_records D
    ON (H.emp_id = D.emp_id)
    WHEN MATCHED THEN
    UPDATE
    SET H.salary = H.salary*1.1
    WHEN NOT MATCHED THEN
    INSERT (H.emp_id, H.name, H.address, H.salary) VALUES(D.emp_id, D.name, D.address, D.salary);

    DBMS_OUTPUT.PUT_LINE('MERGE :'||(DBMS_UTILITY.get_time - l_start)||' hsecs');
END;
/
```

```
    MERGE INTO hr_records H
    USING dept_records D
    ON (H.emp_id = D.emp_id)
    WHEN MATCHED THEN
    UPDATE
    SET H.salary = H.salary*1.1
    WHEN NOT MATCHED THEN
    INSERT (H.emp_id, H.name, H.address, H.salary) VALUES(D.emp_id, D.name, D.address, D.salary);

    DBMS_OUTPUT.PUT_LINE('MERGE :'||(DBMS_UTILITY.get_time - l_start)||' hsecs');
END;
/
```

Script Output | Query Result

Task completed in 0.087 seconds

```
Table HR_RECORDS truncated.


PL/SQL procedure successfully completed.


PL/SQL procedure successfully completed.

MERGE :2 hsecs


PL/SQL procedure successfully completed.
```

Fig: Performance of MERGE INTO statement

References:

1. https://oracle-base.com/articles/9i/merge-statement